

610.5

B77



Library
of the
Academy of Medicine,
Toronto.

7848

Presented by

Dr. N. A. Powell

Index to 1873, v. 1, following p. 40.
.. 1873, v. 2 w.
THE

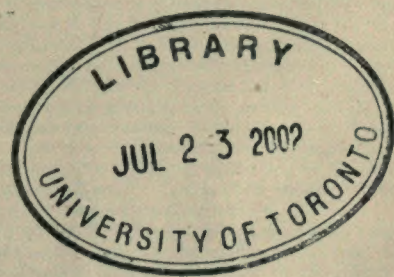
Journal

BRITISH MEDICAL JOURNAL:

BEING THE
JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED FOR THE ASSOCIATION BY
ERNEST HART.

VOLUME II FOR 1873.
JULY TO DECEMBER.



London:
PUBLISHED FOR THE ASSOCIATION BY THOMAS RICHARDS, 37, GREAT QUEEN STREET.

BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED BY ERNEST HART.

LONDON: SATURDAY, JULY 5, 1873.

THE HARVEIAN ORATION

DELIVERED BEFORE

THE ROYAL COLLEGE OF PHYSICIANS,

On Wednesday, June 25th.

By GEORGE ROLLESTON, M.D., F.R.S.,

Linacre Professor of Physiology in the University of Oxford, etc.

MR. PRESIDENT AND FELLOWS OF THE COLLEGE OF PHYSICIANS:—A man whose lot it is to live away from London may well feel some diffidence in accepting an invitation to lecture before a metropolitan audience; and, sir, when you honoured me by requesting me to deliver this year's Harveian Oration, I felt and expressed this natural hesitation. I wish to record that you pointed out to me that my function in Oxford was to pursue and lecture publicly upon the very subjects with which Harvey occupied himself; and I suggested to myself that what could with any propriety form the substance of a course of lectures in the one place, could, *mutatis mutandis*, furnish materials for an address in the other. I felt besides that, as the President of the College of Physicians is, by virtue of his office, one of the five electors to the Linacre Professorship, the Linacre Professor might seem scarcely justified in declining an invitation to appear before the learned body to which in part he owed his position; and, though I mention it last, I felt first of all that a wish expressed to me, not so much by the official whom I am now addressing, as by the individual who now more than twenty years ago introduced me to Harvey's hospital, and has persistently befriended me ever since, was a wish which I ought not lightly to disregard. If now, sir, I follow an example which you have often set me, and, without needless preface or further personal allusions, address myself at once to the business before me, I shall thereby pay you the best of all compliments, by showing you that your teaching has not been wholly thrown away upon your former pupil.

The time allotted to me I propose to occupy, firstly, in expounding with all possible brevity certain advances recently made in our knowledge of the anatomy and physiology of the circulatory organs; and, secondly, in giving the as yet unrecorded history of one of the many attempts to rob Harvey of his rightful rank in the noble army of discoverers, which were made in the latter half of the seventeenth century.

Some of the last, if not the very last, of the many fruitful experiments which Harvey performed in the way of interrogating Nature as to the circulation, were experiments in the way of injection. If the writer of a work which appeared but some forty-three years ago—Guthrie, *On the Diseases and Injuries of Arteries*—had taken the pains to repeat those experiments which Harvey performed more than two hundred and twenty years ago, and when in his seventy-fourth year, we should not have had the following statement at page 8 of his book: "I have conceived that the arteries contain air in an uncombined state, which may assist in keeping them distended, and in facilitating the circulation; but I have not been able to prove it." The fact that Harvey performed experiments in the way of injection may be unknown to many persons who are too well informed to conceive that the arteries may or can, compatibly with the carrying on of any circulation, contain air in an uncombined state; for these experiments are not to be found recorded either in the treatise *De Motu Cordis* or in either of the two letters to Riolanus, which two compositions were, in the older editions of Harvey's works, printed as three parts of a single treatise, under the names of *Exercitatio Anatomica Prima, Secunda, and Tertia*, and were, till the appearance of the College of Physicians' edition in 1766, the only published, as they are still the best known, records of Harvey's work and labour upon the circulation of the blood.

The experiments to which I refer are put upon record in a letter of Harvey's to P. M. Slegel, of date 1651 (see *Harveii Opera*, ed. 1766, p. 613; ed. Sydenham Society, p. 597). They were undertaken with the object of giving a final and happy despatch to all the quibbling objections of Riolanus, "omnes Riolani circa hanc rem altercationes jugulare;" and they consisted, firstly, in forcing water from the cava into the right ventricle whilst the pulmonary artery, the "*vena arteriosa*" of those days, was ligatured—whereby Riolanus's suggestion as to the permeability or porosity of the interventricular septum was shown to be untenable; and, secondly, in forcing water from the pulmonary artery round into the opened left ventricle, whereby the lesser circulation was demonstrated, to use Harvey's own favourite word, *abrophi*a; or, to use the very words employed by him upon this very occasion, by an "*experimentum φουκτορ* a me" (in his seventy-fourth year) "*nuper et collegis aliquot presentibus exploratum*." Simple as this experiment may seem to us now, I do not think that any apology is required for the drawing of attention to it; for it is only twenty-eight years ago that Dr. Sharpey, so recently and so fitly decorated with our Baly Medal (see *Edinburgh Medical and Surgical Journal*, vol. lxiii, p. 20), had to perform the very closely similar experiment of injecting defibrinated blood into the thoracic aorta, with the very closely similar object of showing that the force of the heart was sufficient to account for the passage of blood through the intestinal and hepatic vascular systems—nay, to perform an all but identical experiment, adding on to it but the means for estimating and reproducing the force put out by the ventricle concerned. If such experiments as these were necessary in 1845, how much more necessary must have been the still simpler experiments of Harvey in 1651! At that time, the *prestige* of Riolanus the younger "pressed heavily upon mankind". Harvey himself had called that individual "*anatomicorum coryphæum*" in 1649; and, in the very year and letter we are dealing with, he calls him "*celebrem anatomicum*". And Pecquet, the discoverer of the thoracic duct, in his work, also of this selfsame year 1651, the *Experimenta Nova Anatomica*, a work spoken of by Haller (*Bibliotheca Anatomica*, i, p. 443) as "*nobile opus et inter præcipua sæculi decora*", has the following remarkable passage: "*Ita sentiunt non vulgaris peritiæ medici Harveius, Veslingius, Conringius, Bartholinus, alique complures; nec melior ipse Joannes Riolanus (quod mirari subito pro eximii viri, quâ in rebus anatomicis cæteros anteivit sagacitate). Audi hanc in rem illius sententiam*." This, I think, I will spare you; but I will remark that, after this singular—or perhaps, alas! not singular—instance of the blundering judgments which contemporary writers may pass upon each other, no young man, nor indeed any old one—for Harvey was in his seventy-fifth year when he first read Pecquet's work (see *Epistola Tertia*, Morison's, p. 620, ed. 1766; p. 604, ed. Sydenham Society)—if his own age, in his own estimation, do him scanty justice. Posterity ordinarily—I do not say always—rectifies these false judgments; it has done so, at all events, in the cases of the men so grotesquely grouped together by Pecquet. See also, I would add, Gregorius Horst, the father of Harvey's correspondent of the same name, in his *Opera Medica*, i, p. 83 (1661), where Riolanus is spoken of as "*anatomicorum hujus sæculi fere primum*"; and Bartholinus himself, who, in his work *De Lactis Dubia* (1654), refers to "*multis Riolani observationibus quibus rem anatomicam immortalis nominis celebritate auxit*". Haller, at all events, writing in 1774 (*Bibliotheca Anatomica*, i, p. 301), speaks of Riolanus as "*vir asper et in nuperos suosque cœvæos immitis ac nemini parcens, nimis avidus suarum laudum præco et se ipso fatente anatomicorum princeps*." The duty of attacking and abolishing such a man may, or, indeed, must have been, a disagreeable one to his contemporaries: they appear to have shirked it. It was their duty to have faced it, notwithstanding it might have been disagreeable.

Harvey used for these experiments a somewhat rough injecting apparatus, "*quemadmodum in clysteribus injiciendis fieri solet*." The modern experiment which I wish first to introduce to your attention rests for its accomplishment upon the employment of the delicate injection-syringe (for *Einstichung*) of Ludwig, and of the fine soluble Berlin blue for the substance to be injected. Here, as in many other instances, our superiority to our forefathers rests mainly or wholly

upon our possession of more delicate, or upon our command of more powerful, agents; and the delicate syringe and the penetrating soluble injection-mass help us to discoveries and demonstrations impossible in default of such means, just as the superior lenses of Malpighi and Leeuwenhoeck helped them to the discovery and demonstration of the capillary circulation, unknown to the discoverer of the circulation as a whole. The experiment to which I refer has its results fairly represented in the diagram to which I point, from a specimen prepared by myself at a class-demonstration. It gives a figure of the lacteals injected, by the means just specified, as they exist upon the terminal segment, here widely globular, of the ileum, upon a single disciform patch upon the commencing colon, and finally and chiefly upon and all around the walls of the colossal vermiform appendix of the Rabbit.

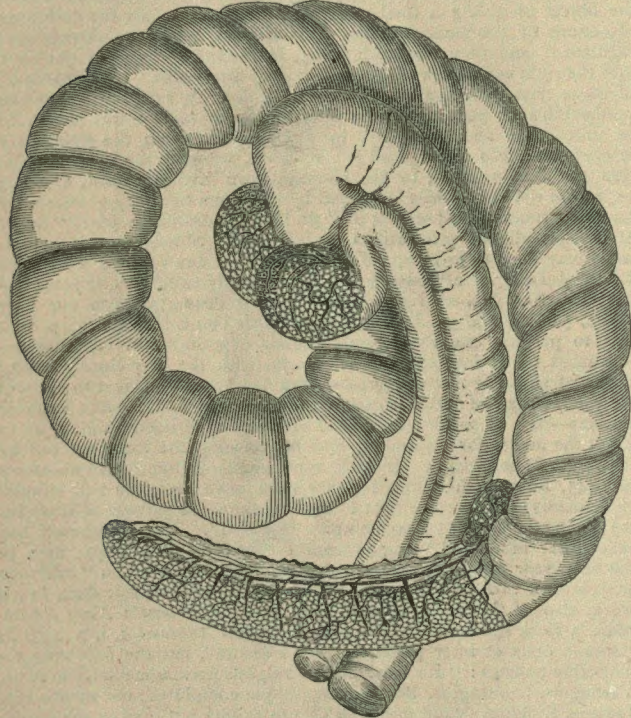


Fig. 1.—Vermiform Appendix and Cæcum with parts of Small Intestine and Colon of Rabbit (*Lepus cuniculus*). The Peyerian and also the mesenteric glands are seen to be injected.

In this latter place, it is but what the Germans call, and have called, a *Kinderspiel*, to insert the point of the fine *Einstichung* syringe, charged with the soluble blue injection, just beneath the peritoneal coat at the cæcal end or elsewhere, when, upon pressing the piston, a reticulation of blue will spread itself over the surface of the tube, inclosing as islands the solid substance of the Peyerian follicles. It needs but a little perseverance in the way of gentle pressure to cause superficial tubular lymphatics to arise into view, and to declare their true character by their contrast with and distinctness from the blood-vessels, as well as by their moniliform character, speaking of their richness in internally placed valves. Passing over the convex walls of the appendix, they join larger trunks which run along its mesenteric border; then larger trunks in their turn enter the mesenteric glands, and form in their substance reticulations strikingly like those formed previously in the walls of the intestine around the solid substance of the Peyerian follicle—speaking thus to the naked eye of the similarity, and by consequence of the homology, which the microscopic examination enables us to prove to exist between the lymph-masses and the solid masses which they surround in the Peyerian follicles and in the mesenteric glands respectively.*

* I take this opportunity of expressing my surprise that Henle has not seen his way towards accepting this view of the real nature or *Bedeutung* of the Peyerian follicles. In his *Gefässlehre* of 1868 (p. 404), he refers us back to his *Eingeweidelehre* of 1862, where the absorbent character of these structures is denied just as it was about the same date by Hyrtl in his *Handbuch der Topographischen Anatomie*, 1860, p. 646, and by Teichman, *Das Saugadarsystem*, 1861, p. 88-91. The view which I have adopted was accepted by a distinguished Fellow of this College, Dr. Burdon Sanderson, in the *Eleventh Report of the Medical Officer of the Privy Council* for 1868, p. 96.

It is the demonstration of the relation of the lymphatic or lacteal vessels, or sinuses, as the case may be, in different animals, to the solid ampulla-like masses in the Peyerian follicles, which the modern method of puncture can claim as being eminently its own attainment; for many years ago—in 1784, in fact—and three years before the appearance of Mascagni's splendid work with similar figures and histories of similar experiments (*Vasorum Lymphaticorum Historia et Iconographia*, 1787), the continuity of the lacteal radicles upon the walls of the intestine with the "lymph-paths", to borrow a word of later coinage, in the mesenteric islands, and finally, after passing through successive lines of these apparently solid structures with the thoracic duct itself, had been demonstrated by Sheldon, then Professor of Anatomy in our Royal Academy of Arts. These are his words (from page 49 of his work *Of the Absorbent System*, 1784), describing his plate No. 5, a copy of which I have had made and suspended there: "In the fifth plate of this work, upon a portion of human jejunum from an adult female subject, seventeen lacteal vessels are injected with quicksilver, by inserting pipes into them upon the intestine. They were remarkably large and varicose in this subject; and, as the quicksilver was poured into the lymphatic injecting-tube to fill these vessels, it frequently ran out in a full stream by the jugular vein which was opened. This circumstance rendered it evident that the mercury had passed through the whole course of the lacteals and thoracic duct, and had penetrated even into the venous system. It is, I believe, the only instance in which the thoracic duct has been injected from the lacteals on the intestines."*

Sheldon's first plate, I may add, when compared with his letterpress on p. 37, appears to show that what he calls "ampullæ" were really Peyerian glands, and that he had repeatedly seen these glands distended in the way of natural injection with chyle, as it is easy enough to see them distended in an animal, such as a rat, which can be got to feed on fatty food, and can be killed at a proper interval of time afterwards. He appears to have had very serious as well as reasonable doubts as to the existence of any foramen in the apices of these ampullæ; but the authority of Lieberkühn, whose *Dissertatio Anatomica* (p. 18) he had himself edited, appears to have weighed with him more than his *αὐτοψία*. Near, therefore, as Sheldon came to seeing the whole truth, he just failed of doing so entirely and completely; and the views which Lieberkühn had put forward (p. 19, *l. c.*) as to the great number of the Peyerian glands in the lower segment of the small intestines, being a proof that they held relation to secretion or excretion rather than to absorption, prevailed, and have prevailed, even into our own day. These are Lieberkühn's words: "Quare ad finem ilei plures quàm in integro intestino positi erunt? Nonne propter fæces jamjudum exsuccas et indurcescentes ut lubricatæ valvulam facile transeant nec lædant?" In Henle's ordinarily and marvellously excellent *Generelle Anatomie*, of date 1841, I find (p. 895) the excretory character of the Peyerian follicles taken as something certain; the only thing left uncertain being the question as to whether their contents found their way into the cavity of the intestine by a constantly patent, however small, duct, or by dehiscence, as ova from an ovary. In 1850, the real meaning, the true physiological import, of these glands was proved by Brücke. The method of injection, of which I have spoken, enables us to demonstrate or exhibit what was thus proved, and that with the greatest ease. It is difficult to understand how any one can now doubt that the Peyerian glands are really but the *pileorrhizæ* of the roots, the glands the tubera, and the thoracic duct the trunk or stem of the absorbent tree.

If any apology be needed for my dwelling so long upon a point of anatomy which has not merely much historical, but also much practical, interest—the Peyerian glands being the part of the organism especially affected by the poison of typhoid fever, which I see has, amongst other aliases, that of "Peyerian fever" (Walshe, *On Diseases of the Heart*, 3rd ed., p. 208)—I would add that I was till recently under the impression that the actual demonstration, the doing, of that which that diagram represents as done, might have been a fitting exhibition for me to go through upon the present occasion, following herein the example of Harvey, "*viliora animalia in scenam adducentis*". I have, however, learned that this very demonstration on the appendix vermiformis of the rabbit has been often performed in Germany, and, indeed, also in England; and I judged, consequently, that it might be superfluous, as it would not be novel, to exhibit it here and now.

* I have some pleasure in pointing out, by the aid of another diagram, taken from the plates of the venerable Professor Arnold, of date 1838, that the quicksilver injection could sometimes give as correct results as the "silver method" of modern microscopy for the detection of lymphatics by their epithelium. The diagram shows the fourth ventricle plexus without, the velum interpositum, on the contrary, with, lymphatics injected with quicksilver. The use of the silver method has enabled me to prove that this representation is correct: abundance of choroidal villi can be procured, and very beautiful objects they are when treated with 0.25 per cent. of nitrate of silver from the plexus in the fourth ventricle, but no lymphatic vessels. These can be shown from the velum interpositum by the use of the same reagent.

Having been thus disappointed in my intention of demonstrating something new in this direction, I cast about in another for something of the same character. And in the heart of a bird, the Australian Cassowary (*Casuarus Australis*), killed at Rockingham Bay, lat. 18 deg., on the east coast of the continent, and sent me by my former pupil, J. E. Davidson, Esq., I came upon a structure which I am well assured has never been either described or figured before. It possesses upon this ground some claim upon our attention; but it possesses stronger claims than any which mere rarity could give it, being a structure which, though it has never been seen in any other member of the class Aves, is largely developed, and, indeed, exactly reproduced in the hearts of certain mammals, and does not fail to be represented, at least rudimentarily, in our own. The structure in question is a "moderator" band, holding precisely the same relations to the other parts of the right ventricle in this bird which the band so named by Mr. T. W. King in the *Guy's Hospital Reports*, vol. ii, p. 122, 1837, holds in many, if not in all, Ungulate mammals. This, I presume, is made plain by a comparison of the two diagrams placed side by side, showing, one of them

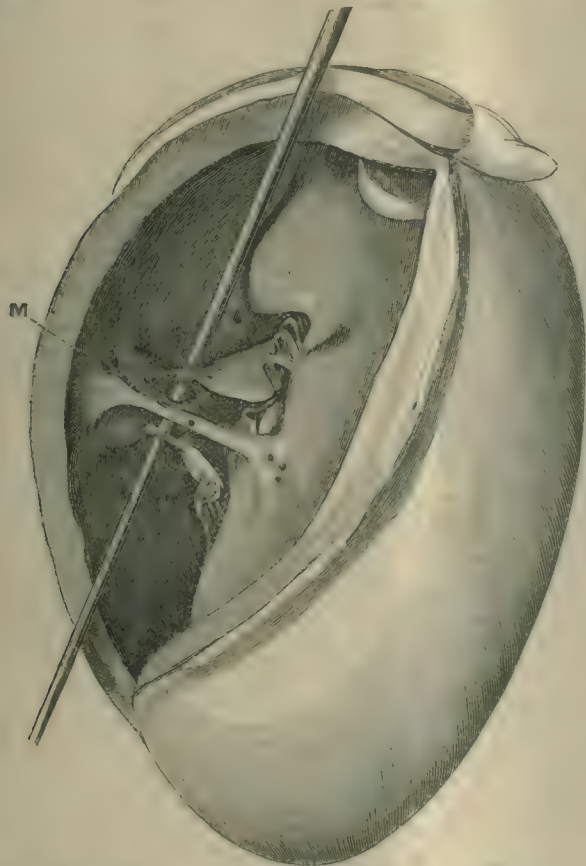


Fig. 2.—Heart of Sheep. The right ventricle is laid open. The letter M indicates the moderator band. A probe has been passed between the chordæ tendineæ of the two main segments of the tricuspid valve and the outer wall of the ventricle.

the heart of this bird, the other the heart of a Sheep, with the right ventricle similarly laid open in each case. The advantage, which in the struggle for existence, and specially in that very common phase of it which takes the form of a race for food or from an eater, which an animal with such a muscular band passing directly across the cavity of its right ventricle from its fixed to its movable wall must possess, is not a difficult thing for any man to understand who has ever either watched in another or experienced in himself the distress caused by the over-distension of any muscular sac. A band of similar function—I do not say definitely of precisely the same morphological importance—has often been figured as existing in the hearts of most or all Reptilia below Crocodilina; and it serves in them to close up and expel the blood from the pulmonary compartment of their imperfectly divided ventricle.

Such being the function of this moderator band, what is its morphological bearing, and what traces can we find of it in ourselves, tempting

us to speculate as to the nature of the secret bond which brings us into relations of affinity not only to the mammalian class, but with an older stock, the many-sided potentialities of which embraced not only mammals, but all warm-blooded animals, and not only all warm-blooded creatures, but cold-blooded animals and reptiles also? The valves of the heart in the higher Vertebrata, when regarded from this point of view of development, the safest if not the sole criterion of homology, may be spoken of as being but trabeculae flaked off from the inner surface of the wall of a muscular sac, and subsequently made more or less membranous in the way of specialisation and its correlative economy. Thus as Gegenbaur (*Vergleichende Anatomie*, 2nd edition, p. 836) has

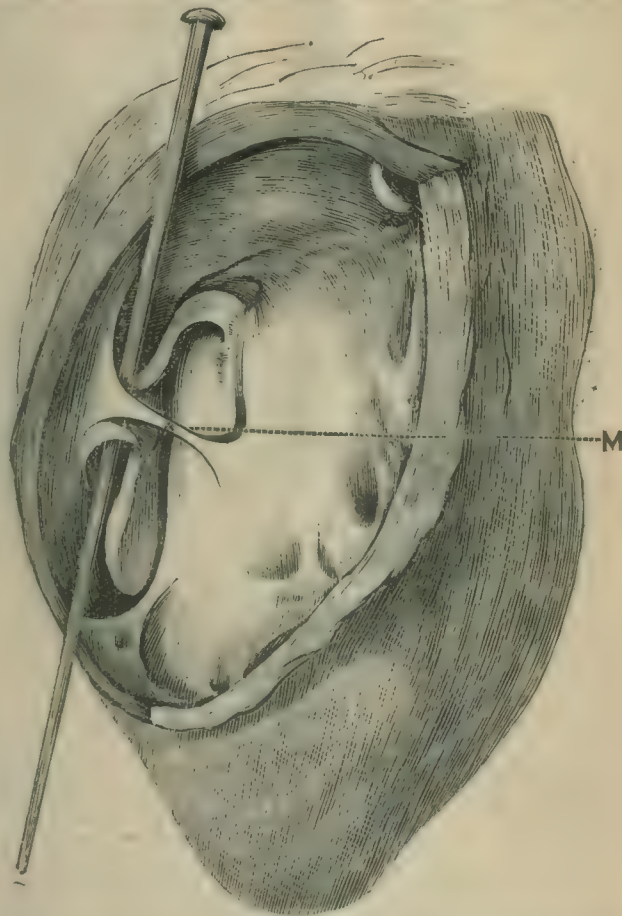


Fig. 3.—Heart of Australian Cassowary (*Casuarus Australis*), shewing M, the moderator band.

remarked, the intervalvular space in these animals corresponds to the entire cavity of the spongy walled heart of Fishes and Amphibia; and the sinuous intertrabecular cavities in the spongy walls of these latter animals correspond with the chief part—viz., the extravascular part of the ventricular space—in Mammals, Birds, and Crocodilina. Now, the muscoli papillares represent the disposal or destination of the innermost layer of the right ventricle, according to Dr. Pettigrew (see his paper, *Phil. Trans.*, 1864, p. 479); and I would submit that the moderator band is but a specialisation of the next layer in order from within outwards—to wit, Dr. Pettigrew's sixth layer, which he has figured (pl. xiv, fig. 33) as proceeding in a spiral direction from right to left, much as the fibres of the moderator bands I have figured do. A study of the heart of the Rabbit will put this matter in a very clear light, and further open our eyes to see and recognise the rudimentary representation of this moderator band in our own hearts. If we look at the outer aspect of that very constant musculus papillaris, which passes in Man from the outer and movable wall of the right ventricle to distribute its chordæ tendineæ to the two more anteriorly placed of the three segments of its auricular valve, we shall frequently see that its longitudinal fibres are crossed nearly or quite at right angles by a slender fibrous band, so that we have before us an appearance not

wholly nor essentially unlike that presented by the striae longitudinales of Lancisi and the fibres of the corpus callosum when viewed in mutual connexion. This band of fibres can sometimes be traced up towards the conus arteriosus, and be seen not to die away until close upon the point of origin of the most anteriorly or upwardly placed chorda tendinea arising from the septum to pass to the hindermost of the three

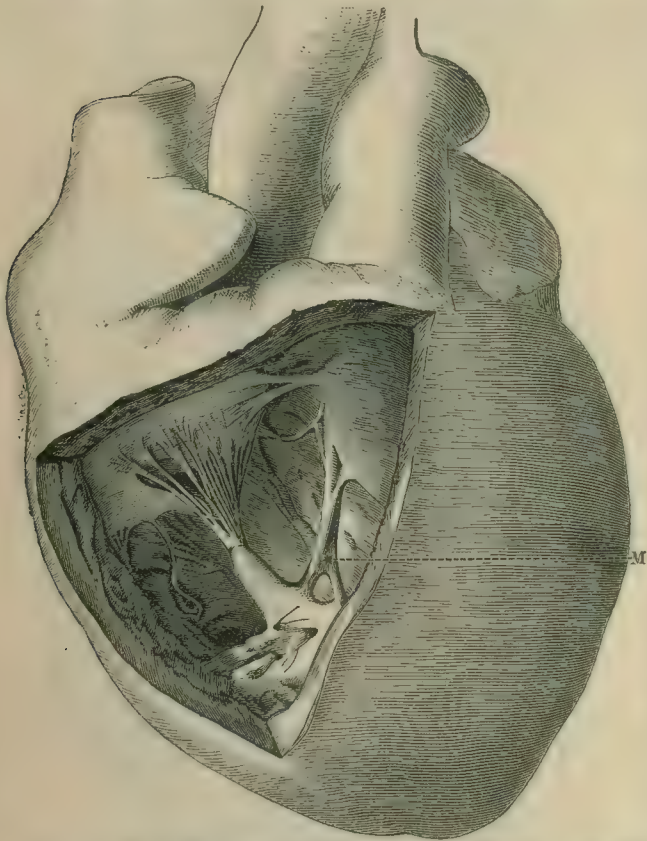


Fig. 4.—Human Heart. The right ventricle has its cavity exposed. The moderator band is seen to pass up from the base of a musculus papillaris arising from the outer or movable wall of the ventricle towards the conus arteriosus. Close to this, its upper end, a chorda tendinea arises, and passes up to the most posteriorly placed of the three cusps of the tricuspid valve.

segments of the tricuspid. The points between which this line of fibres lies may be observed to be the very same as those between which the moderator bands in the Cassowary and the Sheep stretch as free columns in the diagrams before you. It is not altogether rare to see this band raise itself from the position of fusion, like the ventricular wall, and assume the character of a cylindrical band for a lesser distance, but with no less distinctness as a column, than in the Ungulata. Such a case I had actually before me whilst writing this, and you have it now figured before you.

Every gradation, in fact, exists between the entire obsolescence of the moderator band, which we sometimes see in the human heart, through the typical, and, I should anticipate, constant, but not functionally important, representation of it in the Rabbit, up to the important and structurally prominent development attained to by it in the Ungulate Mammal, and this solitary instance for the class of Birds, and the subclass with such generalised affinities, of Struthionies.

And speaking of the method of gradations, I take this opportunity of saying that its application in the case of the muscular right auriculo-ventricular valve of Birds will, in my judgment, put an end to the disputes which have taken place as to its homology with one or other of the two valves in the Crocodiles. The two portions of the valve in the Casuarius Australis are so nearly equal—the larger being but 1.7 inch and the smaller 1.4 inch—as to do away with the difficulty which might be felt in holding that both Crocodilian valves are represented here. There are other reasons for this view, which I reserve for another occasion. But, whilst speaking of the heart of the Bird, I cannot forbear pointing out how the structural arrangements of its auricle, dif-

fering as they do strikingly from those of the same compartment in the mammalian heart, help us by that contrast to get a true idea of the working of this latter. Firstly, the walls of the Bird's right auricle are relatively thicker, not only as compared with the walls of its own ventricle, but also as compared with the walls of the corresponding auricle in the Mammal, the muscoli pectinati standing out in as sharp relief as the similarly working muscular ridges in a hypertrophied bladder, and inclosing anfractuosities and recesses almost as deep. But, secondly, and what is of more importance, the Bird's auricle is furnished with a large and functionally active valve, protecting the entrance of the great veins, and preventing regurgitation into those vessels just as the auriculo-ventricular valves prevent regurgitation from the ventricles. It is fair to argue *à priori* that, if the mammalian auricle had counted for as much in the action of the heart as the Bird's, its force would have been economised by the placing of a large and functionally useful valve in the site of the rudimentary Eustachian—a structure altogether absent in many mammals, and variable, as rudimentary structures very often are, in ourselves. The *à priori* argument of comparative anatomy is abundantly borne out by the appeal to experiment. Marey, in his *Physiologie Médicale de la Circulation du Sang*, 1863, whilst referring (p. 36) to other evidence from comparative anatomy than that which I have adduced, cites, in support of the view that the auricle has but an accessory and subordinate rôle in the functions of the heart, an experiment of Chauveau's, in which the auricle of a horse, being exposed and irritated, lost its contractile power for a time, during which, nevertheless, the ventricles continued to contract and the circulation to be maintained. Colin, again (*Traité de la Physiologie Comparée*, vol. ii, p. 257, 1856), found that the left ventricle continued to be filled with blood, even when the corresponding auricle was prevented from contracting by the insertion into it of a finger. And further, Magendie had long ago noted, in experimentation, what many here present may have noted in pathological or clinical observation—viz., that the auricles may remain extremely distended for hours, and, like other muscular sacs similarly conditioned, unable to contract and empty themselves, without the circulation for all that being brought to a standstill. It was Dr. Pavy's paper treating, in the *Medical Times and Gazette* of November 21st, 1857, of the case of a man (E. Groux) with a congenital fissure of the sternum, which first drew my attention to these points; and his summary of what takes place in the dog is so clear that I herewith reproduce it.

"In the dog, the contraction of the ventricles is sharp and rapid, instead of prolonged, as in the reptile, and does not appear to occupy nearly so much time as half the period of the heart's action. The ventricular contraction communicates a sudden impulse to the auricles, occasioning in them a distinct pulsation, which is instantly followed by a peculiar thrill, wave, or vermicular movement, running through the auricular parietes down towards the ventricle. This thrill or wave is coincident with the passage of the blood from the auricle into the ventricle, and takes place so instantaneously after the ventricular contraction, that the one movement appears to run on to continue itself into the other. There is then a pause, which seems comparatively of considerable duration, and which is succeeded by a recommencement of the heart's action, beginning with the ventricular contraction."

Dr. Pavy has very kindly gone to the trouble of repeating the experiment upon which these statements are based; and from a letter with which he has favoured me, I gather that the auricular contraction detectable by the cardiographic tracing immediately preceding the ventricular contraction, is also detectable, of course during the pause just mentioned, by the eye, unassisted by the cardiograph, and turned simply upon the exposed heart, in which the auricular appendix is seen to become redder or more flesh-coloured at the moment in question (*see* Walshe, *l. c.*, p. 65). And he further remarks that this auricular contraction, difficult though it be to be observed under physiological conditions, may be exaggerated into considerable prominence in disease entailing contraction of the auriculo-ventricular orifices, and may then make itself known by a præstystolic murmur.

I should now be glad to draw attention shortly to a few memoirs which have appeared comparatively recently, and which treated of matters of considerable interest, not merely as scientific problems, but also as practical questions. First among these, I would name the paper which appears in the third volume of Professor Ludwig's *Arbeiten*, 1868 (having previously appeared in vol. xx of *Bericht Math.-Phys.-Klass. K. S. Gesellsch. Wissensch.*, Leipzig), by Professor Ludwig himself and Dr. Dogel. In this paper, we have a number of experiments recorded as performed with the hearts of dogs removed from the body, and as nearly as possible emptied of blood; and the conclusion to which the authors come is, that the heart of the dog, when removed from the body and emptied of blood, still produces a sound during the systole of the ventricles, which is not essentially different from that which is recognised as the normal first sound of the heart. The authors add, how-

ever (p. 85), that they do not think these experiments entirely exclude the possibility of the tension of the auriculo-ventricular valves entering as a factor into the production of the first sound; and hereby they would be guarded from coming into contradiction with most English authorities—as, for example, Dr. Walshe (*Diseases of the Heart*, 3rd ed. 1862, p. 62). Dr. Guttman, however, in a paper of no great length, but of considerable merit, published subsequently to the one just mentioned, and in Virchow's *Archiv* for 1869, points out with most acuteness what, when once pointed out, is ever thereafter obvious—viz., that it is, in the nature of things, impossible, with all possible precautions in the way of emptying the heart of blood, to empty the complex phenomenon made up by a systole of the heart of the condition of tension of the auriculo-ventricular valves. Surely the muscoli papillares will contract with the rest of the ventricular walls, and, contracting, will they not stretch the chordæ tendineæ and the valves? For myself, I would say that we are more likely to overrate the share taken by the valves than to underrate that taken by the muscular walls. I need not say to this audience that the fact with which we are all familiar, of the alteration in the first sound produced by disease of the auriculo-ventricular valves, does not absolutely prove that they produce any part of it during health; and, finally, to my own ear at least, a modification of Wollaston's experiments, which anybody can try for himself by making his temporal and masseter muscles contract at any time of perfect stillness, appears to produce a sound which is scarcely, if at all, different in quality from the first sound of the heart. A judgment, however, upon the nature of a sound, or, indeed, an aggregation of sounds, as in music, is one upon which two observers may very well differ, as neither of them can lay his proof of supposed identity or difference alongside of that which the other may possess, or suppose he does.

It is with much pleasure that I refer to Dr. Rutherford's paper on "The Influence of the Vagus on the Vascular System", which appears in the *Edinburgh Royal Society Transactions* for 1870, vol. xxvi. In that year, having to deliver an address to the Biological Section of the British Association at Liverpool, I made bold to say that the results to which Dr. Rutherford had come, and which were then only known to me in an abstract in the Cambridge and Edinburgh *Journal of Anatomy and Physiology* (May 1869, p. 402), would prove to be of the highest value and importance. His memoir now published in *extenso*, and extending over forty-two pages, as fully justifies my prediction as it will fully repay anyone who will take the pleasant trouble of reading it. The most important result in a practical point of view is the demonstration which Dr. Rutherford has given of the nerve-circle, whereby, in the way of reflex action, the all important secretion of gastric juice is called forth. The sensory impulse caused by the ingestion of food into the stomach, is propagated upwards by the vagi to the medulla oblongata, where it throws into abeyance the vaso-motor nerve-cells, which, whilst the stomach is empty, keep the blood-vessels of the gastric mucous membrane constricted, but which, when their activity is inhibited, allow the zonular fibre-cells of these blood-vessels to dilate, and allow the increased afflux of blood thus called for. That relief will result to some of the countless martyrs to dyspepsia out of the demonstration of this physiological relation of vagus, sympathetic, and peptic glands, I do not doubt. Possibly, I would add, Owjannikow's observations as to the working of hydrate of chloral as a depressor of arterial tension (Ludwig's *Arbeiten*, 1872, p. 32) may prove valuable to persons engaged in practice, by pointing out, in however shadowy a fashion, the road to a more rational and systematised, even if less general, use of this drug than that which I am told is now made of it. It may seem a paradox, but it is none the less true for all that, to say that, for the activity of many organs, a paralysing and inactivity of certain nerve-centres in connection with them is a prerequisite. The activity of such, indeed of most, organs is but intermittent and occasional, being but intermittently and occasionally called for, whilst the constricting activity of the sympathetic has to be constantly at work to prevent waste of force; the phenomenon of the distinction of the corpora cavernosa, a phenomenon used by Harvey himself in the way of illustration (of p. 129 of the *Epistola secunda ad Riolanum*), I may adduce in the way of illustration also, being, as it is, dependent upon a similar nervous mechanism.

Owjannikow's paper (also to be found in Ludwig's *Arbeiten*, 6th year, 1871, and in the *Bericht Math.-Phys.-Klass. K. S. Gesellschaft. Wissensch.*, Leipzig) just referred to, and published two years subsequently to Dr. Rutherford's, gives, as the result of a number of experiments performed in Professor Ludwig's laboratory at Leipzig on rabbits, and independently at St. Petersburg on cats, the conclusion that the ganglionic centres of innervation for the entire sympathetic system occupy but a small space at the base of the brain, two strips, to wit, one on each side of the median fissure in the floor of the fourth ventricle; of, in the rabbit, a length of about four millimeters, beginning about four or five millimeters anteriorly to the calamus scriptorius, and ending

about one or two millimeters behind the level of the corpora quadrigemina. The title of such a book as Eulenberg and Guttman's *Die Pathologie des Sympathicus auf Physiologische Grundlage* (Berlin, 1873), is an encouragement to those who hope to see fruit arise from such researches as these in the way of additions to our means for meeting, or at least understanding, human disease and suffering.

It has long been known (Budge, 1855) that the sympathetic nerves which supply the vessels of the head and iris do not pass directly or by the shortest possible route to this their distribution, but pass down the spinal cord for a greater or lesser distance, and then turn outwards, and pass from the anterior nerve-branches to bend upwards, much as the recurrent laryngeal nerve does. That other vascular regions receive their vaso-motor supply by this apparently circuitous route and, till the history of development is taken into consideration, paradoxical route, is from time to time being demonstrated. Dr. Pavy, to whom I have already referred, many years ago identified and mapped out one segment of the road along which nerve-force passes to the liver, and prevents or allows the occurrence of diabetes. Further exploration of this route we owe to Cyon (*Bulletin de l'Académie Impériale des Sciences de St. Petersburg*), cited in the *BRITISH MEDICAL JOURNAL*, December 23rd, 1871; and this same investigator, working still in the same line of investigation, as it is in these days usually necessary for an investigator to work if he will make himself a name as a discoverer, has also shown us (Ludwig's *Arbeiten*, 3rd year, 1868) the track along which the vaso-motor nerves of the anterior limbs pass, proving that these nerves pass down in the spinal cord as low as the mid-dorsal region, before leaving it to turn upwards in the sympathetic chain to join the brachial plexus. Of all the results, however, which have been attained to in the line of experimentation now under consideration, those come to by Brown-Séquard and demonstrated by him at the meeting of the British Association held at Liverpool in 1870, and subsequently published in the *Lancet* of January 7th, 1871, seem to me to be certainly the most striking and possibly the most important. Could anything have been more surprising to him whose memory we here this day commemorate, than to have been told that an injury to a particular part of the brain, the pons, called after the excellent anatomist whose life ended in the very year in which his had begun, would produce hæmorrhage in certain parts of the lungs, and anæmia, cedema, and emphysema in others? This is an easy experiment to repeat; it is one which might have been done in the days of Harvey as easily as in those of Bernard, of Budge, of Ludwig, and of Brown-Séquard. But easy though it would have been to perform, I am bold to say it was well for Harvey that he never happened to perform it. For considering that, like Haller, he knew nothing of the contractility of arteries; considering that Hunter had not performed his now well-known experiments with the umbilical arteries; considering, sir, that in that excellent work on *Physiology*, the translation of which in 1838, by our late and never sufficiently to be lamented friend Dr. Baly, we owe to your suggestion, I find several pages (p. 202-206) devoted to disproving the muscular contractility of arteries; considering, that it was not till three years later, in 1841, that Henle's work, already referred to, appeared with its still unsurpassed figures, plate iii, figures 8, 9, and 10 of the arteries, with their circular muscular coat, and with its excellent summary in letterpress of the whole subject, pp. 518-526, and especially pp. 524, 525; when I consider that nothing of all this had been done, to say nothing of other advances connected with names of men yet living to speak for themselves and for us—I say it may have been well that Harvey never came upon the facts relating to the alterations of lung-substance being entailed by destruction of brain-substance, not difficult to be observed and reproduced, which we owe to Brown-Séquard. For if he had come upon them, how could he have explained them in the absence of the entire chain of connecting facts, in the forging of which chain so many successive workers—Purkinje, Valentin, Weber, Burdach, Stilling, and others—have all contributed links? Might not even Harvey, often as he withstood such temptations, have, nevertheless, in default of power to assign the real causes of such a phenomenon, been driven back upon some of those explanations which he himself forcibly denounces in the words (*Epistola secunda ad Riolanum*, p. 116), "Vulgo scioli cum causas assignare haud norunt dicunt statim a spiritibus hoc fieri et omnium opifices spiritus introducant, et ut mali poetæ ad fabulæ explicationem et catastrophas Θεὸν ἀνὸς μηχανῆς advocant in scenam." It is a hard thing for any man to abstain from speculating as to the cause of any well established phenomenon, especially if it be of striking interest and importance; it is a hard thing for any man to do more than keep pace with his own generation; and those who have spent any time in reading the works of Harvey's contemporaries, will best appreciate the difficulty he must have had in setting himself free from the influence of the *idola theatri* referred to.

[To be concluded.]

LECTURE ON HYPOCHONDRIASIS.

Delivered at St. Mary's Hospital, June 25th, 1873.

By THOMAS KING CHAMBERS, M.D.,

Honorary Physician to His Royal Highness the Prince of Wales; Consulting Physician to the Hospital; etc.

MISERY !—that is the subject of my lecture to-day. Perhaps you think you have had enough of that. The shadow of pain has been hanging like a gruesome cloud over the whole weary way through the systematic courses of medicine and surgery. But bodily pain is not misery; you must have seen patients jocose, or even cheerful, though daily racked with tortures, the sight of which has brought tears into your eyes. I would even go so far as to say that bodily pain does not cause misery in a normal man, at any rate, not misery at all comparable with that which arises independent of pain. Yet we lavish our pity upon the one, while we allow the other often to excite a feeling not far removed from anger in our breasts. Of course we sympathise with that of which, in minor degrees, we have all experience, while we (that is, the healthy-minded among us), fail to understand that of which our senses are not cognisant. Normally, the mere process of living is, of itself, a positive delight, a continuous delight, with comparatively short interruptions, arising from sickness and death; and the smile with which we greet everybody and everything is not taught by convention, but by instinct, or hereditary reason. Misery is abnormal; a disease, a terrible disease, as those who have felt it know well. It is a constitutional disease, idiopathic, not dependent on external circumstances for its origin. Disappointment, loss of wealth, loss of husband, wife, children, friends, of health, character, or social position, are often alleged as causes, and sometimes they may be the final excitant; but shrewd observation will show that usually they are mere pretexts, offered in explanation of a mystery. Thanks to the All-merciful, all these things are borne daily by millions with cheerfulness: "Some natural tears they drop, but wipe them soon," and involuntarily protracted sorrow is always a pathological state.

This state is called, in the nomenclature of the College of Physicians, "Hypochondriasis," and is rightly classed as a disease in which there is disorder of the sensitive parts of the nervous system, but no disorder of the intellect. For the patient feels all wrong, but understands all right. There is no perversion of the understanding, such as frees the insane from the responsibility of moral agency. The understanding, indeed, is usually very clear, so that it is easy, in the case of educated persons, to demonstrate to them the true nature of their malady, and to elicit evidence that it is idiopathic, and independent of, if not anterior to, the accidental causes assigned. I mean, it is easy to a persevering and earnest will.

The distinction drawn, as above mentioned, is of the highest importance to us as practitioners of general medicine, and to our patients; for while we are inclined, and I believe do right, to hand over those whose intellects are disordered for treatment by the special means which our alienists apply so skilfully, hypochondriacs are better kept in our own care. They are not *alienati mente*, and are injured by being treated as such.

Yet, though the College has acted well in drawing a distinct broad line between hypochondriasis and disorder of the intellect, the nomenclature does not quite satisfy me in its definition. The disturbance of the bodily health is put so prominently forward, that the reader is led to expect to find it preceding the deranged feelings, whereas, in a great many cases, no such sequence of events can be shown. The pasty tongue, the difficulty of swallowing, the loss of appetite, the painful and slow digestion in the stomach, the flatulence in the bowels, the weak, languid circulation, the loss of adipose tissue, and in long cases the atrophy of heart, liver, pancreas, are consequences of the imperfect innervation.

The most vivid picture extant of an hypochondriac is contained in the autobiography entitled, *Grace Abounding Unto the Chief of Sinners*. It is a history of the feelings of "God's poor servant, John Bunyan," as he styles himself. The plain tale of his inward misery, from boyhood up to his imprisonment in Bedford Jail, explains many passages in his larger work, *The Pilgrim's Progress*, which do not accord with the

psychical experiences of healthy Christians. I refer especially to the Slough of Despond, the Man in the Iron Cage, the description of Doubting Castle, Mrs. Diffidence, and Giant Despair. He says, in words which naturally break into poetic rhythm, "I beheld the condition of the dog and toad, and counted the estate of everything that God had made far better than this dreadful state of mine." No healthy man ever felt like that; but to the hypochondriac, alone in creation, no past, no future, can be so bad as the present—*hora novissima, tempora pessima*.

One feature especially noteworthy is the suddenness of the attacks. Bunyan describes himself as arrested by one in the middle of a game of tip-cat, so that he left the cat he was about to strike on the ground. But on "returning desperately to his sport again," he felt his soul "possessed," as he words it, with despair of ever attaining happiness. The suddenness of invasion is most striking when the patient is in the company of others, as Bunyan was. He may be in the middle of an ordinary conversation, when a dark cloud seems to overshadow him, and henceforth all is gloom and unutterable misery. Perhaps, under such circumstances, the attention is diverted from minor degrees of disease, and is drawn towards it only when it has got to the worst; for, in solitude, a more gradual progression is often observable.

A vague alarm of impending evil very frequently accompanies the misery, and sometimes (as in Bunyan's case), it takes the concrete form of a dread of hell, and thoughts about devils. In dreams they assume a definite shape, and seem trying to draw the sufferer along with them. Sometimes there is a dread of death; but I think it is exceptional, and that when you find such a fear in a diseased degree, the case is likely to turn out one of ordinary insanity, delusions of the intellect supervening. More commonly death is looked forward to as a relief from misery, and would be considered not unwelcome. In such cases patients will sometimes commit suicide, not like madmen, in a sudden whim, or uncontrollable impulse, but in a deliberate manner. Indubitably, suicide would be much more common, but for the reason which Hamlet, the prince of hypochondriacs, rightly assigns. "The dread of something after death," acts as a powerful safeguard. I wish Shakespeare could have truthfully written "The hope of something after death," which is a much better reason for avoiding suicide; but such a feeling is inconsistent with the character he is painting. While the fit is on, the only motive influence over the soul is fear, and that, I believe, preserves many an one from self-destruction. It is a stupid and a blasphemous act to hurl back the Creator's best gift in his face, and it well deserves the disgrace and punishment which men attach to it. But irrational it is not, for the hypochondriac may with reason argue that he had rather be or do anything than "grunt and sweat under this weary life." Nay, more, if a man be so credulous as to think the grave the end of his being, and can imagine "this sensible, warm motion, to become a kneaded clod," it is difficult to answer his arguments for extinguishing himself. Suicide is a cure for hypochondriasis, as a cure the hypochondriac seeks it, with a full knowledge of the nature and bearings of the action, and therefore he should be held entirely responsible. To call the deed one of "temporary insanity," where there is no evidence of delusion, is pure effeminacy. Some sciolists have lately promulgated what may be called an "euthanasian" creed, advocating both suicide and murder. Yet mad they certainly are not, and are guilty of any consequences which may follow the paradoxical dogma which they are vain enough to print. They are shown up in *The Pilgrim's Progress* under the guise of a wicked old woman, Mrs. Diffidence, who suggests "knife, halter, and poison," as a cure for the pilgrim's doleful state. Hypochondriasis never disposes the patient to injure others. Without disorder of the intellect, evidence of which may be wormed out, homicidal tendencies do not appear, so that you have no right to lock the poor man up in a mad-house on the grounds of social policy.

Hypochondriasis sometimes appears very early in life. John Bunyan suffered from it when he was a mere child, and quite as much when he was a blackguard swearing tinker, as after his marriage and conversion. Oftener it comes on in manhood, rarely after the meridian of life. Its early supervention would be enough to show its hereditary nature, but you can almost always obtain individual proof of the same, as it is not made a family secret, like madness. Sometimes insanity, more often hysteria, may be traced in sundry of the kindred, but most frequently chronic invalidism, or something which puzzled the doctors but did not shorten life, is the form which the disease assumes in the domestic records.

The intellect of hypochondriacs is usually of a superior order. The author whose case I have quoted is an instance in point. Again, Shakespeare makes Hamlet a courtier, soldier, scholar, "the observed of all observers;" and Shakespeare is never wrong in such matters. The patients who come to us are often shrewd men of business, pushing inventors, judicious speculators, so long as the disease does not interfere

with their usefulness. If skaters, they are distinguished by cutting the most elaborately graceful figures; if sportsmen, they are dead-shots. I select these instances purposely, because sedentary and scholarly habits have been popularly associated with the disease; but I think the association arises from the accident that the higher intellects are naturally attracted to literature. I have not found hypochondriasis often preceded by excess of brain-work or of desk-work, than by athletic training.

A common symptom in hypochondriasis is a temporary loss of power in the voluntary muscles of a part, or more often of the whole body, *paresis subitanea*. The patient is coming up hill from the railway station to dine with a friend, when he suddenly finds himself unable to proceed. Bunyan makes Giant Despair lose the use of his hands at a most lucky moment for the pilgrims, just as he is rushing at them with a club. In my experience, the lower extremities are most affected, but still the paralysis is of the partial character indicated; the Giant is described as withdrawing quietly, and when the legs are seized, the patients can still crawl along. There is no loss of sensibility, not even giddiness. The patient can stand, but he cannot go. He does not fall, but from utter prostration and weariness he throws himself into the nearest resting-place; and there he will remain, if allowed, till the misery gradually passes away, or is relieved by the stimulus of food.

Bunyan parenthetically remarks, that these attacks of paresis came on when the sky was bright: "he sometimes, in sunshiny weather, fell into fits:" a very shrewd observation, and one not likely to occur to any but either an actual sufferer, or to the sensitive penetration which always makes real genius hit the bull's eye of fact. Listen to Shakespeare's hypochondriac. "I have of late (but wherefore I know not), lost all my mirth, foregone all custom of exercises: and indeed, it goes so heavily with my disposition, that this goodly frame, the earth, seems to me a sterile promontory; this most excellent canopy, the air, look you—this brave o'erhanging firmament—this majestical roof fretted with golden fire, why it appears no other thing to me than a foul and pestilent congregation of vapours," says Hamlet, pointing out of window to a bright starry sky. A common-place artist would have put in a background of mist and lowering clouds; but our poets know better, and rightly describe a high state of barometer as an aggravating condition.

It is very seldom that an hypochondriac escapes without the general misery being localised in pain of some part or another, either continuously or at irregular periods. An observant person can usually detect the nature of the pain by noticing that it is not antecedent to, but consequent on the mental distress. Bunyan says, "I felt such a clogging and heat at my stomach, by reason of this my terror, that I was, especially at some times, as if my breast-bone would have split asunder." This is the pain in the hypochondria, whence the disease gets its name. The "clogging and heat" is very graphic; the sharpness, the stabbing, the aching characteristic of neuralgia, are not found here, but instead, a dull sort of burning sensation, deeply seated in the interior of the body. It moves about, but slowly, and when it begins to move is usually moving off. Sometimes, what the patient calls a "scratching," or a "scraping," and which pathologists Latinise into "fornication,"* is felt more superficially than the deep burning. The back of the head and neck, the soles of the feet, the palms of the hands, are favourite points for this sensation; but some also describe it as occurring in the abdomen. A feeling of weight in the rectum, in the uterus, or in the bladder, is often experienced, though they may be all no fuller than natural.

The *paresis subitanea*, which I described in the muscles of the limbs, still more frequently affects the involuntary fibres of the intestinal canal. The peristaltic movements become sluggish, and do not press upon the contents of the bowels. The portal veins fail to re-absorb the air thrown into the area of the tube, and so it becomes rapidly distended. If the air pass off, it is evident, from its odour, that it does not consist of the gases of decomposition, but is mostly atmospheric and carbonic, exhaled from the blood. But the air rarely does pass off by the external vents; it gives a great deal of trouble by remaining in the bowels, distending them inconveniently and painfully. Poor John Bunyan seems to have been so blown up, that he says he feared he was going to suffer the fate of Judas Iscariot, and "burst asunder in the midst." In process of time the whole may be re-absorbed, without necessitating any explosion.

If the paresis of the bowels be long continued or frequently repeated, it retards digestion, and the food decomposes and fills the abdomen

with fetid gurgling gases; there are a nauseous taste in the mouth, eructation, and malodorous flatus. But these cases are by no means so much the rule as to make indigestion an essential feature of hypochondriasis. When the flatulence is most marked, there is often much confusion and giddiness of head.

A feature which is almost universal in long cases of hypochondriasis, is loss of weight during the attacks. I am not sure whether it precedes or follows their commencement; but at all events it disappears very rapidly immediately on a normal condition of feeling being recovered, in such a marked way as that the patient considers the change a cause of restored health. In his *Grace Abounding*, Bunyan describes himself several times as suffering from this symptom—as he words it, "inclining to a consumption, wherewith, about the spring, I was suddenly and violently seized with much weakness in my outward man". And a few pages afterwards he speaks of being "very ill and weak", presumably from a similar cause, when his spirits suddenly revived, and he thought of the angels carrying Lazarus into Abraham's bosom. Then he mused with comfort on "O grave, where is thy victory". "At this", he goes on, "I became well both in body and mind at once, for my sickness did presently vanish". He typifies this symptom in the person of one of the prisoners in Doubting Castle, "Mr. Despondency, who was almost starved to death".

The male genital functions are frequently much deranged in hypochondriasis. Their condition may be described as exhibiting a want of harmony. There is at one time desire without erection, and at another time erection without desire, and sometimes emission without either. This distresses patients very much, for it affects, or is supposed to affect, their social relations to others, and it often leads them to submit themselves to injurious local treatment at the hands of dishonest and ignorant practitioners.

The urine of hypochondriacs is apt to be deficient in due acidity, and variable in specific gravity. Crystals of oxalate of lime often float in it, and an abnormal quantity of renal and vesical epithelium. Mucus also often is formed in excess in the urethra, and is squeezed out during straining at stool, or even stains the linen. These symptoms are all exhibitions of imperfect nutrition, and are analogous to the leucorrhœa of the female. I have, however, known the urine to contain an unusual amount of urea; and then I have found that the patients have been gorging themselves with meat in excess of appetite, sometimes from gluttony, sometimes on theoretical grounds.

The impression that they are the victims of some organic lesion is the well known commonest, and often called the distinctive, feature of hypochondriacs. Feeling general misery, often accompanied by local pain, they construct a theory to account for the same; and, as they are for the most part intelligent and ingenious persons, the theory runs a chance of being a very plausible one, and of convincing themselves and their friends, and often their medical advisers. They have been led into a wrong judgment, doubtless, but so have the doctors; but there is a most distinct broad line to be drawn between an error of this kind and one that is the result of hallucination, illusion, or delusion. The common sense of mankind is, as Dr. Maulesley points out (*Reynolds's System of Medicine*, vol. i, p. 20), the final court of appeal for what constitutes evidence of insanity; and you will find that the impressions of hypochondriacs regarding their bodily health are not repugnant to the common sense of mankind. This is an all-important test, for we often have people coming to us and complaining of things which are utterly preposterous—the mere statement of which is a proof of their non-existence. I refer to such a statement as that made to me by a tradesman's wife, that she had become solid, and that there was no space to contain the food, which nevertheless she ate; or that of a banker, that his abdomen was full of tadpoles; or that of an idle country gentleman, that some stones, which had been thrown in his face weeks ago, had gone down into the stomach and could be heard rattling. All these turned out lunatics in the end, and so, I feel sure, must almost all those laughable but misplaced examples with which writers on hypochondriasis are wont to enliven their treatises. Of course instances occur where the diagnosis is difficult; but they are really rare, and the moral of them is, let us not be in too great a hurry to make the diagnosis.

One usually employs the masculine article in speaking of hypochondriacs, but women are not wholly exempt. I have now a mother and daughter under my care for the disease, the nature of which they thoroughly understand, and are learning to subdue. Their intellects are of a superior order, and perhaps what one would call masculine in a favourable sense; I mean, they are not the least emotional or hysterical. It may be noted that Bunyan places one, and only one, woman in Despair's dungeons. Her he does not describe; because, indeed, he knew nothing of the other sex "but by their apparel" beyond his own family circle. He says he was "shy of women". "The common salutation of women I abhor; 'tis odious to me in whomsoever I see it. Their

* "Fornication" means properly pain like that caused by the bites of ants, such as arises in the action of cantharides on the skin. I do not think that it describes well the sensation in hypochondriasis. I have always found sufferers repudiate the comparison of their feelings to the bites of ants or the stinging of a blister. For obvious reasons, I never use the word *fornication* in their presence.

company alone I cannot away with." So he naturally did not receive their confidences.

It is a great comfort that hypochondriacs rarely if ever have that love of lying which angers us so much in hysterics. It is true that Hamlet shams madness; but that is for a definite politic object, as anybody else might sham, and not for the purpose of deceiving, like a hysterical girl. Now, hypochondriacs will argue with you interminably, but they will not swindle you; neither have they that unamiable suspiciousness of madmen: indeed, they are usually confiding patients. A few years ago, the wife of a hydropathist, who did not believe in her husband, said to me that she was obliged to return home, because the house was full of "the lunatics", meaning their patients. I said it was a wrong word to use—not only because it is stupid to revile one's bread and butter, but because lunatics are too suspicious to be profitable pigeons, and that her nest was more likely to be feathered by faithful hypochondriacs.

The corporeal symptoms so closely resemble those which are produced by excessive exertion, that I should conjecture the pathology of the two states must be the same—namely, a drain upon the voluntary nerve-force beyond the supply. In health, this arises from a temporary and intentional excess of the drain; in the disease, it arises from deficient supply. The part in which changes recognisable by the anatomist would be found, would be the grey matter of the nervous centres probably; but the anatomist never gets a change, for hypochondriacs are usually cured of their life-borne misery by the supervention of the lesions, which finally prove fatal, and which are generally quite unexpected; or, haply, they are carried off by some acute disease, as Bunyan was by an ardent fever caught in riding from London to Reading and back in stormy weather, on the errand of reconciling a prodigal son to his father.

The only anatomical lesion I know of which produces hypochondriasis is of the rectum, in the shape of piles or ulceration; and it is by no means common. However, it is certain that the nervous condition may be cured by curing the local.

The best general treatment is that which is the most rational deduction from the pathology. It may be divided into *physical* and *moral*; and we will consider the physical first, because it is the easiest prescribed. The point of prime importance is the due nutrition of the nerve-substance, and that is effected by keeping up in the body a treasury of freshly renewed adipose tissue. In two instances since Christmas, I have had the remark made by patients that an increase in weight was coincident with a renewal of healthy thought and feelings. This store of adipose tissue, as a basis for the molecular growth of nervous matter, may be accumulated by leading up to the acme of cod-liver oil, through the ladder of Devonshire cream, bacon, olive oil, pancreatic emulsion, marrow pudding, or any other oleaginous substance which may be invented for educating the gustatory nerves to bear our fishy friend. At the same time, it is desirable to bring the digestive functions into good working order by means of strychnia and henbane, *secundum artem*. Some persons will not grow fat without a large amount of bodily rest; and it is necessary to enforce it upon them by medical prescription. I have found fidgets more often interfere with the cure of hypochondriacs than laziness. Even the most untoward accompaniments will sometimes not diminish the value of rest. The being shut up as a Nonconformist for twelve years in Bedford Jail seems to have cured John Bunyan, though it was a filthy and noisome "den", as he justly terms it. He says: "I never knew what it was for God to stand by me at all times, as I have found him since I came in hither"; and confesses that he passed his time there "in much content". It was at this period he was lighthearted enough to compose the characteristic and descriptive anagram of his name, John Bunyan, "Nu hony in a B." Indeed, he is a bee full of new honey. Nor does it seem that he relapsed afterwards. The fact is, that he was well fed up by admiring friends, and entered on his true vocation of writing the life-dramas which enshrine him in our hearts along with Homer and Shakespeare and "George Elliot".

I have been the more particular in alluding to the importance of rest, because all non-professional and some professional authorities exalt the opposite course—namely, bodily exertion, as a panacea for hypochondriasis; but it certainly does not answer. Beguiled by these theorists some years ago, I put them to the test. Corresponding with a hypochondriac, whom I had not seen, in the North of Scotland, I told him I would give him no more advice unless he walked fair heel and toe all the way to London. In a few weeks he presented himself, having conscientiously obeyed my prescription; but, I am sorry to say, he was decidedly the worse for it, and, as may be imagined, not grateful.

But the excess of rest is apt to produce constipation; and if the strychnia and oil be not sufficient to obviate that, an habitual aid must

be given to the peristaltic movement, and to the liquefaction of the feces by green vegetables, salads, or even by such drugs as taraxacum, or Seltzer water taken as a regular diet. Powerful or occasional purgatives are injurious. I have found a very small dose of belladonna—say one-eighth of a grain of the extract at most—combined with half a grain of aloes, serve the turn very well. What is wanted is, not a free action of the bowels—for moderate sluggishness is normal—but a prevention of obstruction.

In the moral treatment of hypochondriasis, Bunyan is an excellent guide. You remember how, when Christian and Hopeful were in the dungeon, in doleful case indeed, the former suddenly bethought him that he had a key in his bosom called "Promise", with which he picked one after another the locks that lay between them and liberty. "And so they went up to the mountains, to behold the gardens, and orchards, and fountains of water, where also they drank and washed themselves, and did eat freely of the vineyards." There is no key equal to it; it is somewhere in every body's pockets; but the prisoner must find it himself, and the medical adviser seldom has an opportunity of helping him. Nevertheless, I trust that no sufferer will come across such miserable comforters as our poor hero. He tells us, in *Grace Abounding*, "I took an opportunity to break my mind to an ancient Christian" (I should call him an old Job's wife), "and told him all my case. I told him also that I was afraid I had sinned the sin against the Holy Ghost; and he told me he thought so too." It is all very well to agree with a maniac's whims, but a hypochondriac may claim a right to be reasoned with, and John Bunyan was badly used.

Several other hints equally suggestive may be found in the *Pilgrim's Progress*. Though the pilgrims managed to escape the Giant was not destroyed, but afterwards fell under the swords of Mr. Greatheart, Mr. Dare-not-lie, and their companions. In fighting to make others happy, the suffering soul is drawn out of itself, and conquers its own foes. You may do much by interesting hypochondriacs in thoughtful works of charity, and by leading them to ornament life with beauty and pleasure. They must hate ugliness in any shape, not for their own sake, but for that of others.

Bunyan feels very clearly the antagonism between hypochondriasis and the æsthetic life. Puritan though he is to the backbone—fanatic, nonconformist, martyr, satirist, woman-hater, a foiled reformer, at war with the age, and getting the worst of it—yet he had the true poet's sympathy with all that is human; and he celebrates the dinging-down of Doubting Castle in a fashion that his sour-faced coreligionists would have denounced as

"idolatrous and pagan,
No less than worshipping of Dagon."

For "Christiana, if need was, could play upon the viol; and her daughter Mercy on the lute. So, since they were so merry disposed, she played them a lesson; and Ready-to-halt would dance. So he took Despondency's daughter, Much-afraid, by the hand; and to dancing they went in the road. True, he could not dance without one crutch in his hand; but I promise you he footed it well: also the girl was to be commended, for she answered the music handsomely."

What is Ready-to-halt's "crutch," which he could not lay aside? The author leaves us to interpret it, each according to his own experience; and for me it shall be the medical treatment, which cannot safely be laid aside, even when the disease appears subdued by the moral. One crutch—that is, half-doses—may be sufficient; but the patient should be warned that his disease is constitutional, and that he is liable to relapses. When Ready-to-halt went over the dark river, he bequeathed his crutches to his son; and I hope they have been of use to him.

I am always very unwilling for a patient to give up his regular occupation; for this brings him into social relations with others, and he may think of them instead of himself. Doubtless, worrying hard work may be a severe trial, and be bad for him; but idleness is much worse. It was by going out of their way, and falling asleep, that the pilgrims fell into the clutches of Giant Despair. I have had as patients two of our professional brethren, confirmed hypochondriacs, who were perfectly well and happy so long as they were engaged in that most trying of all lives, the charge of lunatics—the one in a private capacity, and the other as assistant in an asylum. When unemployed, their misery was frightful.

With respect to the palliative treatment of the pains in hypochondriasis, I must earnestly entreat you not to give opiates. An increased dose is demanded with alarming rapidity; and, when you have once begun, there is no stopping. With opiates I include alcohol. The only admissible cases for the employment of this class of drugs are those where there is an actual deficiency of sleep, confirmed by independent evidence. But the sedative that is chosen must be given in very small doses, and, above all, must not be increased.

CERTAIN PATHOLOGICAL CONDITIONS OF THE NERVOUS SYSTEM.*

By EDWARD LONG FOX, M.D.,
Physician to the Bristol Royal Infirmary.

THESE few cases are brought before the Association, partly because some of them are instances of somewhat unusual lesions, partly because others of them illustrate a pathological condition, by which many of the diseases to which the spinal cord is liable may be grouped together. The cases include two of grave lesion of the pons Varolii; one of congenital chorea (and to this I can find no similar case on record), and two of myelitis.

CASE I.—William Westlake, aged 44, an ostler, was said to have been in good health until the day of admission, and to have spoken on that day. When seen the day after admission to the ward, his condition was as follows. He had right hemiplegia, and was unable to hear or to receive impressions, or to speak. The right pupil was larger than the left, and the pupils did not act. The pulse was thready; the face dusky. His breathing was laboured, almost stertorous. He scarcely swallowed. The urine partly dribbled away, partly was retained; it contained no albumen. He seemed moribund and died in two days.

POST MORTEM EXAMINATION.—There was old pleuropneumonia of the right lung; recent pleuropneumonia of the left lung. The brain was healthy, except the pons. About the middle of the pons, but slightly to the left side, was a depression rather larger than a pea. The walls of this were very soft, and made up of broken down nerve-tubes, and of tubes swollen in some parts and very contracted in others. In one spot, there was pigmental staining, which, under the microscope, seemed formed by very minute and very multiple hæmorrhages.

CASE II.—William Gibbons, aged 30, was admitted into the Bristol Infirmary under Dr. Fairbrother. He had a tuberculated syphilitic rash all over the body, and ulcers on the legs. There was partial right hemiplegia, but no impairment of speech. Soon after admission, his intellect began to become impaired and his speech thick. Later, he became temporarily hemiplegic on the left side, this lasting only a few days. Three months after he was first seen, he suddenly became blind, which condition lasted for several days. No lesion of the eye was visible externally. No examination was made by the aid of the ophthalmoscope. Sight was restored before death. The right hemiplegia persisted. He had some paralysis of the bladder. Stupor gradually supervened, and ended in death after he had been five months under observation.

POST MORTEM EXAMINATION.—Broca's spot and every part of both hemispheres were quite healthy. The pons was softened over a space of the size of a large filbert. The lesion occupied rather more of the left half than of the right, but passed a good deal over the middle line on the right side. The nervous tissue was quite deliquescent. The vessels of the circle of Willis were a little fatty. All other organs were healthy, except that in part of the left lobe of the liver there were regions of yellowish discolouration. After preparation, sections of the diseased part showed the blood-vessels to be almost the only structure left. A few nerve-cells and fibres existed, atrophied and isolated by the disease; strange round bodies, conglomerate cells one-thousandth of an inch in diameter, could be obtained from the injured parts.

CASE III.—Henry Stott, aged 13, was admitted with congenital chorea. His mother was frightened at the end of the second month of pregnancy, by having squeezed a kitten under a barrel and witnessing its death-agonies. He was born about six weeks before his time. He had had chorea from his birth, and had always been as bad as he was now, if not worse. Lately he had learned to say a few words. Until lately, he could not speak at all, but could hum tunes in an indistinct way, and make various noises. He could not stand, or hold anything firmly. His education had been entirely neglected, but he was very sharp and very merry. Most of his movements showed great deficiency of co-ordinating power, but he could combine movements for the purpose of scuttling along the floor in a wonderful manner, one leg being stretched out in front and the other behind, whilst he paddled along with one hand at great speed. He was almost always in motion, except during sleep, and then was quite still. He had fits at three years old, and not since. There was no rheumatism or heart-disease, or any morbid family history. He was put upon arsenic. After a few weeks, he began to say more words and was much less restless. He walked with the help of one hand, and could stand without assist-

ance, although on admission he could not lift himself up without being held. The nurse took great pains with him, and he learned to say a good many words, and was exceedingly intelligent. Playing at nine-pins brought him on considerably, and so did the association with and imitation of two non-choreic boys in the ward.

CASE IV.—Fanny Offer, aged 37, married, had been ill for fourteen days. She was first taken with numbness in the left leg, and then with motor paralysis there: the right leg became gradually affected in the same way a few days later. She lost her sight suddenly fourteen days before admission. She was then constipated, and had difficulty in passing urine. On admission, she was almost wholly blind; she could just distinguish the form of a person near her, but not the features. The retinal vessels were very small, and the white spot cloudy. She was quite paraplegic, being unable to move the legs in the least degree; and had lost sensation almost entirely over the whole region of the motor paralysis. She had no power over the sphincters; the urine dribbled away, and much was retained, and had to be drawn off by the catheter. There was no paralysis of the upper limbs, or of the face, or of the muscles of the eyeball. Her mind was clear. She was very hungry and thirsty. She had a large deep bed-sore on each buttock; and her feet were blistered in many places, from having been burned by hot bottles. She complained of pains in the arms. She had the sensation of cold in the legs, though anæsthetic as to touch. Had been subject to pains in the head ever since her marriage. Four days after admission, she was able to see much better. In three weeks, she was beginning to move the right leg. She died in about a month, from exhaustion consequent on the bed-sores.

POST MORTEM EXAMINATION.—The brain was healthy. At a point corresponding to the last dorsal and first lumbar vertebrae, the spinal cord was much disorganised, shewing a dark brown colour over much of its thickness. A similar condition, though of less degree, existed about the middle of the dorsal region. After preparation, there is seen a thickening of the connective tissue of the cord, and a somewhat gelatinous appearance of what had been the columns of the cord.

This case illustrates the usual course of myelitis, shewing a tendency to spread upwards, with complete anæsthesia and motor paralysis below the seat of lesion. From the first, there seem to have been no meningeal symptoms, such as acute pain on movement, with an instinctive objection to all motion, lest the pain should be renewed. Spinal meningitis indeed seldom occurs without more or less myelitis, but myelitis may certainly run its whole course without any spinal meningitis.

Compare with this case that of a man now in the Bristol Infirmary.

CASE V.—Robert Sheppard, aged 41, a ship's carpenter, had been accustomed to work at heavy hammering, to perspire freely, and to be exposed to blasts of cold air whilst at work. Nine days before admission, he felt slight weakness in the lower limbs, and on the next day, on attempting to walk upstairs, he found himself deprived of sensation, and the power of motion in the lower limbs. On admission, he was found paraplegic, as to motion and sensation, from a line drawn horizontally round the body, half an inch below the umbilicus. There was complete paralysis of the sphincters. The urine, at first full of blood, was now slightly purulent. The respirations were scarcely increased, a proof that the expiratory muscles were not deprived of their nervous power. In this case, during the past four weeks since the commencement of the attack, the disease has certainly made no progress upwards. Motion and sensation are perfect in the upper extremities, and the respiratory process goes on unchanged. The temperature chart shews, however, that the inflammation has been going on, the thermometer on one occasion having marked 106 deg. Fahr., and the evening temperature now being above 100 deg.

I have placed under the microscope specimens of a diseased cord, showing one form of spinal sclerosis. There is seen great diminution of the multipolar cells of the grey matter. The white matter, especially of the posterior columns, is almost wholly gone; its place being taken by many amyloid bodies, granular matter, and a considerable growth of the very finest connective tissue. The patient had symptoms of locomotor ataxy for some years, and eventually a certain amount of paralysis.

There are also specimens of chronic disease of the cord from a patient of Dr. Marshall, the history of which I hope he will give us here some day. Having, however, seen the patient on several occasions, I have Dr. Marshall's permission to say that the main symptoms for years consisted of agonising neuralgia, both of the back and limbs, whilst only very partial paralysis supervened towards the close of his life. A longitudinal section of the cord shews in the grey matter some multipolar cells remaining, with the débris of tubes and broken up tissue, and many holes. The white matter is still more degenerated.

* Read before the Bath and Bristol Branch.

You will see also specimens of myelitis, following fracture of some of the bodies of the vertebræ and consequent hæmorrhage, from the case brought before you by Dr. Beddoe on a recent occasion. The section shews great increase of the connective tissue; no amyloid bodies; special diminution of the elements of the grey matter, the multipolar cells being few in number; and a great deal of granular matter in the place of the grey substance.

Lastly, there is a specimen for the middle of the cervical bulb of the cord, shewing a different form of sclerosis, in a case of general paralysis of the insane. The disease here shews itself in the white matter, and to a less degree in the grey, in the form of small masses of semitransparent material, with more or less irregular outline. The posterior columns are chiefly affected.

In a meeting composed of busy practical men, it would be scarcely seemly to leave untouched the question of treatment, and it is as bearing upon treatment that a knowledge of the pathological anatomy is so important. For what, after all, is usually the main lesion in myelitis, except in the most rapidly fatal cases? It is increase of the connective tissue, and disintegration of the nervous elements consequent on this increase. Now this increase of connective tissue is a proof that we have to deal with a slow inflammatory process. Softening may take place rapidly; induration is invariably gradual. This being granted, and it being now known that we have to deal with a similar lesion, affecting various portions of the cord in paraplegia from myelitis, in many cases of infantile paralysis, in locomotor ataxy, and in some cases, at least, of progressive muscular atrophy, we have before us two principles of treatment, one to support the patient by food, rest, and warmth, and the other to improve the tone of the altered vessels. In acute cases, the use of leeches, blisters, etc., is contra-indicated, partly by the fear of bed-sores, partly by the tendency to depression induced by lesion of so important an organ as the spinal cord. A better effect is obtained by the use of the spinal ice-bag. My own experience points to the advisability of using it alternate hours, watching the pulse carefully meanwhile. It relieves acute symptoms, depresses the temperature, and enhances the comfort of the patient. The drugs most useful in the treatment of these cases are strychnine and ergot; strychnine in the more chronic cases, ergot in the more acute. In infantile paralysis, strychnine will help towards a perfect cure; in progressive muscular atrophy, in locomotor ataxy, and in chronic myelitis, it puts off the evil day, and improves the condition of the patient amazingly; and although acute myelitis is a fatal condition, and may end in death, even in eighteen or twenty hours, yet, in many cases, the combined use of the icebag and of ergot will prolong life, and in some few instances may allow acute myelitis to become chronic. I am far from mentioning these remedies as alone useful, but one cannot help speaking well of what has been found advantageous in one's own practice.

BROMIDE OF POTASSIUM AS A FEBRIFUGE.

By CHARLES MACLEAN, M.B., Applecross.

THE following particulars of a case, taken from my notes, illustrate the value of bromide of potassium in fevers. It came under my care on January 10th; and, as it was a convenient one for observation, I resolved to give a fair trial to the medicine. I had a confidence in it, grounded on some former experience of its efficacy; but the result, I am bound to say, exceeded my expectation. The following are the details.

January 10th. B., a well-nourished woman, aged about 40, was taken ill four days ago, with a well-marked attack of enteric fever. Pulse, 140; temperature, 105.2 deg. Fahr. The respiration was hurried; some sibilant râles were heard over both lungs. The expression of countenance was anxious. The tongue was red at the edges, with a whitish fur down the middle. The bowels were relaxed; the evacuations somewhat bloody. There was tenderness on pressure in the right iliac region. I gave a dose of chalk mixture, with ten minims of tincture of opium, to be followed by twenty grains of bromide of potassium three times a day.

January 13th. There was remarkable improvement in all the symptoms. Pulse, 100; temperature, 101 deg. F. The characteristic pea-soup stools were present, without any blood. There was occasional cough, but hardly as troublesome as on this last day. The respiration was little, if anything, above the normal in frequency. Some pain was still occasionally felt in the right iliac region. The bromide was continued as before.

January 14th. She was much the same as the previous day, and was ordered to continue the medicine, with milk and farinaceous diet.

January 15th. She was improving. Pulse, 94; temperature, 99.5 deg. The evacuations were less frequent, and of the same character.

The tongue was clean and moist. The countenance was placid. She was ordered to continue as before.

January 17th. The medicine was omitted.

January 19th. Pulse, 116; temperature, 100 deg. The tongue had become, as at first, furred in the middle, and was protruded tremulously. The face was flushed and anxious. Respirations 45 in the minute. Sibilus was heard extensively over the chest, but no small crepitation was audible, on the most careful examination. Thirst was complained of. The bromide was recommenced at once; and diluents were given *ad libitum*.

January 22nd. Pulse, 90; temperature, 98 deg. The countenance had a cheerful expression. The tongue was uniformly clean. The bowels were well. The cough was sometimes troublesome, but the respirations were 22 in the minute.

January 23rd. The dose of bromide was reduced to twelve grains.

On the 29th, convalescence was quite established; and on the 31st she was up most of the day and fast gaining strength.

In the intervals between the 10th and 13th, and 19th and 21st, I was unavoidably absent; but, from what I could gather, an improvement took place on both occasions in thirty or thirty-six hours after the bromide was commenced. I reduced the dose on the 23rd, because the temperature remained at 98 deg. F., a little lower than I thought necessary, and I feared a reactionary movement might take place if she were kept too deeply under its influence.

If the facts of this case prove nothing as to the efficacy of the bromide, there must have been one or two remarkable coincidences in the case. I am, however, of opinion, from what I have before seen of it, that there was more than mere coincidence in the matter.

A word as to the physiological action. If, as I believe, bromide of potassium acts by constricting or giving tone to the minute vessels directly, it is calculated to strike at the very root of the disease in fever; for it will then take the place of the paralysed vaso-motor system of nerves, and thereby keep in abeyance that inevitable tendency to congestion that follows the premonitory stage of the disease—the stage characterised by excitement or rigor.

If this view be correct, it is, I think, obvious that the use of the bromide in the treatment of pyrexia is much more in accordance with physiological principles than the direct application of cold; for, however useful the treatment by cold water may be, one thing we must remember is, that we are not treating *heat*, for temperature is a mere symptom of disease; an useful index, no doubt, of the degree of mischief and oxidation of the elements going on in the system.

LEPROSY OF THE JEWS.

By BENJAMIN BLOWER, M.R.C.S. Eng., Liverpool.

I HAVE been much interested with the lectures and letters on leprosy, which have lately appeared in the JOURNAL, but I do not think the leprosy of the Jews is a subject by any means exhausted; and, therefore, beg permission to add a few lines. In studying the Scriptures, we should endeavour to divest our minds of everything apart from the object of revelation. However interesting in a sanitary point of view the laws given to Israel may be, we must remember that "*salus populi lex suprema*" is not the object of the book, but the affairs of the soul.

Turning to Leviticus, chapter xiii, we find the priest not endowed with power to heal, for this the law could not do; but with directions to distinguish two kinds of leprosy from other allied diseases which, apparently infectious, were not unclean. The leper white all over, was not unclean, or kept apart; Gehazi talks with the king in the gate of justice (Second Kings, chap. viii, verse 4). Even among the Syrians Naaman was a great man with his master (Second Kings, chap. v, verse 1). But the leper with raw flesh is unclean; his disease is of all others the most loathsome and disgusting, incurable by human efforts, and transmissible to his offspring. He must dwell outside the camp; we are not told it was on account of contagion. Other infectious diseases are not so separated; for example, "The Lord shall smite thee with the itch, whereof thou canst not be healed" (Deut. ch. xxviii, v. 27); "and the plague, spread not in the skin, the priest shall pronounce him clean, it is but a scab, he shall wash his clothes and be clean" (Lev. ch. xiii, v. 6); "a sore botch that cannot be healed" (Deut. ch. xxviii, v. 35). Unclean evidently means unlawful for use by a typical people. The altar and the priest had to be cleansed, and "almost all things were purged with blood" (Heb. ch. ix, v. 22). The spiritual significance of this separation is not for discussion in a journal devoted to medicine; but from what has been said I take it for granted it was not on the score of health, but "that they defile not the camps, in the midst of which I (the Lord) dwell" (Num. ch. v, v.

3). Even when healed, the leper was put through a ceremony called cleansing before he could take his place in the congregation. It is remarkable that in the Old Testament there is only one instance (Miriam's) of an Israelite's recovery. Our Lord complains of this want of faith in the healing power given to the prophets, when he says, "and many lepers were in Israel in the time of Eliseus the prophet; and none of them were cleansed saving Naaman the Syrian" (Luke ch. iv, v. 27).

I am not anxious to make the Bible agree with the shifting sands of science; but when great pains have been taken to investigate a subject, and the results appear contradictory to the popular notions of the scriptures, it is well we should read the text again. Doing so, I now think that no one can dogmatically say that the sacred writings are opposed to the non-contagious opinions of modern investigators.

CLINICAL MEMORANDA.

ON COMMINUTED FRACTURE OF THE CLAVICLE.

THE interesting case of comminuted fracture of the clavicle, which appeared in the JOURNAL of June 7th, and the valuable commentary on it by Mr. Erichsen, entitle it to serious attention. As it is an accident that may occur at any time or anywhere, it behoves the surgeon, in face of the fatal issue of this case, to inquire whether it may not furnish suggestions for guidance in the management of casualties like it, with a view to preventing the secondary effects on the arm arising from mechanical pressure on the blood-vessels and absorbents, and on the axillary plexus by portions of the fractured bone. Would it be a hopeful or justifiable procedure to divide the integuments, and, by removing loose portions of bone, relieve from pressure the important parts beneath? Encouragement is given to such a step by the very few and exceptional cases in which laceration of the subclavian artery or vein has occurred,* by the tolerant power in the clavicle of bearing severe surgical operations for its removal, and by the means we possess of promoting adhesion of the wound by first intention.

THOMAS T. GRIFFITH.

HÆMATOMA AURIS.

I AM able to supplement the very interesting paper of Dr. Yeates, on Hæmatoma Auris, in your last week's issue, by the statement that I have also seen a case of recovery in which this complication existed. A young man was attacked with acute mania, in October 1861, and came under my care in this asylum, within a week after the attack commenced. For twelve months no improvement took place, but the patient seemed to be rapidly proceeding in the direction of dementia, and for some time there had been hæmatoma of both ears, with the effusion, absorption, and subsequent disfigurement, which mark that peculiarity. A change then suddenly occurred; the excitement passed away, the habits improved, the general mental condition became entirely satisfactory, and the patient was discharged, recovered, sixteen months from the date of his admission, and up to this time, a period of more than ten years, he has remained perfectly well, and been practising his profession.

Unless for the publication of Dr. Yeates' paper, it would not have occurred to me to place this case on record; and it is therefore not improbable that the superintendents of other asylums have met with similar instances, a report of which would materially affect the prognosis to be given in cases of insanity where this complication exists. Its striking diminution of late years would seem to point to a very definite conclusion as to its general causation. I have certainly found, in my own experience, that its appearance has been materially influenced by the expressed assumption that it is invariably associated with violence, somehow exercised, and for which some one shall be made responsible.

FRED. NEEDHAM, M.D.

The Asylum, Bootham, York, June 21st, 1873.

THERAPEUTIC MEMORANDA.

GLYCERINE AS AN APERIENT.

IN the last number of the JOURNAL, Dr. Snow proposes the combination of glycerine with the perchloride of iron, to cover the "astringent metallic taste" of the latter. I have for a long time

* S. Cooper, in his *Surgical Dictionary*, states that, up to 1838, "I am not aware of any case in which the subclavian vessels have been wounded by the spicula of a broken clavicle"; and this assertion is very much confirmed by Mr. Erichsen.

+ In the *Medico-Chimical Transactions*, vol. xxi, page 125, there are five cases of removal of the clavicle, collected by Mr. Travers, including one of his own, all of which ended successfully.

adopted this in my own practice, not with the view, however, of merely covering the astringent taste, but to counteract its astringent effect on the bowels, where this is not required. Indeed, I think glycerine might with advantage be substituted for syrup in every case where the latter is prescribed as a vehicle for other medicines, such as the various preparations of iron, cinchona, rhatany, etc., which have a tendency to constipate; besides which, glycerine keeps better than syrup, its solvent powers are greater, and it possesses all the advantages of syrup without any of its inconveniences.

ALEX. BOGGS, M.D., late of H.M. Indian Army.

13, Boulevard de Courcelles, Paris, 1st July, 1873.

ANÆSTHETICS.

XIV.

THE number of communications which we have received on this important subject exceeds the space at our disposal for their publication. We have had the great satisfaction of arousing the most wide-spread renewed interest in the subject, and fully awakening medical men to a sense of the dangers of chloroform, and to a perception of the duty of publishing the record of all serious or fatal accidents from it as from other anæsthetics. The multiplied evidence adduced in our pages of the apparently greater relative safety of ether has secured for that anæsthetic, of which the use had almost died out, a fresh trial in many of our largest hospitals, and thus far with satisfactory results. The question, however, still remains open, and its opportuneness is not diminished. In Ireland, thanks very much to the exertions of Dr. Morgan, ether is being largely employed, and the special report of the committee of the Surgical Society which we have noticed, although incomplete, is much to the point. We have seen with satisfaction that the medical press generally has followed our example during the last few months in bringing the subject into notice, and we contribute below some further materials for the solution of the problem.

[For a very complete summary of what has already appeared in this JOURNAL, we may refer to a series of abstracts by Dr. John Murray in the *London Medical Record*, of April 23rd, 30th, May 7th, 14th, 21st, 28th, and June 4th.]

XV.—ON THE COMPARATIVE ADVANTAGES OF ETHER AND CHLOROFORM AS ANÆSTHETICS.

MR. ARTHUR FERGUSSON MCGILL, in a paper read before the Leeds and West Riding Medico-Chirurgical Society, says:—

The subject of anæsthesia is so important, and such various opinions are held as to the merits of the different anæsthetics, that I feel that it is unnecessary for me to apologise for bringing the subject before you this evening. At the present time, in general surgery, the choice seems to lie between two drugs, chloroform and ether. Bichloride of methylene and the laughing-gas are both useful; the latter in the shortest operations, as, for example, in the extraction of a tooth; the former in those slightly more prolonged, e.g., in iridectomy and the like. In longer operations they are seldom adopted.

Which, then, shall we use, ether or chloroform? The question is a difficult one to answer; for both have their advantages, both their disadvantages. Before doing so, I will in a few words describe the methods which I consider best for administering both drugs. Chloroform is best given on one thickness of lint by means of a drop-bottle; any bottle will do, a cork with a slit in the side enabling you to drop as well as the most complicated stopper. After the first feeling of suffocation is past, give as much as you can; put the lint close over the patient's mouth and pour on plenty of chloroform. Theoretical writers say, never give air containing more than 4 per cent. of chloroform vapour; I do not know how many per cent. I give, but I give as many as I can.

Many inhalers have been invented to administer ether with; nothing, as far as I know, answers better than a large sponge covered with waterproof. Heat this in warm water, wring it as dry as possible, pour into it an ounce or so of ether, and hold it tightly over the patient's face; and in one or two minutes he is insensible.

The chief advantage attending the use of ether is that it is a safer anæsthetic than chloroform. Statistics tend to show that there is only 1 death in 24,000 administrations against 1 in 3,000 of chloroform. These statistics have a certain amount of value, and anyone who has used both drugs many times can easily believe they are true. The chief danger from chloroform arises from cardiac syncope; the heart falls, the pulse stops, and colour leaves the cheeks and lips. This is a condition of imminent danger, and fortunately seldom occurs if the administrator be attending to his patient. He, however, is prone to

look at the operation, and then it is that danger arises. If your chloroformist will attend to his patient's face and forget the surgery, the number of fatal cases will be much decreased. But, as but few can resist the temptation to look at the operation, we must be prepared for carelessness, and use a drug with which it is not so dangerous. If a little too much ether be given, the result is very different and much more pleasing; the patient's heart continues as before, but the ether vapour filling the lungs prevents the proper aeration of the blood, it becomes venous, and the lips and face blue or purple, not a pleasant appearance certainly; but within ten or twenty seconds of removing the sponge the red blood returns into the cheeks, and all signs of danger are past. Etherial asphyxia is very harmless when compared with chloroform syncope.

The chief disadvantage attending the use of ether is that it often causes great struggling; it then takes three or four assistants to hold the patient down; this in private practice is a great drawback, though in hospital practice it is of comparatively little importance. If the patient be a strong man, it is advisable to give a small quantity of chloroform in the first place, and as soon as partial insensibility is obtained then to continue with the ether. By this means you may often avoid the struggling.

But, unpleasant as the early struggling is, it is the after-excitement which will chiefly prevent the use of ether in private houses. On returning to semiconsciousness, the patient is often in a state much resembling the noisy drunkard. There is, perhaps, no one more unpleasant to have dealing with than a person in this condition, how much more, then, to see a patient in the sick-room talking wildly and perfectly unreasonable in his actions. The friends are naturally alarmed; and rightly so, for, though often no harm is done, yet it occasionally happens that most unpleasant consequences follow. A short time ago I operated on an old man for strangulated hernia; the operation gave every promise of success, but, after I had left, wild delirium due to the ether supervened; the patient pulled off his lint and bandages, and when I next saw him I found that he had pulled two or three yards of intestines through the wound, and that they were lying on the bed by his side. I need hardly add, the patient died. The question naturally arises—Was this a death from ether?

In some cases, a small hypodermic injection of morphia stops this condition, but this is not invariably the case. Time does not permit me to write more on this subject. I will only answer the question, asked at the commencement of the paper—Which shall we use, chloroform or ether? Both: chloroform in private practice; ether in hospitals.

XVI.—MR. HUTCHINSON'S CASE OF DEATH IN COMA FORTY HOURS AFTER THE USE OF ETHER.

Dr. S. G. WEBBER (Boston, U.S.A.) writes:—

Mr. Hutchinson, in the issue for March 8th, has reported a case of death occurring about forty hours after the administration of ether, the symptoms closely resembling apoplexy or embolism. Mr. Hutchinson concludes from this case that it is dangerous to give ether to aged people. It seems to me this conclusion is rather hasty. As ether is gradually gaining in England the position which we think it deserves, it is for the interest of humanity and of scientific truth that when death occurs after an operation in which ether has been employed, such an event should receive a correct interpretation. Judged by the experience which we have in America of the effects of ether, I cannot agree with Mr. Hutchinson's views.

Dr. Webber then reviews the case briefly. He points out that the symptoms were unilateral, and such as are commonly due to the local disturbance following plugging of the middle cerebral artery. The compression of the carotid might have given rise to them; the man was eighty-four years of age, and with atheromatous conditions. Pressure on the carotid from ten to fifteen minutes is adequate to explain the results in such a case.

XVII.—NOTE ON ETHER AS AN ANÆSTHETIC.

MR. PRIESTLEY SMITH, Resident-Surgeon to the Birmingham and Midland Eye Hospital, writes:—

The following case is recorded simply as an indication that ether cannot in every case be relied upon to stimulate the heart's action.

A girl aged 16, a patient of Mr. Arthur Bracey, somewhat weakened by recent illness, was to undergo excision of the eyeball. Ether was administered with a leather inhaler, allowing but little admixture of air. The patient breathed it well, and did not struggle. The pulse was rather feeble from the first. It continued regular, but with no increase of force, until the point of conjunctival insensibility was almost, though not quite reached, when it suddenly grew weaker, and after a

few beats, became imperceptible. The face became pale at the same moment. Respiration became very shallow. The patient was instantly rolled on to her left side for a moment, several slaps were given over the cardiac region, and artificial respiration was commenced. Before the battery, which was in the room, could be applied, the pulse was again faintly perceptible, and after a few minutes of very feeble action, was permanently restored. The operation was satisfactorily performed, and the patient made a good recovery. Experience of ether in this hospital, during many months, appears to show that, in the cases which cause anxiety, asphyxia is the danger usually to be dreaded, this case being the first of primary failure of the heart's action. The most careful administration of chloroform in this case would, I think, have been attended with extreme danger.

SURGICAL INSTRUMENTS IN 1873.

REPORT OF THE SURGICAL INSTRUMENTS IN THE INTERNATIONAL EXHIBITION AT SOUTH KENSINGTON.

II.

MESSRS. BLAISE AND CO. also exhibit the following instruments.

8. Improved Lithotrite. By a simple arrangement the sliding action of this lithotrite is convertible to a screw action by means of a thumb-button. The cylindrical form of the handle is also very advantageous, as it is extremely firm in the hand of the operator, while it admits of



the most delicate manipulation when held between the thumb and finger.

9. Improved Scissors for obstetric use, as employed by Dr. Heywood Smith. The blades of these scissors may be fixed at any angle by means of a small screw key; they are also made with straight or curved blades with an universal joint, the angle of which may be altered at pleasure.

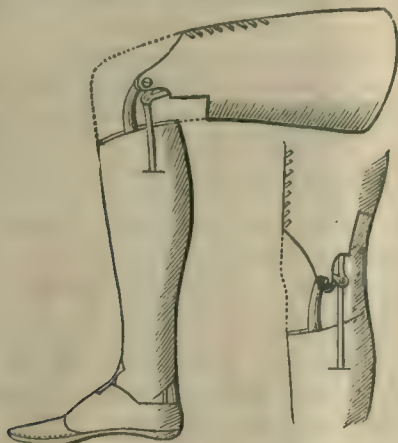
10. Pair of Forceps, for removing the articular surface of the patella in amputation through the knee-joint, as used and suggested by Mr. G. D. Pollock. They are also used as very strong bone-cutting forceps.

It is not right to leave this case without speaking in high terms of commendation of the excellence of the workmanship, the perfection of the material, and the ingenuity of contrivance, which mark these instruments. Instruments of finer temper than these were never

turned out of a manufactory. We believe that the American hospitals, appreciating their high merits, have recently entered into large contracts with this firm.

Artificial Limbs are exhibited by Messrs. MASTERS AND SONS, of 210, New Kent Road.

One of the most important improvements effected in artificial limbs during the last twenty years is a new arrangement of the tendon in the leg for amputation below the knee. It was invented by Mr. Masters, and has stood the test of experience thoroughly. The woodcut is intended to illustrate it. Another leg in the same case shows the old arrangement; and it will be seen that, in bending the knee, the tendon always bends in the same place, giving rise to an eventual fracture. Moreover, as it does not remain straight, the foot has no support when the leg bends. A third disadvantage consists in the distance between the knee-joint and the point as which the catgut is attached above the knee. In bringing the leg erect after a step, there is necessarily a considerable counterpoise, which has to be overcome. Mr. Masters's improvement has none of these disadvantages. The tendon never bends,



is always in a state of tension, so that the foot is always supported; and, working on its own axis so near the main joint, the counterpoise in bringing the leg up is neutralised.

An old leg, also shown, was made fifty years ago by Mr. Potts. This invention has since been known as the "Anglesey" leg, as Mr. Potts made it first for the late marquis. Very few real improvements have been made in this limb, and these are shown in another leg for amputation above the knee. Mr. Masters has adopted a new flexible toe instead of a wooden joint, and one or two minor alterations.

The arm for amputation above the elbow is particularly worthy of examination. Mr. Masters has arranged it so that, by a slight movement of the opposite shoulder, the arm flexes itself, and the hand turns round simultaneously to the natural position for carrying anything to the mouth or face. This invention, which is principally constructed on the principle of the inclined plane, is particularly adapted to cases where both arms are gone. Patients can even write well with these arms.

Another arm has an arrangement by Mr. Masters by which the act of extending the arm opens the thumb and two next fingers sufficiently to grasp small articles; e.g., a book, ball, or brush. One advantage in this improvement is, that no catgut is employed.

Some of Mr. Masters's other improvements are, the "feather-edged" joints in the fingers, which do not exhibit the unsightly ridges seen in other hands; the spring in the wrist-plates; the arrangement of the elbow-joints; etc.

NOTES ON BOOKS.

The Botanical Companion to the British Pharmacopæia. By HYMAN MARKS, L.R.C.S.I. Longmans, Green, and Co.; Fannin and Co.—This little book supplies a want which the student of medicine has long felt—namely, that of having a handy book in which he could at once put his finger upon everything connected with the various plants which occur in the *British Pharmacopæia*. The classification of the natural orders in the first part, and the alphabetical arrangement in the end, in which is also included the official part of the various plants, render the matter so simple, that we would recommend it to the notice of every student.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 5TH, 1873.

THE LONDON COLLEGE OF PHYSICIANS.

THE President and Council of the Royal College of Physicians received on Wednesday evening the Fellows and Members of the College, and invited guests, including leading members of our own and other professions, at a *soirée* at their house in Trafalgar Square. The guests were received by Dr. Burrows (the President), Dr. Farre (the Treasurer), and the Censors. The rooms were well filled, both with interesting objects and notable men; but other attractions of a like kind, which were numerous on that evening, drew off a large contingent of the guests. There were many visitors from the provinces, some from afar, including Falconer, of Bath; McEwen, of Chester; Wardell, of Tunbridge Wells; Paget and Humphry, of Cambridge; Harris, of Redruth; Gray, of Oxford.

Seeing these, and bearing in mind the forthcoming meeting of the British Medical Association, which will presently again bring most of them to London, and which was the subject of much conversation, the singular course taken by the Council of the College in deciding against the postponement of this *soirée*, or the invitation of the members of the Association to a special *soirée*, was freely debated in the room. It seems pretty clear, as we suspected, that the Council, or those who acted for it in the matter, have taken a very unpopular and damaging course. It can, of course, matter nothing to the Association or to the London Reception Committee, who desired to have a free evening for other purposes, whether the College proffered hospitalities or not to the great body of medical men (including a large contingent of its own fellows, members, and licentiates), who will in the first week in August be welcomed in town by some sign of attention by nearly every other medical institution in London, and by every medical man. It mattered, however, very much to the College of Physicians that it should not make itself conspicuous on such an occasion by a discourteous and unwarrantable omission. The excuse suggested, of want of funds, is not considered a very creditable or a very well discovered reason. It is perfectly understood that there was no real want of funds for the purpose, and that means were readily at hand for avoiding any undue strain on that tender organ, the College chest. The fact appears to be, that there cling still to the College, very closely and very continuously, some antique and narrow influences which have on more than one occasion lately compromised its best and widest interests in hugging too closely a present or supposed advantage; and it is to these influences that many are disposed to trace a decision which leaves the College in the unfortunate position which it occupies in this matter.

At the moment when the Colleges, Medical Societies, and

great Hospitals of London are with due courtesy and cordiality considering how best they may render the stay of the intending medical visitors to London agreeable and instructive, and how they may most adequately testify their natural goodwill to the old pupils, members, and friends who will gather from afar, the Royal College of Physicians of London, which aspires to be the head of the profession and the new Alma Mater of the general practitioners of the future, and which proposes to be allowed to mulct them in the annual sum of £1200 for the greater honour and glory of the College—the enterprising representatives of this liberal and aspiring institution, proud of its great part and flushed with confidence in the golden dawn of a still brighter future, put their hands in their pockets, carefully button them, and whistle to the classic tune of *vacuus viator*. To the intimation conveyed to it of the time at which it was intended to hold the meeting, the College alone of the very few institutions to which that special and altogether exceptional compliment was paid, replied by a blank stare. The coming of five or six hundred or more provincial medical men to stay for a week in London, and to gather in congress for objects scientific, professional, and social, may concern the Lord Mayor, the College of Surgeons, the Benchers of Lincoln's Inn, the Royal Medical and Chirurgical Society, University College and King's College, the Obstetrical Society, the newspapers, and the leading members of the profession; but it is nothing to the College of Physicians, which has no remark to make on the subject, and is not concerned to show itself interested in a matter so foreign to its taste, constitution, and personal relationships. The peculiar dignity of such a position is obvious; its courtesy, wisdom, and right-mindedness not less so. Except to the College itself, the subject is one of absolutely no further interest at this moment.

But to the College it is of very great import. Just at this moment it is aspiring to an intimate connexion with the backbone of the profession, the work-a-day men who toil and labour without any of those high adornments of power and place, which so well become the typical Fellow of the College of Physicians, and which sometimes persuade him that a sufficiently Brahminical strictness of caste is not observed in respect to his fellowship. Nothing could more clearly show what course would be pursued by the guiding spirits on this occasion—and we are happily ignorant, and desire to be so, as to who they may be. They could not have chosen a more thoughtful manner or a more happy time of showing the fraternal spirit in which they regard the great professional fraternity. A reception of so much warmth and friendliness, attentions so exquisite, and courtesy so well-modelled and devised, as that which they have (not) offered, will be accurately appreciated. The spirit which dictated it is deserving the attention of the fellows and members, as it calls for the admiring and friendly recognition of the profession at large.

Just as it stands, it is a phenomenon which it may be possible to explain, but of which it would be very interesting to hear an excuse. Unless we misjudge the matter gravely, this particular act—unimportant in many aspects, but important as an outward sign of the inward spirit of exclusiveness, narrowness, and something worse than either, may count for much in the future history of the College. It will inspire distrust, and weaken confidence, just when and where they will be most needed.

The new College schemes, although well laid, are not yet completed. They weigh hardly on the general practitioner, whom they propose to mulct in a large annual sum, altogether apart from the expenses of his examination, for the pure benefit of the funds of the College. The College will pocket £1200 a year, as we last week pointed out, just because it is the College. It proposes to give nothing in return, not even, as it now appears, civility or brotherly warmth and just respect to those whom it intends to mulct. It is just one of those arrangements which depend upon goodwill. The only return which it could make for what it is proposing to take for its own good, would be a friendly, sympathetic, personal interest in its contributories, which would be repaid by affection and by trust. It has gone out of it way to manifest and to provoke a precisely opposite feeling; and the results will be likely to be apparent, whether quickly or at a far off date. While the Colleges were able to propose their joint diploma as a family arrangement, they had the matter very much in their own hands. They have fixed a very high fee—thirty guineas is to be the minimum licence for general practice. The public and the profession are interested in getting the best examinations, conducted at fairly remunerative rates, and in only paying for that for which they receive value.

The College of Physicians is proposing to take advantage of the private contract with the College of Surgeons, to extract a large sum annually from intending practitioners, for which it offers no value in return. It is more than doubtful, in our opinion, whether such a course will be sanctioned; and the College advisers have now taken pains to make it quite clear that the general practitioner has not even a sentimental interest in desiring that it should be.

RECRUITING IN THE ARMY.

It has always been the peculiar province of after-dinner orators to assure us that our army, if small, is thoroughly efficient, and that, if the men are few in number, they are made of good stuff, fit for action in any part of the world. And although some allowance was necessarily made for the rosy tints imparted by civic or other hospitality, the general public seemed fairly entitled to believe that recruiting was going on vigorously and well, and that our regiments only required an increase to their numbers to be ready to take the field at any moment. Army medical officers, however, knew that there was something unsound about all this semi-official congratulation, for their experience showed them that the recruits admitted within the last few years have been sadly inferior to the old standard, and that stunted ill-developed lads, containing too often the seeds of constitutional disease, were rapidly filling up the ranks. And now the bubble has burst, and those in authority have been obliged to confess the humiliating fact, that the much-vaunted improvements in our system of recruiting have failed to attract the superior set of men so confidently expected, and that large numbers of raw lads below the regulation chest-measurement of thirty-three inches have been passed. In other words, so impossible has it been to rival the attractions of well paid labour, and so unpopular has the short service system proved, that, in order to prevent our battalions from melting away altogether, it has been thought advisable to fill them up with material totally unfit for real military service of any kind. Painful as this necessity must have been, the country would have sympathised with the difficulty of the position, and might willingly have assented to some experimental lowering of standard, had they been frankly taken into the confidence of ministers, and asked to suspend their verdict until better times should come. But in place of this, it now turns out that measurements below the regulation standard have been entered in some

mysterious way in columns which are supposed only to carry the statistics of those over thirty-three inches, and that the public have been imposed upon by the belief that our regimental ranks are strictly filled up by men of full and ample development. We now know, from the confessions in both houses, that this is not the case; that puny youths and stunted men now wear her Majesty's uniform in many of her regiments, and that we only require real warfare to demonstrate that the policy of Marshal Le Bœuf is not confined to France.

Lord Malmesbury would have us believe that chest-measurement is no test of constitutional vigour, and quotes a gymnastic friend of his early days in support of this view. We are not aware that any person of this class, with the exception of Mr. Maclaren, has ever established any claim to give any opinion on this subject; and to call in the aid of a mere muscular Christian to settle physiological points, is as absurd as to expect scientific information from a gamekeeper on the subject of the grouse-disease. Chest-measurement, if no absolute criterion of general power, gives at all events the dimensions of the cavity in which the lungs have to do their work, as well as an approximate estimate of the volume of these organs themselves; and every one who has ever done any regimental duty knows the strain thrown on the circulating organs by a soldier's work. Not to mention the ordinary drills and guards, the running drill, gymnastic training, pressure of belts, tight clothing, and knapsack, are a severe test of the thoracic power; and a man of less than thirty-three inches round the chest is manifestly unfit for the many calls thus made upon him.

THE DEVELOPMENT OF EPITHELIOMA.

DR. VAJDA, Assistant-Surgeon of the Vienna General Hospital, publishes in the *Centralblatt für die Medicinische Wissenschaften* for June 7th, an account of the results at which he has arrived from his investigation of the mode of growth of epithelial cancer. The object of the inquiry was to ascertain, if possible, the reason of the difference in the views entertained by pathologists on the subject.

From an examination of specimens of epithelial cancer, of which the Vienna hospital afforded him an abundant supply, Dr. Vajda has arrived at the following results.

1. The primary basis of epithelial cancer is always a normally present vascular system, often of extremely fine calibre. This stands in such intimate relation with the epithelial new growths, that the newly formed epithelial elements may be regarded as the products of the nuclei and cells lying in the walls of the vessels.

2. The vessels lying beyond the limits of the physiological epithelium also take part in the formation of epithelial cancer; an endogenous formation of nuclei taking place either in the nuclei of the vascular walls, or, more rarely, in the epithelial cells lying in direct connection with the vessels. Around the newly formed nucleus is collected plasma, by which the cell may be regarded as being formed.

3. The new epithelial cells, thus produced, generally remain for some time in continuity, or sometimes only in contiguity, with the vessels.

4. If the condition for further development are not presented to the newly formed cells, which is especially the case when large masses remain collected for some time, retrograde metamorphoses generally set in. These embrace mucous degeneration (as in cancer of the mucous membranes); fatty degeneration (as in cancer of the lips and labia pudendi); horny change of the newly formed elements (as in cancer on the limbs). After fatty degeneration, a vascular network without junctions, the existence of which was readily suspected, often comes into view; or when larger vessels are laid bare by the falling away of the proliferated elements or by the preparation of the specimen, a vascular skeleton may be seen, formed of tubes whose walls consist of a meshwork without nuclei and without life. According to Cohnheim, the same is observed in the cornea.

5. In parts which are undergoing cancerous degeneration, very numerous pale cell-elements, manifesting lively motions, are found; and these, especially when examined with the warm stage, are seen to

throw out and retract processes, without, however, appearing to undergo any remarkable change of position.

6. Epithelial degeneration extends with special facility in parts where the vessel which has formed the starting point lies in loose tissue, or when the surrounding connective tissue has been broken up by inflammation.

THE ARMY MEDICAL SERVICE.

AT the request of the Secretary of State for War, the detailed report of the statement made by the Chairman of the Parliamentary Bills Committee of the British Medical Association, on behalf of the army medical officers, which appeared in the *BRITISH MEDICAL JOURNAL* of last week, has been forwarded to him in writing. Mr. Cardwell will furnish a reply at an early date, and has promised to give to the matters submitted his most careful and favourable consideration. It must be earnestly hoped, in the interests of the whole service, not less than those of the medical officers, that Mr. Cardwell will see the mischiefs that have already resulted from the practical withdrawal of many of the privileges accorded in 1858 and 1870, and that he will recognise the advisability of improving the status of the service, as settled at this moment, by concessions as to forage, choice of quarters, indemnity to officers incurring pecuniary loss by removal from regiments, relief from losses in respect to exchange-expenses and from mess and band subscriptions, readjustment of relative rank, of periods of temporary half-pay counting towards service, of terms of retirement after twenty years' service, and of improved rates of payment and retirement in the administrative ranks of the service. The propositions which have been submitted to the Secretary of State on these subjects are the result of the spontaneous reclamations addressed to us from all ranks of the service, and have been approved by several most thoughtful, moderate, and conservative members of the service, including some who are on full pay and others who have retired. The reply of Mr. Cardwell will be awaited with anxious interest.

It is stated that M. Nélaton, who has been seriously ill, is now somewhat better.

THE Worshipful Company of Mercers have voted two hundred guineas to the funds of St. George's Hospital.

HER Royal Highness the Princess Louise (Marchioness of Lorne) paid a visit to the Royal Hospital for Diseases of the Chest, City Road, this week.

MR. BELLAMY requests us to state that he has withdrawn his name from the candidature for the Chair of Anatomy at King's College, as he understands that no staff-appointment is connected therewith.

A SMALL barque has recently arrived at Falmouth from the Mauritius with about half the crew suffering from scurvy, and the Board of Trade have directed their medical inspector to institute an inquiry into the causes of the outbreak.

WE learn with great pleasure that Dr. Cornelius B. Fox of Scarborough, to whose excellent qualifications for the post of medical officer of health we referred in connexion with his candidature for that appointment under the Public Health Act in East Essex, has received the appointment. The salary is £800 *per annum*; and the area includes the united districts of Chelmsford, Maldon, and Billericay.

IN consequence of the recent appearance of small-pox in docks on both sides of the Thames, the District Boards of Works of Greenwich, Poplar, and Limehouse, have severally and independently communicated with the Local Government Board and the City Corporation, pointing out how absolutely necessary it is that the latter authority should at once commence sanitary work in the river and in the docks, in order to prevent the spread of epidemic diseases, and to guard against the introduction of cholera by way of the port.

ADVICES from the Brazils state that the yellow fever in Rio takes off two to seven persons daily. The cold weather having set in, it is expected that it will shortly disappear. In Monte Video, the fever had abated.

THE PROVINCES & LONDON.

WE learn from our provincial correspondence that in the great provincial towns something like pride is felt at the very favourable contrast shown by provincial Hospital Sunday returns, compared with those of the great metropolis. In Manchester, last year, £7,000 was collected; in Birmingham, £9,000; in Liverpool, £10,000. In this great city, the collection has fallen short of £30,000, at which it was estimated by the lowest computations.

THE ACTION OF MERCURY.

At the request of the lecturer on *Materia Medica and Therapeutics* at St. Bartholomew's Hospital, the leading article on the Action of Mercury, which appeared in the *BRITISH MEDICAL JOURNAL* of January 7th, will be reprinted for the use of students. Only a limited number, however, will be reprinted; and lecturers who wish to have copies for the use of their class will apply by letter to the publisher during the ensuing week.

A NEW HOSPITAL.

It is proposed, according to the *Pall Mall Gazette*, to raise a fund for a memorial to the late Rev. W. Pennefather, Vicar of St. Jude's, Mildmay Park, Islington; and there is some probability that it will take the form of a hospital for the district, where such an institution is much needed. In this case, the nursing will be undertaken by the deaconesses connected with the Church of St. Jude.

ARMY MEDICAL WARRANT.

By permission of the major-general commanding the eastern district, a meeting of army medical officers was held in the principal medical officer's office at Colchester on Wednesday, July 4th. The report of the Aldershot meeting of May 14th was unanimously adopted, with the following alteration.

With a view to secure a reasonable flow of promotion, it is suggested that all officers of the administrative rank shall be placed on the retired list at the age of fifty; and further, that the terms of office of surgeon-general be limited to a period of five years. Meetings of the executive medical officers serving in Malta have been held, to discuss the effect on their present position and future prospects of the warrant of the 1st of March and of the special circular of the 6th of March last. The proceedings of the meeting of medical officers held in the United Kingdom on the 5th of April last, of that of the Parliamentary Bills Committee on the 18th of May, and the memorial of the Irish Medical Association, were before the meeting, who, after discussing the matter from every point of view, gave their unqualified approval to everything that had been advanced in these documents. They felt, however, that it would not be just to themselves or to their comrades who were at home working for the general good, or to the civil members of the profession who were petitioning for justice to their military brethren, if they should shrink from laying a respectful statement of their opinions and wishes before the authorities. They were unanimous in condemning the intention of employing them as clerks and storekeepers, which, they felt, would place them in a false position, interfere with their proper duties as medical men, and prove, therefore, disadvantageous to the public service. At the same time, they were agreed that, should the authorities insist on imposing on them these duties, for which they had neither special training nor aptitude, it would be their duty to obey cheerfully so long as they continued in the service, which some intended to quit, should these objectionable duties be insisted upon, as soon as their private arrangements and circumstances enabled them to take this step. They decided on embodying their opinions in a respectful memorial, to be forwarded through the proper channel to the Secretary of State for War. They were unanimous in considering that improved retirements after twenty years' full-

pay service, a certainty of promotion to the rank of surgeon-major at from twelve to fifteen years' service, and the withdrawal of the special circular, were essential; and that less would not give satisfaction.

UNIVERSITY COLLEGE HOSPITAL.

THE annual ball which took place last month resulted in a gain to the hospital of more than two hundred pounds—the largest sum which has yet been received from that source.

THE CHOLERA IN AMERICA.

FROM the *Philadelphia Medical and Surgical Reporter* of June 21st, the latest American medical paper received, we find that there is a continued abatement in the cholera at Nashville. The cases yield to treatment in nearly every instance. The mortality is decreasing. The cases of cholera are also diminishing at Memphis.—Recent telegrams announce that the cholera is extending in Nashville and has appeared at St. Louis.

THE HEALTH OF THE ARMY.

THE Statistical Report on the Sickness and Mortality of the Troops serving in the United Kingdom in 1871, just published, shows a mean daily average of sick of 38.78 per 1,000 of mean strength, in a force of 92,667 men. The deaths were 8.62. This is considerably less than the corresponding figures on the average of the last ten years, 1861-70, which were 46.01 of sickness, and 9.45 of deaths. The mortality was lower than in 1870 at all the groups of stations, except the manufacturing towns and among the men detached from their corps.

TRANSFUSION OF BLOOD IN LEUKÆMIA.

IN our number of May 24th, we mentioned that Mr. Callender had performed transfusion of blood on a patient suffering from leucocythæmia, and that he proposed to repeat it if successful. It has been repeated once since: several ounces of blood, taken from a stout-looking countryman, were injected. As in the first trial, the immediate results of the operation were encouraging, but it does not seem to have done much permanent good. The notes of this case will be looked for with interest in the *St. Bartholomew's Hospital Reports*.

MILITARY BLUNDERS.

WE fear that the conciliatory effect on the Army Medical Department of the Depôt centre appointments will hardly turn out so satisfactory as Mr. Cardwell expects, if they are all filled up in the following way. Some little time ago, on the reconstruction, according to the new system, of the Depôt at Winchester, the medical charge was offered, quite unsolicited, to a surgeon-major of the Rifle Brigade. The appointment was a desirable one in every way, for not only did it necessitate no absolute severance from his regiment, but the prospect of several years' quiet was gratifying to a married man, who had seen much foreign service. On arriving to take up the duties of his post, he was shown a letter handing over the vacancy to another medical officer, senior to himself; but, naturally looking upon this as a mistake, he went on with his preparations, which involved taking a house and going to considerable expense. In a few days the mystery was solved by the appearance of his rival on the scene, with the claim not only of seniority, but of an appointment a few days anterior to his own, and it now became evident that the authorities had fallen into a most extraordinary error. On turning up the Winchester Depôt in the *Army List*, we find it headed by the numbers 51, 52, 53, 54; and there is no doubt that these were read as separate and distinct establishments, each to be officered by a "special" medical staff. Numbers 51 and 52 were accordingly thus filled up before it was ascertained that they were really sectional divisions of one consolidated depôt numbering only 192 men, and precluded from any immediate increase by the presence of a line regiment in the barracks. Under these circumstances, it was clearly absurd to monopolise the services of two surgeons-major, and the junior had to withdraw—meeting, however, on his return with another complication, in the fact that his battalion of Rifle Brigade had in the meantime been given to another. The painful and sometimes injurious

process of falling between two stools was, however, prevented by the cancelling of this latter appointment; but the case as it stands seems to us almost unparalleled in the annals of official bungling. To appoint two men to a post hardly providing work for one is a method of subdividing patronage which hardly savours of an economical age, and can only be satisfactory until the recipients find out that one or other must be sacrificed to want of care in the donors. We would venture to suggest a little more deliberation in future arrangements, and trust that the great expense, inconvenience, and annoyance suffered by the gentleman to whom we have referred may not be overlooked by those in high places.

THE CHOLERA IN EUROPE.

UP to June 24th, forty-three cases of cholera had occurred among the Polish raftmen on the Vistula, in the neighbourhood of Dantzic; among them, there had been thirty-four deaths.—At Graudenz, five Polish raftmen suffering from cholera, and one who had died of the disease, were, it is reported, found on the rafts last week. The dead body was buried; and the beds on which the sick had lain were burned.

WHO IS RESPONSIBLE?

CONSIDERING that Netley is not only our great national establishment for the reception of invalided and sick soldiers, but the government school of hygiene for the army and the navy also, it would be desirable that some further information should be elicited as to the facts conveyed in the following paragraph in the Annual Sanitary Report on the Royal Victoria Hospital, by Inspector-General Beatson, C.B.

The arrangements for filling this bath are much more satisfactory since the steam engine was substituted for the windmill; but the mistake has been made (although the result which would follow was pointed out) of drawing the water to fill the bath from the neighbourhood of the main sewer, instead of from the vicinity of the pier. The effect is, that the water in the bath is far from pure; in fact, the sewage-bubbles are not unfrequently visible, while the odour of the water in the bath is very impure.

The parenthetical observation seems to deserve particular attention. By whom pointed out, and by whom neglected?

MEDICAL KNIGHTS.

TWO medical men have received the honour of knighthood this week. One is Sir Alexander Nisbet, M.D., Honorary Physician to Her Majesty, and Inspector-General of Hospitals and Fleets. The other is Sir Joseph Ritchie Lyon Dickson, Physician to Her Majesty's Legation in Venice. He is the second son of the late Mr. John Dickson, R.N., of Dalkeith, surgeon to Lord Nelson at the siege of Copenhagen, afterwards appointed by the British Government Surgeon-Major and Chief of the Medical Staff of His Highness the Hereditary Pasha of the Regency of Tripoli. In 1847, Sir Joseph was appointed Physician to Her Majesty's Legation in Persia, and in 1849 attended the King for typhus fever during the absence of His Majesty's body physician, and received the Commander's Star of the Lion and Sun in acknowledgment of his successful attendance. His Majesty requested the British Government to attach Sir Joseph to his staff on the occasion of His Majesty's visit to Europe. Sir Joseph's elder brother is Physician to Her Majesty's Embassy in Constantinople.

NEPHROTOMY AT ST. BARTHOLOMEW'S HOSPITAL.

MR. CALLENDER removed, last week, a large calculus from the kidney of a woman about forty years of age. As the case is to be published in full in the *St. Bartholomew's Hospital Reports*, we give here only a short notice. The patient was admitted under Dr. Andrews, suffering from profuse pyelitis; she was very weak, and greatly emaciated. By palpation through the thin abdominal walls, a large, smooth, hard tumour could be felt in the right lumbar region. It was rather elastic, but not distinctly fluctuating, and resembled somewhat in shape a greatly enlarged kidney. It was at first thought that there might be malignant disease of this organ; but it was found that at times the tumour increased greatly in size, coming forward almost to the umbilicus, and then suddenly collapsed again. It could not be clearly proved that

this partial collapse of the tumour was followed by any marked increase of pus in the urine, nor could any stone be felt when the tumour was thus diminished; but there was a distinct history of renal colic, and, after full consideration of the case, Dr. Andrews and Mr. Callender came to the conclusion that the symptoms were due to the presence of a large stone in the pelvis of the kidney, and that, as the patient was evidently sinking under the constant drain of pus, the removal of the stone by operation offered the only, though slight, chance of recovery. Mr. Callender accordingly made an incision opposite the outer edge of the quadratus lumborum, nearly as if for colotomy. On reaching the back of the tumour, a trocar was introduced, and a quantity of puriform fluid drawn off; the opening was then enlarged, and an oval calculus, nearly of the size of a hen's egg, was extracted. Its weight, taken roughly after the operation, was two ounces and a quarter. The patient rallied somewhat during the first two days, but quickly relapsed, and died on the third day. Unfortunately, no *post mortem* examination could be obtained.

THE CHOLERA IN VENICE.

THE following telegram has been received from the Hon. H. C. Vivian, Her Majesty's Acting Agent and Consul-General in Egypt, and forwarded to us by the Foreign Office: "Alexandria, June 29, 1873, 1.40 P.M. Quarantine probable here on arrivals from Venice, owing to appearance of cholera. Passengers for India or Egypt had better avoid Venice route."

THE ADMINISTRATION OF ETHER.

AT the anniversary meeting of the Massachusetts Medical Society on June 3rd, Dr. B. Joy Jeffries made a personal explanation, denying the authorship of an article in relation to ether published in the last number of *Braithwaite's Retrospect*, and attributed to him.

MR. JONATHAN HUTCHINSON.

MR. JONATHAN HUTCHINSON has, we learn, resigned the appointment which he holds as Senior Surgeon of the London Hospital. Mr. Hutchinson was appointed as fourth assistant-surgeon in 1859. He passed rapidly through the various grades of seniority, promotion being unusually rapid in the hospital, owing to accidental causes. Mr. Hutchinson has now been senior surgeon for nearly four years. He retires very early from the post; and his loss can hardly fail to be severely felt by the school, for no school, however strong, can well afford to lose a surgeon and teacher of such ripe experience and manifold accomplishment. Mr. Hutchinson retains his appointments as Surgeon to the Royal London Ophthalmic Hospital and the Hospital for Diseases of the Skin. Mr. James Adams is senior assistant-surgeon, and will probably, therefore, now become surgeon.

THE CONTAGIOUS DISEASES ACTS.

CONCERNING the operation of these Acts, the newly published *Army Medical Report* contains some very decisive statements. From one table it appears that, comparing the sickness tables at stations where the Act was in operation in 1871, with those of 1864, the year prior to the first Act being applied, the decrease in the constitutional form of disorder, and that likely to produce permanent physical deterioration, has been 56.6 per 1,000; as contrasted with the results in 1871 at stations not yet under the Act, there is a difference against the latter of 41.4 per 1,000. A like result may be ascertained by comparing the average amount of enthetic disease during seven years 1865-71 at stations which have had and those which have not had the protection of the Act. On the average of the seven years, there were 36.1 per 1,000 of mean strength in favour of the protected stations as to the worst form of contagious disease. It is observed that perhaps the fairest estimate of the benefit derived by the army from the Acts is to be found in the difference between the admissions at the stations under the Act in 1871, and the average of them during the seven years at the stations not under the Act, amounting to 49.4 per 1,000 of the strength. While this great decrease has been observable in the army generally, there

has been an increase in the admissions from the Household Cavalry, Royal Artillery, Dépôt Brigade Royal Artillery, and the Army Service Corps, serving in unprotected stations. The Foot Guards have furnished much the highest proportion of cases, and next to them the Royal Artillery. The 3rd Battalion Grenadier Guards, quartered during the whole year in London, had much the largest number of cases; the 2nd Battalion of the same corps and the 2nd of the Coldstream Guards ranking next.

PHYSICIAN AND LOGICIAN.

In a little book, just published with the strange title *Malice, Rudeness, and Severity of Physicians to their Patients (Malice, Rudesse, et Dureté de quelques Hommes de l'Art envers leurs Malades*. Par C. Ravel, Médecine de l'Hôtel Dieu de Cavaillon. In 8vo. Tarascon et Aubanel. 1873), Dr. Ravel of Cavaillon gives the following amusing story from Sextus Empiricus. "The physician Herophilus gave a clever answer to the philosopher Diodorus, who maintained, among other things, that there was no movement, and undertook to prove it by the following sophism. If a body moves, it either moves in the place in which it is, or in the place in which it is not. Now it does not move in the place in which it is; for that which is in a place is actually resting there, and consequently it cannot be said that it moves. Nor does it move in a place in which it is not; for a body can neither act nor be acted upon where it is not. Therefore nothing moves. The philosopher having one day dislocated his arm, and having come to beg Herophilus to replace it, the physician replied by this argument: 'Either the bone of your arm has moved in the place in which it was, or in the place in which it was not. Now, according to your principles, it could not have moved either in the one or the other; therefore it has not moved at all, and is not displaced.' The poor philosopher, seeing that Herophilus jested with him, begged him to leave dialectics to the sophists, and to heal him according to the art of medicine."

ALUM IN BREAD.

FREDERICK HARRIS, a baker, of 599, Old Kent Road, was summoned before Mr. Benson at the Southwark Police Court on Saturday for selling adulterated bread. Dr. Bernays, the appointed analyst for Camberwell Parish, said he had analysed a loaf purchased at the prisoner's shop, and found it largely adulterated with alum—so much so that it was seriously injurious to health, especially to young people. The defendant said he had not used alum for nine months, and he was sure the bread was not purchased at his shop. He had, however, no evidence to show that. Mr. Benson said he had no doubt whatever in the case, and fined him £5 and 23s. costs. The money was immediately paid.

PRIZES OF THE SOCIETY OF APOTHECARIES.

AT the recent competitive examination for the prizes in Botany, given annually by the Society of Apothecaries, the successful candidates were:—1. John Todd, student of University College, London, a gold medal; 2. Charles Henry Cuming, student of University College, London, a silver medal and a book.

EXAMINERS AT THE ROYAL COLLEGE OF SURGEONS.

AT a special meeting of the Council on the 1st instant, to elect two members of the Court of Examiners in the vacancies caused by the death of Mr. Richard Partridge of King's College, and by the completion of his five years' term of office by Mr. S. A. Lane of St. Mary's Hospital, the choice of the Council fell on Mr. John Marshall, F.R.S., Surgeon to University College Hospital, for the first named vacancy, and on Mr. Timothy Holmes, Surgeon to St. George's Hospital, and Hunterian Professor of Surgery and Pathology in the College of Surgeons, for the second vacancy. The Council thus carries out its principle of selecting a certain number of examiners outside its own limits—a resolution which we entirely applaud. It must be felt as unfortunate that, in carrying out this resolution, it loses the opportunity of obtaining once more the services of Mr. Samuel Lane, who by common con-

sent has been one of the best examiners who ever entered its walls, and of gaining the highly useful assistance of Mr. John Gay, who is one of the few surgeons who have not allowed time to dull their activity, or use to take off its edge, who has made solid contributions to anatomical and surgical research, and whose contributions to the anatomy and surgery of hernia and of the veins will be remembered when the work of half of those who have been elected as examiners during the last dozen years will have been long buried in oblivion. It may be hoped that opportunity will be found of electing Mr. Gay to a post which he eminently deserves, and which he would fill with honour. He has the misfortune to be at present on the Council, to be senior to Mr. Holmes, and to belong to an unfashionable hospital, without any school to back it; but it will be readily admitted that neither of the examiners elected, admirable as are their accomplishments, has yet had the fortune to inscribe his name so deeply on the science and practice of his art as the excellent surgeon and anatomist who has been passed over.

THE SHAH AND THE HOSPITALS.

IN connexion with the reception of the Shah at the Guildhall, it was suggested that the decorations should be left, and that the public should be allowed to inspect them for a small fee, which should be paid to the benefit of the Hospital Sunday fund. It has also been suggested that the Shah should be taken to see one of our finest metropolitan hospitals—institutions unique in their perfection, and in the grandeur of voluntary benevolence which they illustrate. Friday, the 4th instant, has accordingly been fixed for a visit to St. Thomas's Hospital.

HORSES FOR SURGEONS.

APROPOS of the pending question of restoring to the medical officers of the army the allowances for horses which have been practically in many instances removed by the recent warrant, and of the claim preferred by them and on their behalf for a restoration of the privileges in that respect heretofore accorded to them, we may note incidentally that, in concluding his "suggestions" at the close of his recently published Report on the Hospital Service of the Fourth Division of the Northern Army, Surgeon-Major Hutton, Rifle Brigade, adds that "the surgeon should, if possible, be a good horseman." Mr. Cardwell's attention was drawn to this aspect of the question on the occasion of the recent deputation; and the measures taken for the purpose in the new Saxon Army Medical School were brought under his notice.

FINES UNDER THE ADULTERATION ACT.

BY the Adulteration of Food Act, it is enacted that the penalties imposed at the metropolitan police-courts are to go to the vestries; but in the recent cases of penalties being inflicted under the Acts, the fines received have been paid over to the Police Receiver by the magistrates' clerks. Some of the metropolitan vestries, who are dissatisfied at not receiving the fines after they have incurred the expense of appointing analysts, inspectors, etc., to carry out the Act, have made application to Mr. Bruce on the subject, and an answer has been received stating that by the Metropolitan Police Act the penalties inflicted by the magistrates at police-courts are to go to the police receiver; and the Home Secretary refers to the case of *Wray v. Ellis*, 1 "Ellis v. Ellis", 276, where it is decided that this is to be done. It has, however, been pointed out to Mr. Bruce that the Adulteration of Food Act was passed subsequently to the Metropolitan Police Act, and also to the decision in the case referred to.

IRELAND.

THE RIVER LIFFEY.

WE regret to say that the apathy and indifference of the municipal authorities of Dublin still continue in reference to the river Liffey. Now that the hot summer weather has set in, the citizens are again

crying out that something should be done to mitigate the evil that exists. It is really impossible for any one who is not acquainted with Dublin to believe that a source of danger in a sanitary point of view and an annoyance to the citizens should be allowed to continue so long unabated. When the tide is out, the different sewers which empty their contents into the river, and the black festering mud which lies exposed to the summer sun, together combine such dreadful effluvia that it is almost impossible to pass down the quays in weather like the present. That this state of affairs can be remedied very simply is patent to all unprejudiced minds, viz., by merely placing a couple of flood-gates in the river at a nominal cost; which, by always retaining a certain amount of water in the river, will prevent any unpleasant odour from escaping. This plan of proceeding has on more than one occasion been suggested to the corporation for their approval; but inasmuch as there is nothing political nor religious in the matter at issue, but only the health of the unfortunate over-taxed citizens, the members of the corporation do not consider it worth their while to remedy the present most disgraceful and unsatisfactory condition of affairs, which in any other city in the world of half the importance of Dublin would not be tolerated for a single moment.

ROYAL COLLEGE OF SURGEONS.

Mr. HARGRAVE, the representative of this College in the General Medical Council, will vacate his office in September next, when the term of five years for which he was elected will have been completed. It is most unlikely, and, we may add, morally impossible, that after that period the College will re-elect him for another term of years. Some younger member of the profession, and one who will act more in accordance with the views of the institution, will undoubtedly be appointed; but who the individual will be, rumour is altogether silent.

EPITHELIOMA OF SOFT PALATE TREATED BY GALVANIC CAUTERY. MR. R. PERSSÉ WHITE, of the Meath Hospital, Dublin, had under his care lately a man, aged 66, suffering from an epithelial growth half the size of a walnut growing from the uvula, which he removed by the galvanic cautery knife, using Grenet's battery worked with a solution of bichromate of potash. A month afterwards, cicatrization took place, and he left hospital quite recovered.

UNIVERSITY OF DUBLIN.

THE medical travelling prize of the University of Dublin has been awarded to Mr. Theodore Stark, scholar of Trinity College; and the surgical travelling prize to Mr. Andrew Clarke, scholar of Trinity College. Each prize is of the value of £50.

THE ANNUAL MEETING, 1873.

WE are informed that the Council of the Obstetrical Society of London have passed a resolution opening their library and reading-room at 291, Regent Street, to members of the Association during the annual meeting in London in August next.

The authorities of the Royal Medical and Chirurgical Society have, we believe, expressed a like intention, but we have not received a formal notice of it.

We mentioned last week that some of the great hospitals were desirous of making arrangements to receive warmly old and new medical friends and old pupils who will be visiting London in the first week of August. A semi-official communication from Guy's testifies to the hearty desire of the authorities to do all in their power. There is no opportunity for any *soirée* or general entertainment which was on the *tapis*. But arrangements will, we expect, be made by Dr. Steele, the medical superintendent, to receive visitors soon after the sections close, and to facilitate their view of what Guy's has to

show; and other hospitals will probably make similar arrangements. Some of the old pupils may care to revisit the operating theatres, and we will give publicity to any announcements of intended operations which may be appointed for the week in which the meeting is held.

We are requested to state that members in the provinces will render very material assistance to the Reception Committee, by sending early notice of their intention to attend the meeting to Dr. A. P. Stewart, 75, Grosvenor Street, London, W.

ELECTION AT THE ROYAL COLLEGE OF SURGEONS.

THE election of four Fellows to fill the vacancies in the Council of the Royal College of Surgeons of England took place on Thursday afternoon. The excess of the number of candidates over that of the vacancies, and the circumstance that a provincial candidate had been brought forward at very short notice indeed to fill the place of Mr. Turner of Manchester, had created a great interest in the election. There was an unusual number of voters; and especially we are glad to be able to record a remarkably large attendance of provincial Fellows, who travelled to London at very great sacrifice in support of an important principle. The result of the election is shown in the figures which we record below. We are chiefly concerned to express our satisfaction that the principle for which we felt it a duty earnestly to contend has been recognised. The election of Mr. Southam of Manchester is a testimony of the approval with which metropolitan as well as provincial Fellows regarded the principle which he very fitly and adequately represents. His candidature was surrounded with difficulties, owing to the combinations which existed in the metropolis to secure the election of particular candidates, and the organised canvassing which the state of the poll indicates to the practised eye. To some it will be a surprise, that Mr. Cooper Forster and Mr. Savory, representing the flower of the metropolitan schools, were out-voted, however it may be a matter of regret. To those who have become aware of the machinery at work, it will not. The following are the official figures at the close of the ballot.

Paget, Sir James	...	...	200—including 2 plumpers.
Walton, Mr. Haynes	...	136	" 25 "
Southam, Mr. George	...	114	" 13 "
Marshall, Mr. John	...	106	" 5 "
Forster, Mr. J. Cooper	...	105	" 4 "
Savory, Mr. W. S.	...	97	" 1 "
Hird, Mr. F.	...	62	" 5 "
Hussey, Mr. E. P.	...	29	" 0 "

Among the provincial Fellows who attended were: Messrs. A. Baker, Bartleet, Savage, and Thomas, of Birmingham; Lund, Southam, Blackmore, Mellor, Railton, and Woodcock, of Manchester; R. Harrison, Stubbs, McCheane, and Walker, of Liverpool; Husband, of York; Mathias, of Southport; Harris, of Redruth; Sir J. C. Burrows, Messrs. Cattlin, Rugg, Morgan, of Brighton; Crosse and Dalrymple, M.P., of Norwich; Greene, Bristol; Horsfall, Leeds; Faircloth, Northampton; Humphry, Cambridge; Lingen, Hereford; Jones, Brackley; Plankerd, Langport; Roden, Kidderminster; Smith, Warrington; Wood, Shrewsbury; Paget, Leicester; Hussey, Oxford; Holman, Hurstpierpoint; Sympton, Lincoln; Halkyard, Oldham; etc.

This election is likely to raise again the very important question whether provincial Fellows shall be always compelled to make such serious sacrifices to record their vote, or whether they shall be allowed to vote without being burdened in a manner which practically disfranchises the majority of them. In any case, however, the election has done justice on this occasion to the provincial schools and to provincial surgeons; and that is matter of the more sincere congratulation to us, as we were left alone in the medical press to urge their claims, and as the same journal which endeavoured formerly to discredit Mr. Turner's candidature, adopted similar tactics on this occasion. A battle won, however, heals all soreness; and this has been well fought and gallantly won, and is full of encouragement for the future.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

The business of the Annual Meeting will be transacted in six Sections, viz.:—

SECTION A. MEDICINE.—*President*: Dr. Sibson, F.R.S., London. *Vice-Presidents*: Dr. Habershon, London; Dr. Eason Wilkin- son, Manchester. *Secretaries*: Dr. John Murray, 42, Harley Street, London, W.; Dr. Silver, 2, Stafford Street, Bond Street, W.

SECTION B. SURGERY.—*President*: John Hilton, Esq., F.R.S., London. *Vice-Presidents*: W. S. Savory, Esq., F.R.S., London; Dr. George Buchanan, Glasgow. *Secretaries*: Henry Arnott, Esq., 6, Nottingham Place, London, W.; Dr. Alexander Ogston, Aberdeen.

SECTION C. OBSTETRIC MEDICINE.—*President*: Dr. Braxton Hicks, F.R.S., London. *Vice-Presidents*: Dr. G. H. Kidd, Dublin; Dr. Leishman, Glasgow. *Secretaries*: Dr. J. H. Aveling, 1, Upper Wimpole Street, London, W.; Dr. A. B. Steele, Liverpool.

SECTION D. PUBLIC MEDICINE.—*President*: Dr. Lyon Playfair, C.B., M.P., F.R.S., London. *Vice-Presidents*: G. W. Hastings, Esq.; T. J. Dyke, Esq., Merthyr Tydfil. *Secretaries*: Dr. Corfield, 10, Bolton Row, Mayfair, W.; Dr. Baylis, Birkenhead.

SECTION E. PSYCHOLOGY.—*President*: Dr. Harrington Tuke, London. *Vice-Presidents*: Dr. Radcliffe, London; Dr. Thurnam, Devizes. *Secretaries*: Dr. Blandford, 71, Grosvenor Street, London, W.; Dr. S. W. D. Williams, Hayward's Heath, Sussex.

SECTION F. PHYSIOLOGY.—*President*: Professor Humphry, M.D., F.R.S., Cambridge. *Vice-Presidents*: Dr. Rutherford, London; Dr. Ransom, F.R.S., Nottingham. *Secretaries*: Dr. W. M. Ord, 11, Brook Street, London; Dr. McKendrick, Edinburgh.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.

SATURDAY, August 9th.

EXCURSIONS.—By permission, the following among other Excursions will be arranged:—

Excursions to Cliefden, near Maidenhead, the seat of the Marquis of Westminster; and to Windsor Castle.

Excursion to Brighton, and visit to Brighton Aquarium.

Visit to Woolwich Arsenal and the Factories.

Arrangements will be made, of which further details will be published, for facilitating visits during the week to the Print and MSS. Rooms of

* By invitation of the Metropolitan Members.

the British Museum, the Mint, the General Post Office, the Private Collections at Grosvenor House, Stafford House, etc., and to some leading Factories.

** Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.

Dr. A. HENRY, 16, Brunswick Square, W.C.

Dr. S. WILKS, F.R.S., 77, Grosvenor Street, W.

GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.

ERNEST HART, Esq., 59, Queen Anne Street, W.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

It is intended that the surgical instruments, etc., shall be *bono fide* novelties, or improvements on those in common use. The Committee will be greatly obliged to exhibitors if they will send in their contributions as early as practicable.

Pathological Department.—The pathological part of the Museum will be arranged in the following departments—*a.* Diseases of brain, injuries to head, etc.; *b.* Diseases of heart and blood-vessels; *c.* Diseases of lungs; *d.* Diseases of abdominal and pelvic viscera; *e.* Malignant diseases; *f.* Diseases of eye and ear; *g.* Diseases of skin; *h.* Syphilis; *i.* Fractures and dislocations; *k.* Congenital deformities; *l.* Diseases of the lower animals; *m.* Miscellaneous.

Exhibition of Patients.—It is intended to arrange for the exhibition of living subjects of disease at special hours. Those intending to bring forward such, must give notice at least a fortnight before the meeting, and state the time at which it will be most convenient to them to attend. A written description of the case must also be sent. Notice of the hours fixed for each demonstration of this kind will be printed in the catalogue.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibitions of complete series of instruments, as electro-therapeutic apparatus, and instruments for physical diagnosis. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc. A department will be provided for the exchange or sale of duplicate photographs, casts, etc.

Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit. The Committee earnestly request those who intend to exhibit to bear in mind that it is impossible that descriptions, etc., can be included in the catalogue *unless sent in early*. They should be received at least a fortnight before the meeting, that is, not later than July 16th.

Communications, objects intended for exhibition, etc., may for the present be addressed to the private care of any of the members of the Museum Committee, or to Mr. FRANCIS FOWKE, at the office of the BRITISH MEDICAL JOURNAL. During the week preceding the meeting, all articles should be sent direct to the Library, King's College, and addressed to the care of the Curator of the Museum of the British Medical Association.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed.—Mr. Jonathan Hutchinson, *Chairman*, 4, Finsbury Circus, E.C.; Dr. George Buchanan, 193, Bath Street, Glasgow; Dr. Cayley, 58, Welbeck Street, W.; Mr. Richard Davy, 33, Welbeck Street, W.; Dr. Dickinson, 11, Chesterfield Street, Mayfair, W.; Dr. C. Hilton Fagge, 11, St. Thomas Street, E.C.; Dr. Gordon, 1, Howard Street, Belfast; Dr. Green, 74, Wimpole Street, W.; Mr. Furneaux Jordan, 22, Colmore Row, Birmingham; Dr. Charles Kelly, 94, Wimpole Street, Cavendish Square, W.; Dr. Moxon, 6, Finsbury Circus, E.C.; Dr. John William Moore, Dublin; Dr. Payne, 6, Savile Row, W.; Dr. A. Silver, 2, Stafford Street, Old Bond Street, W.; Dr. Heywood Smith, 2, Portugal Street, Grosvenor Square, W.; Mr. George Southam, 10, Lever Street, Manchester; Dr. Grainger Stewart, 19, Charlotte Square, Edinburgh; Dr. H. G. Sutton, 9, Finsbury Square, E.C.; Mr. C. G. Wheelhouse, Hilary Place, Leeds; Dr. Wilks, 77, Grosvenor Street, W.; Dr. C. Theodore Williams, 78, Park Street, Grosvenor Square,

W. The *Honorary Secretaries* are Mr. Waren Tay, 10, Finsbury Pavement, E.C., and Mr. Francis Fowke, 37, Great Queen Street, W.C.

Papers.—The following papers have been promised.

Francis E. Anstie, M.D. Alcohol in Pyrexia.

T. Clifford Allbutt, M.D. The After-history of Cases of Railway Accident.

H. Charlton Bastian, M.D., F.R.S. On the Modes of Causation of Epilepsy and allied Convulsive Affections at different Periods of Life.

James Ross, M.D. The Theory of Counterirritation.

Thomas J. MacLagan, M.D. The Germ-theory of Disease applied to the Explanation of the Phenomena of Idiopathic Fever.

William Sedgwick, Esq. The Absence of Purging in Cholera.

T. Grainger Stewart, M.D. On Chronic Bright's Disease.

Christopher Heath, Esq. On Colotomy.

G. W. Callender, Esq., F.R.S. On the Isolation and Treatment of Wounds.

Jonathan Hutchinson, Esq. Some Notes on the Effects of Iodide of Potassium.

William S. Savory, Esq., F.R.S. On the Treatment of Strictures of the Urethra.

Arthur E. Durham, Esq. The Removal of Bronchocoeles by Operation.

Berkeley Hill, Esq. A New Urethrotome for incising very Narrow Strictures.

T. Holmes, Esq. On the Diseases which simulate Aneurism.

George Critchett, Esq. The Treatment of some of the Superficial Affections of the Eye.

T. Pridgin Teale, Esq. On the Restoration of Perinæum and Sphincter Ani ruptured during Labour.

J. T. Clover, Esq. Induction of Sleep during Surgical Operations.

William Mac Cormac, Esq. Some Remarks on Onychia Maligna.

Spencer Wells, Esq. On the Excision of the Enlarged Spleen.

C. E. FitzGerald, M.B. A Series of Ophthalmoscopic Drawings with Explanatory Notes.

Lawson Tait, Esq. 1. On the Anatomy and Treatment of Dermoid Cysts of the Ovary and Peritoneum. 2. On Methylene Ether as an Anaesthetic.

John C. Murray, M.D. Urinary Calculi: their Preventive and Solvent Treatment.

Thomas W. Hime, M.B. Intrauterine Therapeutics.

Ewing Whittle, M.D. The Anticipation of Post Partum Hæmorrhage.

John Bassett, Esq. The Prevention of Uterine Hæmorrhage.

A. B. Steele, L.K.Q.C.P. Case of Apoplexy and Hemiplegia in the Puerperal Period, terminating in Recovery.

J. A. Wanklyn, Esq. 1. The Action and Relative Value of Disinfectants. 2. The Chemical History of Excreted Urea. 3. The Ammonia process of Water-analysis for Medical Officers of Health.

T. W. Grimshaw, M.D., and D. Toler Maunsell, M.B. State Medicine and Public Health in Ireland.

J. W. Moore, M.D. 1. Influence of Mean Temperature on the Prevalence of Small-Pox. 2. Crystallisation of Nitrate of Urea from Urine.

Charles Elam, M.D. On Disturbed Mental Phenomena falling short of Insanity.

J. G. Davey, M.D. The Delusions of the Insane: their real value as a Means of Diagnosis.

J. Langdon Down, M.D. On some of the Causes of Imbecility and Idiocy.

Francis E. Anstie, M.D. Some of the Relations of Nerve-pain with Mental Derangement.

T. Buzzard, M.D. On Co-ordinated Convulsions from Mental Shock.

David Nicolson, M.B. On the Occurrence of Insanity among Criminals.

W. H. O. Sankey, M.D. Is there such a Disease as Acute Primary Mania?

H. Sutherland, M.D. Climacteric Insanity in the Male.

David Yellowlees, M.D. Insanity and Intemperance.

Herbert Page, M.B. A Case of Traumatic Pneumothorax, illustrating the use of the Aspirator.

W. F. Teevan, Esq. The Treatment of Retention and Extravasation of Urine.

Sir Duncan Gibb, Bart., M.D. Cyanopuon Laryngis; or Thyroiditis with Blue Suppuration.

Edward Woakes, M.D. Case of Double Ventral Hernia: one strangulated on admission, the second becoming so five days after operation on the first; Second Operation: Recovery.

F. Waterhouse, Esq. Case of Conical Cornea with Staphyloma.

J. Batty Tuke, M.D., and J. G. M'Kendrick, M.D. The Morbid Changes following Experimental Injuries to the Brain.

Thomas Savage, M.D. Some Points on the Treatment of Flexions of the Uterus.

E. A. Schäfer, Esq. Exhibition of Preparations of Muscular Fibre.

G. Rainey, Esq. Currents occurring in Fluids kept in Closed Vessels, and their bearing upon Endosmosis, Diffusion, and Cyclosis.

A. Ransome, M.D. Demonstration of Apparatus for Measuring the Chest.

John Harley, M.D. Physiological Effects of *Æthusa Cynapium*.

John G. M'Kendrick, M.D. 1. Report on Actions of Certain Drugs. 2. Researches of Mr. Dewar and Dr. M'Kendrick on the Physiological Action of Light. 3. Effect of Light on the Iris of the Common Cat. 4. Demonstration of Helmholtz's Views on the Mechanism of the Bones of the Ear.

W. K. Parker, Esq., F.R.S. The Ossicula Auditûs in the Mamalia and their Representatives in the Ovipara.

W. M. Ord, M.B. Slips of the Tongue.

T. Spencer Cobbold, M.D., F.R.S. Observations on Hæmatozoa, illustrated by Specimens. 2. Treatment of Tapeworm, with Cases.

3. The Treatment of Ascarides, with Cases.

E. J. Tilt, M.D. The Prevention of Uterine Inflammation.

A. Wiltshire, M.D. New Obstetric Instruments.

Protheroe Smith, M.D. The Treatment of Displacements of Internal Organs and of their Functional Diseases by means of External Appliances.

James Finlayson, M.D. The Alleged Dangers of Dentition, and the Practice of Lancing the Gums.

J. H. Aveling, M.D. A Loop-saw, or Substitute for the Ecraseur.

J. Hughlings Jackson, M.D. Hemiplegia from Blocking of Cerebral Arteries.

Henry W. Rumsey, M.D. The State Medicine Qualification.

George Harley, M.D., F.R.S. The Formation of Stone, and its Medical Treatment.

William Adams, Esq. On the Pathology of the Cases of so-called Spinal Concussion following Railway and other Accidents.

Francis Mason, Esq. Remarks on a Case of Melanotic Tumour developed in a Congenital Mole.

William Cadge, Esq. Median Lithotomy.

Edward Lund, Esq. Fallacies and Failures in Antiseptic Surgery.

W. Laidlaw Purvis, M.D. 1. A New Method of Diagnosis of the Refraction of the Human Eye. 2. The Passage of the White Corpuscles through the Capillaries.

J. Hughes Bennett, M.D., F.R.S. Report of the Committee on the Antagonism of Drugs.

T. Lauder Brunton, M.D. The Action of Purgative Medicines.

U. Pritchard, M.D. Exhibitions of Sections of the Cochlea.

W. J. Mickle, M.D. On Morphia in some Cases of Insanity.

NOTICES OF MOTION FOR ALTERATIONS OF LAWS.

1. The President of the Council will move the following alterations in the Laws.

Rule 7. To omit the word "and" in the second line, and insert after "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872".

Rule 8. To omit the word "fortnight", and insert instead the words "five weeks"; also in the same rule, to insert the word "twenty" instead of "ten".

Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-elect, President of Council, Treasurer, the Vice-Presidents, and one Secretary from each Branch. 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.

"*Mode of Election.*—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons."

2. Mr. R. H. B. Nicholson, of Hull, gives notice that he will move, at the annual meeting in August next, that Law 23 be omitted; viz., "The Committee of Council shall annually prepare a statement of accounts up to the last day of each year, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year. The accounts shall be previously audited every year by two auditors, appointed at the preceding annual meeting, and not holding any other office in the general Association." And that the following new Law be substituted for it:—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to the 31st day of December of each year, and such account shall include a statement of assets and liabilities, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year."

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Friday, the 11th day of July next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, June 26th, 1873.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Belvoir Hotel, Rhyl, on Tuesday, July 8th, at 1 P.M.; R. DAVIES, Esq., of Llanfair-talhaiarn, President.

The dinner will be at 4 P.M. Tickets, including waiters and dessert, 7s. 6d. each.

Members who have cases to report or papers to read, and those who intend dining, will please to communicate, as soon as possible, with the undersigned.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, June 9th, 1873.

MIDLAND BRANCH.

THE annual meeting of the above Branch will be held in the Board Room of the Leicester Infirmary, on Tuesday, July 8th, at 2 P.M.; H. LANKESTER, Esq., President-elect.

Dinner at the Bell Hotel at 5 P.M. Tickets, 7s. 6d. each.

Members wishing to read papers, or to be present at the dinner, are requested to give immediate notice to the undersigned.

THOMAS BLUNT, M.D., *Honorary Secretary*.

St. Martin's, Leicester, June 17th, 1873.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held at the Bristol Library and Institution, on Thursday, July 10th, at 3.30 P.M.; EDWARD LONG FOX, M.D., President, in the Chair.

The business of the meeting will be to receive the Report of the Council; to elect the officers of the Branch, and nine representatives to the General Council for the ensuing year; to transact the necessary business and to discuss such subjects connected with the interest of the Branch and of the profession as may be brought before it.

Members who have not paid their subscriptions, are requested to do so to the Local Secretaries, at or before the annual meeting, in order that the accounts may be made up before the anniversary meeting of the Association.

The dinner will be held at the Royal Hotel, College Green, Bristol, at 6.30 P.M. Tickets, including ice and dessert, 7s. 6d. each.

The Bristol Secretary particularly requests that those members who intend to be present at the dinner will send in their names before Monday, July 7, in order that the necessary arrangements may be completed.

E. C. BOARD, Bristol. } *Honorary Secretaries*.
R. S. FOWLER, Bath. }

Bristol, June 16th, 1873.

METROPOLITAN COUNTIES BRANCH.

THE twenty-first annual meeting of this Branch will be held at the banqueting-hall, Alexandra Park, on Tuesday, July 15th, at 3 P.M. President for 1872-73, Sir WILLIAM FERGUSON, Bart., F.R.S.; President-elect for 1873-4, RICHARD QUAIN, M.D., F.R.S.

At half-past 5 P.M. precisely, the members will dine together; RICHARD QUAIN, M.D., F.R.S., in the Chair. Tickets, fifteen shillings each (including ices, tea, coffee, and attendance, and exclusive of wine).

A. P. STEWART, M.D.

ALEXANDER HENRY, M.D. } *Honorary Secretaries*.

London, June 18th, 1873.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, July 24th, at 2 P.M., under the presidency of GEORGE GILLET, Esq.

Dinner at 5 o'clock.

Gentlemen are requested to send to the Secretary the titles of communications they wish to make at the meeting.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, June 24th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETING.

A MEETING of this district was held at the Infirmary, Chichester, on Friday, June 6th, Dr. TYACKE in the chair. Fourteen members and four visitors attended.

Next Meeting.—It was resolved that the next meeting be held at Petworth, and that Henry Boxall, Esq., of Wisborough Green, be requested to take the chair.

Communications.—The following communications were brought before the meeting.

1. Dr. Tyacke gave a short address on the local advantages and objects of interest in the city: its drainage and water-supply.

2. Dr. Fussell gave the notes on a case of a Tumour of the Brain, and on two cases of Retroversion of the Unimpregnated Uterus.

3. Dr. Paxton related the history of a Case of Sudden Death, probably caused by Bronchocele.

These various subjects gave rise to considerable discussion, in which many gentlemen took part.

The Dinner took place at the Dolphin Hotel, when sixteen members and friends assembled, under the presidency of Dr. Tyacke.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A MEETING of the Section took place in Queen's College, Birmingham, on June 17th; Dr. WADE in the Chair.

Anatomy and Tumours of the Mamma.—Mr. T. H. BARTLETT read a paper on the normal and morbid anatomy of the mamma, describing the gland in its passive condition, and in its state of physiological hypertrophy, and discussed the morbid conditions of the mammary gland, limiting himself to those growths ordinarily understood as tumours. Mr. Bartlett divided them into the adenomata, the sarcomata, and the carcinomata. The paper was illustrated by very numerous and beautiful sections, specially prepared for the occasion by Dr. Rickards, the Pathologist to the General Hospital.

Dermoid and Hamorrhagic Ovarian Cysts.—Mr. LAWSON TAIT showed a section of a small portion of a large dermoid cyst which he had been unable to remove from a patient on whom he operated. As far as he could determine, the cyst was not ovarian, but peritoneal; but, as the patient had recovered with the cyst in process of cure from suppuration, no opportunity had been afforded of determining this point. The section showed one curious peculiarity seen at the time of operation, that the hairs which grew as usual in the cyst, did not grow into the cavity of the cyst, but grew along its walls in their substance, and did not appear on the internal surface. The contents of the cyst were limpid, and had a horrible corpse-like odour. The section was tinted with carmine, and showed abortive dermoid structures and cross sections of hair. Mr. Tait showed also a section of a hamorrhagic ovarian cyst of an unique kind, as far he could discover. The cyst-contents were of a putty-like consistence, and evidently composed of inspissated blood, as blood-corpuscles could be readily detected, and hæmatine crystals could be obtained from it. The chief peculiarities of the cyst consisted of a large dark-coloured patches on its inner surface, with raised borders and evident signs of ulceration. In some parts, this ulceration had healed, and elsewhere it was in progress. It was evidently the source of the hæmorrhage. One peculiarity of the case was the extreme severity of the uterine hæmorrhage, thus giving rise to the belief, before the operation, that the tumour might be a soft fibroid of the uterus, pedunculated. How the hæmorrhage occurred it was impossible to discover, for it had ceased entirely since the operation, and the patient has recovered.

Muscular Fibres of the Uterus.—Dr. MALINS showed specimens illustrative of the muscular fibres of the unimpregnated and pregnant uterus. The process of involution of the uterine walls after delivery was described, and an example shown, tinted with aniline, from an uterus six weeks after childbirth, in which no trace of fatty degeneration was visible.

tion could be found. He pointed out that the formation of the non-contractile fibre-cells afforded a favourable field for investigation, since the details of the process have not yet been described.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Pathological and Chemical Laboratories.—*Tubercles of the Choroid.*—*Comparative Pathology.*—*Syphilitic and Non-syphilitic Bubo.*—*New Council of Hygiene.*—*The Weather.*—*Illness of MM. Nélaton and Claude Bernard.*

AMONG the innovations and improvements introduced by M. Jules Simon, late Minister of Public Instruction, for the better teaching of the science and art of medicine in France, I may mention as not the least important, the formation of laboratories, which have been attached to those hospitals in Paris where clinical medicine and surgery are specially taught by professors of the faculty. These laboratories, due principally to the efforts of Professor Béhier, seconded by M. Wurtz, the Dean of the Faculty, are intended for pathological and chemical researches, where ocular demonstration is given of the different changes that take place in disease, and which, whenever practicable, is done during the life of the patient. These useful institutions, though as yet very incomplete, are certainly a great boon; they are highly appreciated by the students, and have already done good service. Those of the Hôtel Dieu and La Charité are the most frequented; and if one may judge from the number of students who voluntarily resort to them, one is forced to the conclusion that a better time is in store for both patients and doctors. Demonstrations are given weekly by the *chefs de laboratoires*, as well as by the chemical preparators, in presence of the clinical professor, and with such a trio one must be very dull indeed if he cannot form some idea of the mechanism, so to speak, of the different morbid changes that take place in the body. On Wednesday last I attended, or, as the French would say, "assisted," at one of these demonstrations, at the Hôtel Dieu, which was opened by M. Ernest Hardy, the chemical director of the laboratory, and so well known for his work on biological chemistry, who delivered a very able lecture on the relative proportions of the different carbonates of the urine, which he illustrated by experiments in a very ingenious apparatus made for the purpose. As the pupils progress in their studies, they will be permitted to manipulate for themselves, not only in chemical researches, but in pathological histology, the part allotted to Dr. Liouville, *chef du laboratoire*, who immediately followed, I was struck with the clearness and ability with which he mastered his subject; in fact, this is to say nothing new of him, for those who have walked M. Béhier's wards during the last eighteen months or so, would have recognised in M. Liouville, then *chef de clinique*, the qualities necessary for practical teaching. He is very obliging to foreign visitors, and, like his illustrious master Béhier, is ever ready to bring to their notice and explain the most interesting cases that present themselves in the ward. This, I regret, cannot be said of all the clinical teachers, for some of them are so gruff that I have known even native pupils desert them on that account.

The subject treated of by M. Liouville was "Tubercles of the Choroid." A certain number of cases had recently been observed in the wards of M. Béhier, of patients affected with generalised military tuberculosis, and M. Liouville was induced to examine the choroid of some who died from the above affection. This membrane was often found implicated, and M. Liouville had a few years ago prepared some specimens of tubercular cerebro-spinal meningitis, which he presented to the Anatomical-Biological Society of Paris, copies of which may be seen in the proceedings of that society, in the form of beautiful chromo-lithographic plates, accompanied with the description, for the years 1869 and 1870. In following up these interesting researches, M. Liouville resorted to experiments on animals, and the result was as follows. He injected hypodermically into a guinea-pig the blood of a man affected with generalised tuberculosis of the military form, and, on examining the eye of the animal, the choroid was found studded with tubercles of the same character, and was handed round to the class for inspection. The effect was most striking, and the experiment at the same time afforded a good illustration of the utility of the study of applied pathological anatomy, which forms the natural complement of the clinical lectures, which are demonstrated, when necessary, even by comparative experimental pathology. Such a combination of studies cannot but be attended with the best results, as it constitutes the proper system of medical education, and this is so true that even the school of

medicine has become alive to its utility. A new impetus has been given in that direction, and didactic lectures on comparative pathology are now regularly delivered at the Faculty of Medicine by Professors Vulpian and Charcot, both of whom have earned for themselves, in that branch, as well as in physiology, a reputation almost unequalled in Europe. Indeed, it may be said, that the same thirst for knowledge prevails everywhere; but whether from the disasters that had overtaken the country, or from some other cause, the French seem bent upon regaining their position, and of showing to the world that, if they have been unfortunate in war, they are still, as they ever have been, second to none in the cause of civilisation, and in the cultivation of the arts and sciences.

In a lecture lately delivered by M. Fournier at the Lourcine hospital, he treated of the differential diagnosis of the syphilitic and non-syphilitic bubo, which may be summarised as follows.

Symptomatic bubo of the hard or infecting chancre. *Symptomatic bubo of the soft or simple chancre.*

- | | |
|---|--|
| 1. A constant symptom. | 1. An occasional complication. |
| 2. The bubo is aphlegmasic or non-inflammatory. | 2. Inflammatory, constituting a painful tumour which is of some size. |
| 3. Bubo nearly always multiglandular. | 3. Unioglandular (monoadenitis). |
| 4. Bubo is resolved spontaneously, never suppurates except in cases of complications. | 4. Suppurates frequently, and almost inevitably, assuming the character of chancrous bubo. |
| 5. Bubo never secretes pus auto-inoculable. | 5. Bubo secretes pus which is auto-inoculable, which reproduces soft chancre. |
| 6. Bubo never becomes converted into a glandular chancre. | 6. Bubo almost always becomes converted into a glandular chancre. |
| 7. Bubo essentially mild in character, so much so that it is often passed unnoticed. | 7. Bubo always a serious complication. |

The above was then formulated thus: in simple chancre there is sometimes no bubo, and, when it does occur, the bubo is inflammatory. In true chancre the bubo is always non-inflammatory.

The new Council of Hygiene have entered on their functions, and their first work was to inspect the confectioners' shops, and to see that the paper which is used to envelope the confectionery is not coloured with any deleterious substance. The colouring matter prohibited for such purposes as being dangerous, and giving rise to severe accidents, are for green, the arseniate of copper; yellow, the oxide of lead; red, the sulphuret of mercury; white, the carbonate of lead or litharge; and the chrysocal, in imitation of gilt paper.

The weather is becoming very oppressive, and the heat almost tropical, the thermometer marking yesterday in the shade nearly 28 degs. Centigrade, or about 75 degs. Reaumur, and the barometer came down to 29½.

You will have heard of the serious illness of M. Nélaton, the celebrated surgeon, who is suffering from disease of the heart. Symptoms of improvement had taken place during the week in the condition of the illustrious patient, but I regret to say he has had a relapse, and little hope is entertained of his recovery.

Another eminent member of the profession, M. Claude Bernard, the great physiologist, is also seriously indisposed. He was taken ill during the week, but I am glad to be able to say that a change for the better is announced by his medical attendants.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

The Necessity of Quarantine.—Cases in the Royal Infirmary.

THE necessity in large seaports for some system of medical supervision of the nature of quarantine has been exemplified by a recent occurrence in Liverpool. The mail steamer *Benin*, from the West Coast of Africa, arrived in the river Mersey on June 8th; and, when boarded by the medical officer resident at this port, whose duty it is to visit and report in such cases, it was found that no fewer than eleven deaths had occurred during the passage from Bonny. Of these, four were attributed to yellow fever; five to African fever, complicated with apoplexy in two cases, and congestion of the brain in a third; one to phthisis, and one to dysentery. This fearful mortality appeared in no way due to any sanitary neglect, as the vessel was well found, and in all respects in a satisfactory condition. The fever was supposed to have been contracted at Bonny, where a steamer was lying alongside the *Benin*, having several cases of fever on board; and the sickness

had broken out a few days after leaving that port. The crew and passengers were all in good health when the steamer reached Liverpool.

On a recent visit to the Royal Infirmary, we saw on the same day the following cases, exemplifying the resources of that institution as a field of surgical observation. There was a case of attempted removal of a large cystic tumour of the neck in the situation of the thyroid gland, in a woman 36 years of age. The growth had existed for several years, had attained the size of the closed fist, was increasing rapidly, and, therefore, it was decided to attempt its removal. It was found, however, that the tumour dipped down so deeply into the neck, implicating the laryngeal apparatus, and had such intimate connection with the surrounding vessels and tissues, that its extirpation *en masse* was impracticable. The operator, Mr. Bickersteth, therefore divided the mass into two portions, and, having passed a ligature round each, shaved off as much of the diseased growth as could with safety be removed. The operation was performed a week ago, and the patient, although suffering from some erysipelatous swelling of the face, was on the whole in a favourable condition.

We also witnessed the successful removal, by Mr. Bickersteth, of a large cartilaginous tumour from the angle of the jaw in a man about 50 years of age. The tumour dipped deeply down into the intermaxillary space, and its firm attachment to the surrounding parts, especially in the neighbourhood of the styloid process of the temporal bone, rendered its removal a work of considerable time and difficulty. In spite of extreme caution in the dissection, an opening was made in the jugular vein, which caused much venous hæmorrhage, in addition to rather free loss from wounded arteries.

In the wards of the hospital, our attention was directed by Mr. Harrison to a case just admitted under his care, showing the serious mischief which might follow the too free division of the frænum of the tongue in an infant. The child, thirty-six hours old, had undergone the popular but questionable process of having its tongue cut by a "mid-wife", who performed the operation with a pair of sharp-pointed scissors. Previously to admission, medical aid had been called in, and the actual cautery had been applied; but, the bleeding still continuing, the child was brought to the Infirmary. The loss of blood had already rendered recovery almost hopeless; and, after trying continued compression, it was found necessary to secure by ligature a considerable portion of the divided tissues before the hæmorrhage could be arrested.

A case of femoral hernia was at the same time admitted, in which the patient had been ruptured for five years. The gut had been irreducible for three days, when, symptoms of strangulation coming on, the patient was sent into the Infirmary. Mr. Harrison proceeded to operate immediately on admission; as the patient was much collapsed, the sac was opened at once, without reference to the state of the intestine, which, although of a deep claret colour, proved to be sound, and was accordingly reduced. The case is doing favourably.

Under Mr. Harrison's care we also saw a case of suicidal cut-throat, in which repeated gashes had been made, and a considerable cavity, as it were, scooped out; but the large vessels had escaped, and the man was doing well. We saw also a case of injury to the spine, with suspected laceration of the urethra: the latter injury, however, terminated in suppuration immediately in front of the scrotum, rendering it imperative to cut down into the urethra in that situation, involving of course the risk of urethral fistula. Under appropriate treatment and the frequent passage of a bougie, the case was progressing favourably.

Visitors to the Royal Infirmary can scarcely fail to be struck with the inadequate accommodation, as regards space for spectators, afforded in the present operating theatre. At the time of its original construction, the theatre was probably sufficiently commodious; but with the increase in the medical school, and consequently the large number of students attending the hospital, additional space is urgently needed. We believe the Medical Board have already called the attention of the trustees of the Infirmary to the matter, but, so far as we can learn, without any immediate prospect of any practical result.

UTRECHT.

FROM OUR OWN CORRESPONDENT.]

Snellen's Operation for Strabismus.

BELIEVING that the operation for strabismus, as performed by Dr. Snellen, has some advantages over those which I have seen on the Continent elsewhere, or in England, and that it has not been described in any English journal, I beg to forward the following description thereof, which, as Dr. Snellen has kindly looked over my notes thereon, may be relied upon as correct.

Chloroform is not administered, except to children and to adults who insist upon it, as its administration prevents the operator from judging

of the amount of correction effected for some time after the operation. Critchett's speculum being placed in position, the patient is requested to turn the eye in the direction which allows the operator to view the field of operation best, but the globe is not fixed in any way. The conjunctiva being pinched up close to the cornea by means of the usual forceps, an arm of a sharp-pointed pair of scissors is passed through the conjunctiva in a meridional direction along the middle line from before backwards. The forceps is now removed, so that the conjunctiva is separated from the bulb by the blade of the scissors alone, which drags it slightly away from the eyeball, and is cut while in this position. By this means a straight incision is made from before backwards in the conjunctiva, which inclines to shut on the eye being directed to the opposite side, while a wound having anything of a perpendicular direction is apt to gape when such movement is made. Another advantage which this direction of wound possesses is, that should it be wished to close it by a suture, which is generally done, the closure has no effect upon the amount of the operation, as the position of the tendon cannot be in any way influenced thereby, while, should a perpendicular wound be closed, the position of the tendon will almost certainly be changed. The edges of the conjunctival wound are now raised with the forceps, and, by means of blunt-pointed scissors, the subconjunctival tissue is divided equally upwards and downwards by numerous small snips. With the forceps the caruncle is next seized and raised, and, by means of the scissors, loosened from its underlying cellular tissue, the points of the scissors being always directed towards the conjunctiva, and away from the ball, so that any puncture of Tenon's capsule is avoided, which, when it occurs, allows blood so pass inside the capsule, causing exophthalmus, from the pressure thus occasioned—pressure so great sometimes that Dr. Snellen relates a case in which the speculum was with difficulty taken out. By keeping the points of the scissors in the direction indicated, a branch of the ciliary artery which runs beneath the caruncle is also avoided. The tendon is now seized by the forceps, and a small opening is made with the scissors, as close to the sclera as possible. One of the scissor-blades being passed into this opening, and the other between the tendon and conjunctiva, the capsule is cut equally in both directions upwards and downwards: this allows the muscle to act equally, and not more in one direction than another, which it can hardly fail to do if the wound in the capsule be oblique, which probably will be the case should the blunt hook be passed under the tendon before it is cut, as then a portion of the capsule is carried beneath the tendon by the hook, and, being cut at the same moment as the tendon, is cut obliquely. Any remaining fibres are sought for by the blunt hook and cut in the usual manner.

The parts of the operation peculiar to Dr. Snellen are, as far as I know, the following: the conjunctival wound from before backwards; the position of the scissors while cutting the subconjunctival tissue; the cutting Tenon's capsule equally upwards and downwards.

The advantages claimed for the operation are as follows.

1. The operation, being truly an operation *à jour*, is easy, and the danger of wounding the sclerotic is avoided.
2. Tenon's capsule being cut equally, the effect is in the proper direction.
3. Pressure on the eyeball with the blunt hook is avoided, and much pain is prevented.
4. The accumulation of blood under the conjunctiva is diminished.
5. It is more in the operator's power to cut the capsule to the required degree, and to regulate the amount of the effect.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS OF IRELAND.

WEDNESDAY, APRIL 9TH, 1873.

WILLIAM STOKES, M.D., D.C.L., in the Chair.

The Late Henry Eames, M.D.—Dr. ATTHILL moved the following resolution:—"That this Society desires to express its sense of the great loss it has sustained in the premature death of Dr. Henry Eames, who for four years filled the office of Honorary Secretary of the Society, and to convey to his family its sincere sympathy with them in their bereavement."—Dr. WHARTON seconded the motion, which was unanimously adopted.

Poisoning by the Fumes of Charcoal.—Dr. J. HAWTREY BENSON read a narrative of two cases of poisoning by carbonic oxide, occurring in University students, aged 18. The lads had incautiously left in their sleeping apartment, the chimney of which was stopped up, a charcoal brazier on a cold night last March. Next morning they were both

found insensible. On being summoned, Dr. Benson found one lad already aroused, but still heavy and confused, with a small and feeble pulse (104 in the minute), respirations 20, temperature 99 deg. Slight vomiting followed, which seemed to relieve him, and after remaining in bed all day, he was nearly well, though weak, next morning. The second lad was deeply comatose, with face livid and bloated, respiration laboured and stertorous, eyes congested, pupils alternately dilated and contracted, teeth clenched, slight frothing at the mouth, limbs somewhat rigid, pulse 140, but regular and fairly strong; temperature 103 deg., respiration 36, an evidently sluggish peripheral circulation, visible jugular pulsation, and universal dry râles over the posterior aspect of the chest. Free ventilation of the apartment was at once secured, and a current from Gaiffe's induction-apparatus was passed between the phrenic nerve and the diaphragm during inspiration. At the suggestion of his colleague Dr. Purser, Dr. Benson used cold affusion (temperature of water 60 deg.). At 1 P.M., the pulse was 132, respiration 36, temperature 102.6 deg.; the patient sweating profusely. At 3.30 P.M., Dr. Hudson visited in consultation, and, looking to the evident distension of the right heart, recommended cupping under both clavicles. Three or four ounces of blood were removed with difficulty. At 9.30 P.M., pulse 120, respiration 24, temperature, 102 deg. The patient was still deeply comatose. A pint of urine was removed by the catheter. Dr. Purser now examined the fundus of the eye with the ophthalmoscope, and found extreme venous congestion. In about thirty hours from the time of the accident, full consciousness returned; but there was profound muscular prostration, with pains in the calves of the legs and feet; and on the third day sordes covered the lips and teeth. Pyrexia persisted for six days, after which the temperature became subnormal for a day (97 deg.). On the ninth day, the patient was able to sit up for the first time. Dr. Benson alluded to the persistence of the symptoms caused by the inhalation of carbonic oxide, while carbonic acid produced but comparatively transitory effects. Modern investigation, represented by Claude Bernard, had shown that this peculiarity in carbonic oxide poisoning depended on the formation in the blood of a new and definite compound, called *carbonic oxide hæmoglobin*, a substance possessing a separate spectrum, distinct from that of either the oxy- or the reduced hæmoglobin, and also differing from these in its chemical properties.—Dr. PURSER said that, in Dr. Benson's second case, the ophthalmoscope showed extreme congestion of the venous, and emptiness of the arterial, system of the fundus of the eye.—Dr. H. KENNEDY mentioned two cases of poisoning by carbonic oxide which had come under his notice, and in which the symptoms closely resembled those detailed by Dr. Benson.—Dr. QUINLAN alluded to the method adopted for resuscitating the dog experimented on in the *Grotto del Cane*, near Naples, by dipping the animal two or three times in a neighbouring pool.—The CHAIRMAN said that in this accident a fever was clearly produced, as a direct result of blood-poisoning.—Dr. BENSON said that one of his patients suffered from a copious crop of boils, a few weeks after his recovery, a fact of much interest when taken in connection with the question of blood-poisoning.

Pulmonary Hæmorrhage as a Cause of Consumption.—Dr. J. MAGEE FINNY introduced the subject by reading an account of three illustrative cases.—CASE I. Miss F., aged 18, a member of a delicate family, but hitherto in good health, coughed up some blood on July 9th, 1869. Hæmorrhage recurred on the 11th and 12th, and for nine days black sputa continued to be expectorated. On the tenth day, the temperature rose to 103 deg., near which point it continued till shortly before death. At the time the bleeding occurred, physical examination discovered a slight moist râle over the lower portion of the left lung posteriorly, without any sign of consolidation. After six days, dullness was noticed in the situation, with tubular breathing and bronchophony. The lung-disease now made rapid progress, softening occurred, cavities formed, and in eight weeks the patient was dead.—CASE II. Miss M., aged 22, unmarried, two days before her monthly period, had moderate hæmoptysis. Black sputa continued to come up for ten days. After five days, symptoms of an attack of pneumonia, including a crop of *herpes labialis*, supervened, and there were the physical signs of consolidation of the base of the left lung. On the seventeenth day, resolution seemed to set in, but in five days fresh symptoms appeared, the temperature rising to 101.5, and 103.4 deg. The patient now sank slowly but surely under the influence of an increasing pulmonary affection, and died forty-four days from the first hæmorrhage.—CASE III. A medical student, aged 21, had always enjoyed good health. While shooting, in the grouse season, he took a difficult leap, and came down heavily on his feet. Almost instantly he coughed up some bright blood. In a few days, pneumonic consolidation of the lower lobe of the right lung was detected. Partial resolution followed, but under depressing treatment inflammation again lighted up, and throughout the whole right lung consolidation, softening, and abscesses followed in quick succession. The patient died within five

months from the initiary hæmoptysis. These three cases coincided in the following points. 1. In none of them did the lungs exhibit any signs of previously existing disease before the hæmoptysis occurred. 2. The patients were all young, and healthy. 3. The bleeding took place unexpectedly, and suddenly. 4. After a few days, pneumonia, at first lobular, then lobar, with high fever set in, and from its effects the patients seemed to die at varying intervals. As explanatory of the initiatory hæmorrhage, Dr. Finny said anyone of three views might be held;—first—that there existed in these otherwise healthy and to all appearances, sound individuals, prior to the occurrence of the hæmoptysis, a diseased state of the walls of the arteries of the lung (Williams); second—that tubercles, deposited in the lung and lurking there for an indefinite period, produced the bleeding (Laennec); and third a view—much more simple than either of the former—that under some undue exertion on the part of the patient, there occurred an accidental rupture of some blood-vessel, either bronchial or pulmonary; excluding the pulmonary aneurism of Rokitsansky and of Rasmussen of Copenhagen. The last supposition appeared to the author to apply to the hæmorrhage in the cases brought forward by him, in all of which the bleeding would fall under the head of some one of the three classes of congestive hæmorrhages described by M. Trastour. The cases, indeed, went to prove the truth of Niemeyer's dictum *phthisis ab hæmoptoe*; but against the exclusive application of this theory, (he Dr. Finny) would set his face. The result of a primary pulmonary hæmorrhage might vary much in different cases. Thus, if all the effused blood were expectorated from the lungs, probably no evil consequences would follow. Again, the presence of the serofulous diathesis in an individual, the subject of pulmonary hæmorrhage, was a most important factor. The summing up of the whole matter amounted to this, that pulmonary hæmorrhage might play a most serious part in producing consumption in previously healthy lungs, or in hastening the fatal termination in lungs already diseased, by lighting up afresh dormant inflammation.

On the motion of Dr. MACSWINEY, seconded by Dr. GRIMSHAW, the discussion on Dr. Finny's paper was adjourned.

Election of Honorary Secretary.—Dr. George F. Duffey was elected Honorary Secretary, in the room of late Dr. Henry Eames.

WEDNESDAY, MAY 7TH, 1873.

THOMAS DAREY, Esq., in the Chair.

Pulmonary Hæmorrhage as a Cause of Consumption.—Dr. MACSWINEY, in opening the discussion on Dr. Finny's paper, said that, in any case of phthisis, there were three periods when pulmonary hæmorrhage might occur. The disease might be ushered in by a profuse hæmoptysis, its course might be complicated by occasional slight attacks of hæmoptysis, or its fatal termination might be hastened by severe hæmoptysis. Many pulmonary hæmorrhages were not connected with, or followed by, phthisis. As arguments against the theory *phthisis ab hæmoptoe*, he would recall the fact that phthisis often did not follow hæmoptysis; that Dr. Williams explained the early hæmorrhage as depending on a fragile state of the vessels, due to a previously existing phthisical tendency; and that pulmonary secondary inflammation could not be set up by the effused blood, since it was absorbed in a few days, as shown by the early disappearance of the phthisical sign of crepitation in these cases. He would explain Dr. Finny's cases by supposing that a phthisical tendency had caused the hæmoptysis, and he would ask whether tubercles might not remain for some time latent in the lungs. He asked whether it was advisable to arrest pulmonary hæmorrhage at once. In many cases, no doubt, interference did become absolutely necessary, and then perfect quietude of mind and body was indispensable, with iced unstimulating drinks, ergot, and extensive dry-cupping over the chest.—Dr. GRIMSHAW considered that hæmoptysis might certainly be regarded as a cause of phthisis. He drew a marked distinction between the *exciting* and the *predisposing* causes of phthisis. While admitting Dr. MacSwiney's position, that crepitation after hæmorrhage disappeared with the absorption of the fluids of the blood, he stated that the solid constituents of the blood remained, and acted as an irritant foreign body. Local treatment by depletion in cases of hæmoptysis uncomplicated by phthisis was often useful in checking a tendency to secondary inflammation.—Dr. H. KENNEDY said that, if nutrition were an inflammation, then Niemeyer's views could be accepted by him. He alluded to cirrhosis of the lung, in which great hæmorrhages were not followed by phthisis. A similar state of affairs was to be found in pulmonary apoplexy. The effect of hæmoptysis was often most salutary in relieving symptoms, where phthisis had already set in. He believed that, in all the cases brought forward by Dr. Finny, there was evidence of previously existing mischief in the lungs.—Dr. HAYDEN deprecated the adoption of any exclusive doctrine, such as Laennec's, as to the tubercular nature of phthisis, or as to the

modern view of the origin of phthisis from pulmonary hæmorrhage. The truth lay between the two extremes, thus—latent tubercle might be a cause of hæmoptysis; while, on the other hand, primary pulmonary hæmorrhage might lead to secondary disorganisation of lung-tissue.—Dr. GERALD YEO concurred with Dr. Finny's views. He could not agree with Dr. Kennedy that pulmonary apoplexy was not a cause of phthisis; on the contrary, he thought that small apoplexies (hæmorrhagic infarctions), in themselves not sufficient to produce immediate death, frequently caused destruction of the lung tissue, and thus phthisis.—Dr. JAMES LITTLE said that two factors were necessary to produce post-hæmorrhagic phthisis; the occurrence of hæmorrhage, and the pre-existence of a phthisical tendency.—Mr. FLEMING drew attention to the analogy between the crepitation heard in cases of traumatic hæmoptysis, and the emphysematous crackling observed in cases of subcutaneous or intramuscular extravasation of blood.—Dr. FINNY gave a full *résumé* of his opinions on the relations between hæmoptysis and phthisis. The Society then adjourned.

CORRESPONDENCE.

MEDICAL ADVERTISING AND MEDICAL FEES.

SIR,—I trust that you will pursue the subject of medical advertising in the daily papers: the custom is a disgrace to our profession. I am, like your correspondent "Juvenis Senior," suspicious of my seniors, but I do not hold the commercial and unworthy views he expresses. We surely do not admit that we are subservient to the medical publishers, and that it is they who insist on their works being advertised. If the publishers do so strongly urge their claims, it must be from motives which the profession dare not openly favour. If the publisher insert a string of medical works in the *Times* (for instance), he must do it either because the authors wish to advertise themselves under the cover of his name, or he must do it to push the sale of the works advertised amongst the public. If the former, there can be no excuse whatever for not following out the resolution of the College of Physicians. The author has merely to arrange with his publisher that his book shall not be advertised in the daily papers. If the publisher refuse this, he can go to another, who is willing to meet the views of the College and of respectability. If the publisher, on the other hand, find by his announcements in the *Times* that he sells a large number of copies of his medical works, it can only be to non-professional persons, as all medical men consult the medical journals for their information. But no Fellow of the College would dare for a moment to advocate the perusal of medical works amongst the public. It is difficult to understand how Fellows of the College who pretend to superior virtue can have so long found their minds to tolerate so much sophistry in the question of medical advertising, such as the interests of the publishers, etc. Amongst the good results of the College resolution, the following occur at once to my mind. We shall have less rubbish in the shape of medical works published for the purpose of advertising, and we shall be able to tell our inquiring lay friends that so and so must be a quack if his book be advertised in a daily paper. The remarks of your correspondent on medical fees are very just.

I am, etc., M.R.C.P.

SIR,—The letter of "Juvenis Senior," in last week's JOURNAL, will appeal strongly to all juniors in the profession. Experience is entirely against any hope that the seniors will be affected in the slightest degree by any such appeals. The question how juniors who aspire to consulting practice can live through the early years of a professional career is one which the juniors may ask others, but which they will probably have to answer themselves. This is entirely a question of fees. Let me suggest to all juniors a solution of this starvation problem. As the seniors insist on making their standard fee the guinea, let juniors adopt as their standard the equally respectable half-guinea. At discretion they may charge more, or even, see patients twice (as some seniors do three times), for their standard fee. If juniors adopt a lower scale of fees than is now recognised, they will be told that they are infringing the etiquette that governs these things in the profession. There never was, in my experience, a more miserable veil than this professional etiquette. Right dealing and honesty of motive are real safeguards, and cannot be too jealously insisted on, but etiquette is too often a different thing altogether from these. In this particular case, etiquette means a shallow device for keeping young men under water, and enforcing upon them the manifest absurdity that position and dignity contain sustenance for themselves and their hungry children. The objection to the proposal that claims serious attention, is one which is likely to be raised by general practitioners. The general practitioner may complain that the effect of

the new scale will be to place him in competition with junior consultants. The objection is more apparent than real. The general practitioner has five sources of professional income: midwifery, medical family practice, surgical family practice, medical consultations at home, and surgical consultations at home. The consultant has three sources of income: consultations (medical or surgical), at home; consultations with other practitioners, and family practice (medical or surgical). In the matter of family practice, the preference of the public for medical attendants who can take all cases operates in favour of the general practitioner and against the consultant. Again, the consultant would not take a less fee than half-a-guinea, though he might see patients twice for the fee, he would not take five shillings for a fee. Even at equal fees the general practitioner has a great advantage over the consultant. In the comparison, the provincial consultant has been specially regarded; in the case of the metropolitan consultant, comparison would show a more marked advantage to the general practitioner.

June 23rd, 1873.

I am, etc.,

REFORM.

OBITUARY.

FREDERICK HEISCH DUNBAR, M.D.

DR. DUNBAR, who died on May 16th at the early age of thirty-one, was the sixth son of the late Joseph Dunbar, Esq., of Cork. Dr. F. H. Dunbar received his medical education at the Queen's College, Cork, where he carried off numerous medals and prizes, giving promise of a brilliant career in the medical profession. In October 1862, he was commissioned as Assistant-Surgeon in the army; and soon afterwards proceeded on the staff to China, whence he was subsequently transferred on appointment to the 23rd Royal Welsh Fusiliers. He served for several years with that corps, distinguishing himself by devotion to the care of the sick during a severe epidemic of cholera at Jubbulpore. His naturally strong constitution was impaired by tropical service, and he was invalided to England in permanently impaired health. He was employed on staff duty at home until gazetted to the 67th Regiment, with which he continued to do duty until last autumn, when he was placed on the half-pay list on account of disease of the liver, which ultimately caused his death.

JAMES ROBERTS, M.R.C.S.E., GOLCAR.

THE late Mr. James Roberts was born in 1816, and died on May 10th, 1873. He practised as a surgeon in Golcar for thirty years, and had a large country practice. He held the appointment of Certifying Surgeon for several townships under the Factory Acts, and was also Medical Officer for the Golcar District of the Huddersfield Union.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

FYLDE.—Mr. P. Hinckes Bird has been elected Medical Officer of Health for the Fylde District.

MR. CHARLES WILKS, late Medical Officer for District No. 3 of the West Ashford Union, Kent, has obtained a superannuation allowance of £40 *per annum*.

THE TORRINGTON DISTRICT.

SIR,—We beg to acquaint our professional brethren that we intend becoming candidates for the Torrington District. Several junior members of our profession have written to us, asking the question of our intentions; and, to their honour, after the stand we have made, they assure us they will not become our opponents if we be candidates.

We emphatically deny the truth of the paragraph in the last advertisement issued by the Board of Guardians, commencing, "The District Medical Book," etc. It is not a faithful statement. When the Local Government Board inquire into the matter, we shall be enabled to prove our position.

We are, etc.,

CHARLES R. JONES,
RICHARD AUGUSTUS ROUSE.

Great Torrington, North Devon, July 1st, 1873.

P.S. We are not partners in business.—C. R. J., R. A. R.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, June 26th, 1873.

Walker, John Robert, Clifton Gardens, W.

The following gentleman also on the same day passed his primary professional examination.

Houlbrook, Edward, Leeds School of Medicine

MEDICAL VACANCIES.

THE following vacancies are announced:—

AFRICAN ASSOCIATION OF LIVERPOOL.—Medical Officer for a Station on the West Coast of Africa: minimum salary, £300 per annum, and all expenses. Applications to the Surgeons' Committee of the Association, Exchange Buildings, Liverpool.

AMERSHAM RURAL SANITARY DISTRICT.—Medical Officer of Health: £100 for one year. Applications to Henry Bedford, Esq.

AXBRIDGE RURAL SANITARY DISTRICT.—Four Medical Officers of Health: £50 per annum, each, for two years.

BRADFORD (Yorkshire) INFIRMARY AND DISPENSARY.—Physician.

BROMLEY, Kent, Rural, combined with several other Rural and Urban Sanitary Districts. Medical Officer of Health: £800 per annum. Applications to Joseph Snelling, Esq., Tonbridge.

BUCHANAN, DRYMEN, and KIMORONOCK, Parishes of.—Medical Officer: £500 first year, guaranteed. Applications to Horatio R. B. Peile, Esq., Catter House, Drymen, by Glasgow.

CASTLEREA UNION, co. Roscommon.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Frenchpark Dispensary District: £100 per annum, and fees.

CHAPEL-EN-LE-FRITH Rural, and other Rural and Urban Sanitary Districts, combined: £300 per annum, for two years. Applications to Henry Barber, Esq., New Mills.

CHESTER, etc.—Medical Officer of Health: £600 per annum, to include travelling and all other expenses.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer: £100 per annum, board, and residence. Applications to W. T. Grant, Esq.

GREENWICH UNION.—Dispenser: £80 per ann., unfurnished apartments, etc.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon: £40 per annum, board, and lodging.

HALKIRK, Caithness.—Parochial Medical Officer, and Medical Officer to the Poorhouse.

H.M.'s INDIAN MEDICAL SERVICE.—Eleven Surgeons. INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.

LEEDS URBAN SANITARY DISTRICT.—Medical Officer of Health: £400 per annum. Applications to Capel A. Curwood, Esq.

LONDON TEMPERANCE HOSPITAL.—Physician.—Surgeon.

MILE-END OLD TOWN.—Medical Officer for the North District: £200 per annum, to include all fees except vaccination.

NAVAL MEDICAL SERVICE.—Assistant-Surgeons.

NORTH CHARITABLE INFIRMARY, Cork.—Resident Surgeon.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM.—Assistant Medical Officer: £100 per annum, furnished apartments, board, and washing.

PENKITH RURAL AND URBAN SANITARY DISTRICTS.—Medical Officer of Health: £300 per annum.

REAY, Caithness.—Parochial Medical Officer.

ROYAL ISLE OF WIGHT INFIRMARY, Ryde.—House-Surgeon and Secretary: £40 per annum, board, etc.

ST. SAVIOUR, Southwark.—Medical Officer for the Christchurch District: £130 per annum.

ST. THOMAS'S HOSPITAL.—Demonstrator of Anatomy.

STAMFORD, RUTLAND, and GENERAL INFIRMARY.—House-Surgeon, Apothecary, and Secretary: £100 per annum, board, lodging, and washing.

STOCKPORT INFIRMARY.—Assistant to the House-Surgeon.

TARBAT, Ross-shire.—Parochial Medical Officer. Applications to Mr. John Ross, Tain.

THURSO, Caithness.—Parochial Medical Officer.

TORRINGTON UNION.—Medical Officer, Great Torrington District: £100 per annum and midwifery fees.

STRATFORD-ON-AVON Rural, combined with several other Rural and Urban, Sanitary Districts—Medical Officer of Health: £600 per annum.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Physician.

WATTEN, Caithness.—Parochial Medical Officer.

WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead.—House-Surgeon and Assistant-Secretary: £100 per annum, furnished rooms, etc.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Governor and Secretary: £150 per annum, to commence, board and residence.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon: £80 per annum, residence and maintenance.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

WHITE.—On July 1st, at Storey's Gate, S.W., the wife of *J. Campbell White, L.R.C.P.Ed., of a son.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. JONES.—What authority has our correspondent for stating—1st. That dispensers in hospitals are overworked. 2nd. That the dispenser of the Berkshire Hospital was overworked. 3rd. That dispensers are worked fifteen hours a day?

ADDRESSES AND PAPERS AT THE ANNUAL MEETING.

WE shall have great pleasure in furnishing printed slips of the addresses and abstracts of papers read at the Annual Meeting, to the editor of the *Irish Hospital Gazette*, as we have been in the habit of doing for several years to all editors of medical papers who apply for the same. Addresses and papers read at the Annual Meetings, are the property of the Association, and the MS. must be forwarded solely to the Secretaries; but printed slips are then freely issued to all who desire to publish them.

ARNOLD'S POCKET CLINICAL THERMOMETERS.

SIR,—In reply to M.B.'s letter which appears in last week's JOURNAL, respecting our Patent Pocket Clinical Thermometers, we can only refer him to our advertisement in the BRITISH MEDICAL JOURNAL of the same date, he will there find no mention made of the diagram representing the actual size of the instrument. The first we made was certainly of the exact size of the diagram; but, finding many members of the profession preferred them a trifle longer, thereby rendering the register scale more easily discernible, we increased the length (when opened) to seven inches. If M.B. will kindly refer to the notice that appeared in your JOURNAL, he will find the words, "It will at once be seen that, by a very simple arrangement, a thermometer of 3½ inches in length can be instantly increased to one of 7 inches."

With reference to the same not being engraved centigrade as well as Fahrenheit, we must again trouble M.B. to read our advertisement. He will then see that to procure an instrument with centigrade scale (as well as Fahrenheit) costs 2s. 6d. in addition. Many practitioners do not care for the double scale; and, to meet all requirements, we make them with both single and double scales.

In conclusion, if M.B. will kindly either call or send his address, we shall be pleased to either show or send some of each description for his inspection and approval. The best and most conclusive evidence we can give respecting the merits of our invention is fully expressed in the following letter, just received, and which we shall feel obliged by your inserting.

[COPY.]

6, Christopher Street, Finsbury Square, E.C., "

Messrs. Arnold and Sons. June 23rd, 1873.
GENTLEMEN,—The Patent Clinical Thermometer I bought of you is a decided improvement on all the pocket thermometers I have ever seen. It was a very carefully and beautifully made instrument, and exceedingly sensitive. The arrangement which doubles its length, or the reverse, at a moment's notice is very clever. I enclose an order for three more, which please add to my account (enclosed).

Yours very faithfully,

W. BATHURST WOODMAN,

Translator and Editor of *Wunderlich's Medical Thermometry* for the New Sydenham Society.

Apologising for occupying so much of your valuable space,
35 and 36, West Smithfield. We are, etc.,

ARNOLD and SONS.

OLD AND NEW WORLD HOMŒOPATHS.

THE homœopaths in this country have recently laid down the dogma, that he is the best homœopath who least often has recourse to allopathic doses and principles of treatment. We learn from a recent report of a trial of homœopaths in America, in the *Boston Medical and Surgical Journal*, that they have there adopted the more candid formula, "that there is no requirement for membership in the Homœopathic Society, that its members belong to no exclusive sect, and profess to practise according to no special dogma"—that is to say, that being homœopaths, they do not, in fact, practise homœopathy.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

SPECIAL HOSPITALS.

DR. PROSSER JAMES, one of the physicians of the Hospital for Diseases of the Throat, writes, in reference to the paragraph referring to the hospital which we condemned, to state that he had no foreknowledge of it; that he has no share in the administration of the hospital, his sole duty being that of a physician; that his advice in respect to such matter "has not been asked, and, of course, never proffered." The last paragraph hits the point at which we are at issue with him. Editors of daily papers rarely invent puffs about "new and improved methods of treatment"; and we do not think it desirable that physicians should look upon them calmly because their "advice has not been asked." The matter is not in this case a very grave one, and it does not affect Dr. P. James more than his colleagues; but we repeat that it is an example of the kind continually recurring of the evils which gather round special hospitals; and we entirely maintain the ground that the medical staff cannot be considered free from responsibility in such matters.

IMPETIGO.

SIR,—As it is not generally recognised that there is a disease similar to impetigo, which frequently assumes a contagious and epidemic character, I have thought it right to bring under the notice of your readers the cases of four children in a family suffering from an eruption having those peculiar features and progress which proved it was a special form of disease described some years since in the *JOURNAL* by Dr. Tilbury Fox, under the name of "impetigo contagiosa." It began in the youngest of the four—a boy aged 8—induced by a fall on his chin, causing an excoriation, which festered, the discharge drying up into the crystallised honey-like appearance. Later, a small vesicular pustule showed itself on the nose; then larger ones of the size of a threepenny-piece appeared on the hand. These after a day or two discharged, forming similar scabs to what had been observed on the chin. On removing the crusts, there was left a small discharging ulcer. In about ten days, the next child, a girl aged 10, had the same eruption, but only on the hands—no doubt from contact in playing with her brother. A few days afterwards, her sister, aged 13, showed it very severely on the hands, face, mouth, and was thought happily to have escaped; but, unfortunately, on his return he was in like manner attacked. In all these cases the eruption was preceded by feverish symptoms, loss of appetite, and general malaise; and in every case the eruption consisted of minute painless vesico-pustules, the contents of which dried into thin light yellow crusts, covering over a reddish surface. They all had chicken-pox just before Christmas; since then they have had frequent colds, otherwise their health has been tolerably good, but not robust. As it is usually thought that impetigo only occurs in ill-fed, badly nurtured children, I may mention that in this instance the children were all well cared for, and there was no neglect of hygiene. The treatment adopted has been principally local—by zinc and white precipitate ointment—but the most effectual application I have found to be the new disinfectant, "chlorozone," which consists of fixed chlorine in an alkaline permanganate solution.

I am, etc.,

GEORGE P. RUGG, M.D.

Stockwell Villa, Clapham Road, June 25th, 1873.

MIDWIFERY ORDERS.

SIR,—With your permission, I would say a few words to your correspondent on this head in the *JOURNAL* of 24th May ult. It has been my fortune(?) to be medical officer for more than twenty years to two small districts in *two* unions. In the one, all midwifery and other extra fees have been cheerfully, honourably, and uniformly paid whenever claimed. In the other, the reverse has been almost the rule; scarcely any fees paid without murmur; many deducted or withheld altogether. *Apropos* for your correspondent, it happens that I have had a very parallel case to his. In October last, I received an order from a "legally authorised" person (the overseer) to attend a case of great peril. I did so; and in due course, at Christmas, sent in an account, including a charge of £2 for the case. The bill was paid less the £2, with the few words, "that the guardians did not consider that the 'element of destitution' in the man existed at the time," and requested me "to apply to the overseer for the payment of the fee." Of course, I considered I had nothing to do with the overseer (my contract being with the guardians); and therefore I at once wrote to the Local Government Board, asking for an explanation. I wrote three times; but each time they scrupulously avoided to give a direct reply to my inquiries. First, they "recommended" me to apply to the overseer (as the guardians suggested). This I declined, and wrote again; to which they replied, "they were not the legal arbitrators between the guardians and their officers." Yet a third time I wrote them, with certain intimation of threats which I had made to the guardians of a county-court appeal, etc. To this they replied: "We have no power to compel the guardians to pay you."

It must appear obvious that all these replies were evasive of the true state of the case; or why, I would ask, did they not at once tell me that any demand upon the guardians was illegal or wrong, and therefore it was not imperative on them to pay the charge? This correspondence with the Local Government Board and the guardians, with threats as above, absorbed most of the time between Christmas and Lady-day. I then determined to give the guardians another chance of the *amende*; and I sent in with the Lady-day account the item of "£2 fee deducted from last account." I confess I was not very greatly surprised to receive a cheque including this fee, with the simple remark "that the Board had paid it, but you are not to take it as a precedent, etc." It is most clear that the guardians were at fault upon the true interpretation of the words "sudden and urgent necessity" in the Act. They took it as referring to pecuniary means, or what they called the "element of destitution"; whereas it appears to me that the most common-sense view of it can only give it the interpretation which I did, and in which I was supported by a magistrate and *ex officio* guardian—viz., that "urgent necessity" does not refer to the "necessaries of life, etc., but to the need of the application of skill and appliances to avert death."

In a note under Art. 182, it will be seen in Glen's *Consolidated Orders*, "that it is immaterial whether the party making application be in receipt of other relief; the fact of his application constitutes him *de facto* a pauper." And, further on, "an overseer is bound to give an order in case of 'sudden and urgent necessity.'"

I think that it will appear most obvious to you how disastrous must be the consequences of this state of things, that we are to be called upon either to attend such cases without a prospect of payment, or to refuse a legal order and thus render ourselves amenable to the law of manslaughter.

If, sir, you shall be pleased to insert this in your next impression, I trust your correspondent will take courage, and do as I most certainly should—take out a summons against the chairman.

East Rudham, Brandon, June 3rd, 1873.

I am, etc.,

FRED. MANBY.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

SIR,—A case that I think must be unusual has lately occurred in my practice. Perhaps some of your readers could inform me if it occasionally happens, and if it is referred to in any work on obstetric practice. As unskilled midwives are only too often employed all over the country, I think it not unlikely that the lamentable accident to which I refer may sometimes occur in their hands.

I was called last week to see a child that was born about twelve hours before they sent for me. The message was, that it was likely to die soon if it did not get relief, as there was a lump in its neck that kept it from breathing. Only an ignorant old woman had been in attendance at the birth. When I went, I at once noticed an unnatural appearance about the child's neck. The head was thrown very much backwards on the spine, and the line of the face was in a continuous straight line with that of the neck at the chin. There was great difficulty of breathing, but there was nothing apparent about the throat to account for it. I was from the first look of it apprehensive that the neck was injured; and my first impulse was to raise the head, seeing how much respiration was impeded. I was afraid to cause the least unnecessary movement, however, for fear that if the neck were broken the child might die in my hands. I gently raised the head, and the result was total disappearance of the disfigurement, and the infant breathed quite naturally. Seeing this, I at once got a pad made and applied it to the back of the neck, and then got a shawl put over all to act as a sort of splint, and this simple treatment answered to a wish. When I saw the child last—five days after my first visit—I found it very well; it had continued so ever since, and righted its head.

I was led to think this case one of displacement in the cervical portion of the spine by the method of exclusion, and also by the direct evidence, so far as it went. The disfigurement, along with the difficulty of breathing, which I suspected would be caused by the angular projection formed at the point of displacement, pressing (the oesophagus) forwards on the trachea when the head was inclined backwards, seemed to point to it; and the total removal of the symptoms by simply lifting the head up seemed to confirm my diagnosis. I am aware that the *vis medicatrix nature* is strong in infancy, but I own I never gave it credit for being all that it appeared to be in this case. A circumstance that surprised me not a little was the entire absence of paralysis below the seat of the injury; but as the paralysis may be in all degrees of severity, depending on the displacement more or less of the particular parts entering into the formation of the osseous canal, so I suppose it may even be *nil*.

I am, etc.,

CHARLES MACLEAN.

Applecross, 28th June 1873.

MR. D. H. DYTE.—As soon as possible.

THE plan suggested by a member (Dublin) has been in operation at all recent annual meetings, and will be so at this.

OUT-PATIENT DEPARTMENTS.—A Metropolitan Associate writes:—I have been extremely pleased by the editorial paragraph in the *JOURNAL* of June 28th, entitled "Misinterpreted Figures"; and beg to thank you for it. A few such sensible and courageous expressions of opinion would do much to direct public charity into healthier channels.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The *Liverpool Weekly Albion*, June 28th; The *Manchester Guardian*, July 2nd; The *Aberdeen Daily Free Press*, June 28th; The *Bath Express*, June 28th; The *Birmingham Daily Post*, July 2nd; The *Herts and Essex Observer*; The *Roscommon Journal*; The *Hull Packet*; The *Yorkshire Post and Leeds Intelligencer*; The *Melbourne Argus*; The *Sussex Daily News*; The *City Press*; The *Birmingham Daily Mail*; The *Kendal Mercury*; The *Daily Review*; The *Western Mail*; The *Wrexham Guardian*; The *Lincolnshire Chronicle*; The *Lincoln Gazette*; The *Inquirer*; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. T. K. Chambers, London; Dr. G. Rolleston, Oxford; Dr. G. M. Humphry, Cambridge; Dr. Rumsey, Cheltenham; Dr. A. B. Steele, Liverpool; Dr. Prosser James, London; Dr. Harris, Redruth; Dr. Sawyer, Birmingham; Our Paris Correspondent; Dr. Du Bois Reymond, Berlin; Dr. Hayem, Paris; Mr. Thomas Smith, London; Mr. Berkeley Bill, London; Dr. Cobbold, London; Dr. Pye-Smith, London; Mr. Bellamy, London; Mr. Macnamara, Dublin; Dr. Hughlings Jackson, London; Mr. J. W. Langmore, London; Dr. Noble, Manchester; Mr. C. F. Hodgson, Brighton; Mr. W. Sedgwick, London; Dr. A. Pearce, Botesdale; Dr. Procter, York; Dr. J. Bell, Edinburgh; Dr. Moffit, London; Mr. Charters White, London; Mr. Eyton Jones, Wrexham; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. W. Squire, London; Dr. Stewart, London; Dr. George Johnson, London; Mr. Cox, Winchcombe; Mr. Jeaffreson, Newcastle-upon-Tyne; Mr. White, Sittingbourne; Mr. J. Whitehead, Manchester; Mr. Smith, St. Heliers; Mr. Gaskoin, London; V. S., Bournemouth; Dr. J. S. Cohen, Philadelphia; Dr. Paton, London; Mr. R. Harrison, Liverpool; Mr. Fairlie Clarke, London; Mr. Tallerman, London; Mr. Acton, London; Dr. W. T. Gairdner, Glasgow; Mr. Matthews, London; Mr. Blaise, London; Dr. George Harley, London; Dr. T. L. Brunton, London; Dr. Fox, Scarborough; Dr. Max von Pettenkofer, Munich; Dr. Lichtenberg, London; Dr. Jaccoud, Paris; An Associate; M. Broca, Paris; Mr. Warner, Guildford; Dr. Heaton, Leeds; A Correspondent; Dr. Joseph Rogers, London; Dr. Gueneau de Mussy, Paris; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. E. L. Fox, Clifton; Dr. Arnison, Newcastle-upon-Tyne; Messrs. Arnold and Sons, London; Mr. W. R. Cutis, London; A Member; Dr. C. R. Jones, Great Torrington; Mr. P. Hinckes Bird, London; The Editor of the "Irish Hospital Gazette"; Mr. D. H. Dyte, London; etc.

THE HARVEIAN ORATION

DELIVERED BEFORE

THE ROYAL COLLEGE OF PHYSICIANS,

On Wednesday, June 25th.*

By GEORGE ROLLESTON, M.D., F.R.S.,

Linacre Professor of Physiology in the University of Oxford, etc.

I PASS from this reflection to an exposition of the claims which have been put forward on behalf of Walter Warner, the editor in 1631 of Harriott's *Algebra*, to the discovery of the circulation of the blood; and I do this by a natural transition, Walter Warner having been a man in whose mind, all his mathematics notwithstanding, the *idola* in question greatly abounded. Warner's claims are alluded to by Dr. Willis in a note to his excellent *Life of Harvey* (see p. lxiv). They are put forward by Anthony Wood, upon the authority of Dr. Pell, a man distinguished as one of Oliver Cromwell's diplomatists, and afterwards as an assiduous supporter of the then young Royal Society; and upon that of Dr. Morley, some time Dean of Christchurch, and afterwards Bishop of Winchester (see Wood, *Athena Oxonienses*, i, 461, ed. 2nd of 1721, vol. i, p. 302, ed. Bliss). Aubrey, a contemporary of Wood's, appears, from a note at p. 417 of the second volume of his *Lives of Eminent Persons*, to have had the same story from Izaak Walton, who gave Dr. Morley again as his authority; and Aubrey repeats the tale with certain additions, and notably with that of Dr. Pell's authority, at p. 577 of the same volume. The same story was pointed out to me by one of the officials in the Bodleian Library as being given in an anonymous biographical miscellany to be found in the Rawlinsonian Collection, B 158, p. 152-153. This MS. appears to be of the latter half of the seventeenth century, and its legend runs to the following effect. A certain Henry, Earl of Northumberland, being imprisoned in the Tower, did, for the better passing of his time, get several learned persons to live and converse with him; one of these men (whom Aubrey tells us, *l. c.*, p. 368, the world called the Earl of Northumberland's magi) was "Mr. Warrener." And the MS. proceeds, "He was the inventor, probably, of the circulation of the blood, of which subject he made a treatise, consisting of two books, which he sent to Dr. Harvey, who epitomised and printed them in his own name; he usually said that Dr. Harvey did not understand the motion of the heart, which was a perfect hydraulic. . . . Dr. Pain, that very ingenious and learned canon of Christchurch, told me that he had seen and perused this book of Warrener's." Finally, the excellent *Biographia Britannica* has embalmed Wood's and Aubrey's story, in the articles "Harriott" and "Harvey," pp. 2542 and 2550. Ed. 1757. Many *à priori* improbabilities will be seen at once to attach to this story, and it is easy enough to discredit more than one of the witnesses. But I have better than indirect evidence to bring forward, and I will have the agreeable mental exercise of excogitating it to the ingenuity of my hearers, which ingenuity will be sharpened, no doubt, by their regard for their own Harvey, and strengthened by the belief that

"Whatever records spring to light,
He never shall be shamed."

I may be asked, after this quotation, why I should have thought it worth while to investigate Walter Warner's claims at all. I will shelter myself, in the first instance, behind the example of Sir George Ent who, feeling and acting by Harvey as Launcelot in his better days felt and acted by Arthur, took similar pains to set aside the similar fable as to Harvey's indebtedness to Father Sarpi. And, in the second place, I will remind my hearers that it was but as recently as 1838, that an article appeared in the *London and Westminster Review*, in which the claims of the Italian monk, just mentioned, were once again brought forward with surprising confidence, plausibility, and ignorance.

It was possible, I thought, that the same paltry but evil spirit which animated Dutens in writing his *Inquiry into the Origin of the Discoveries attributed to the Moderns* (1769), and in coming to the conclusion that every great man in modern times had been anticipated by somebody or other in ancient ones, might still be going about in dry places, and might wholly enter into and entirely fill up the soul of some small antiquary, who, coming under such inspiration and guidance upon the passages which I have collected, might proceed to instruct the literary

public as to Warner's claims. Whilst considering what indirect evidence might be brought together to rebut this possible attempt at detraction, I came upon what led me to the discovery of the direct evidence I have promised to lay before you, in the shape of a clue which brought me, after a somewhat tortuous course, upon Walter Warner's actual autograph MS. I found, whilst following up Dr. Pell's history, scattered through Dr. Birch's unindexed *History of the Royal Society*, that Dr. Birch had procured a number of MSS. of Mr. Walter Warner's for that Society mixed up with Dr. Pell's (see vol. ii, p. 342; vol. iv, p. 447). Coupling this statement with the voucher for Warner's claims, ascribed by Wood and Aubrey to Dr. Pell (who, however, is never reported in Dr. Birch's *History*, so far as I found, to have given currency to this statement), I thought that by these MSS. I should be able to test the truth of these statements. But the librarian of the Royal Society knew nothing of any MSS., either of Pell's or of Warner's; and, as the result will show, it would have been odd if he had—at least, in his official capacity. I then made inquiry of the Duke of Northumberland, in whose library the MS. of Warner, once a pensioner of his house, might possibly be preserved; but Mr. J. E. Martin informed me that this hope was a vain one. I found that Sir John College had once possessed one MS. of Warner; but I learnt from the Rev. W. W. Milman that they had lost it, and much besides, in the great fire of London in 1666. Finally, when taking the register of Merton College up to the British Museum for the purpose of comparing the entries made in that volume during Harvey's wardenship with his one authentic autograph MS. now in the national collection, I bethought me of making, at the same time, some inquiries as to Warner and Pell; and at last, when I least expected it, and had long ceased to hope for it, I came upon Walter Warner's MS., contained in Dr. Birch's collection, which, according to him, had been made over to the Royal Society, under the title, 4,394, *Birch Collection*, numbered on in continuation of the *Sloane Collection*.

Mr. E. Maude Thompson, by the employment of various scientific methods, the observation of which went some way to compensate me for the tedious labour entailed upon me by the result to which they brought him, identified the MS. as being really Warner's, and even in bringing its date down to the same close upon 1610, half-a-dozen years or so, therefore, before Harvey first lectured at the College of Physicians. The MS. being thus identified, I set myself down to look through its 416 folio pages, the average number of lines in a page being thirty-three or thirty-four; the average of words, many of them idle ones, being eight or nine in a line. I do not think it is very likely that I have missed any clearer exposition of Warner's views than the one which I am about to read from page 138; nor do I think that, by choosing it, I can in any way misrepresent them, for they are stated elsewhere in the *Treatise* in very much the same words, *e. g.*, p. 137. These, then, were his views. "By this spontaneall pulsatory motion the blood is continually extracted from the vaines (propter fugam vacui) as well originally exsuctory as secondarily circulatory and propelled into the arteries (propter fugam penetrationis), but with some diversity in the distribution, some part thereof being propelled up into the head by the internal jugular arteries, ad plexum choroideum for spiritio-faction, the rest into all the rest of the arteries in universum corpus for organo-faction. Out of that part of the blood that is propelled by the jugular arteries up to the head, the spiritus confusus or immersus thereof being expressed and segregated in plexu choroidi, either by excussion or exhalation, and animal spirits, thereof made by the self-operation of the preexistent in somno, it is again distributed as before, one portion thereof being still derived and transmitted to the heart, ad motum spontaneum pulsationis ciendum, and so about again, perpetua circulatione durante fabrica corporea, and all violent destructions or impediments abstracted."

It is, perhaps, needless to dwell further upon Warner's claims—certainly I do not propose to trouble you with reading to you any more of his speculations and conclusions. I have, however, had a copy made of folio pages 140, 141, 142, 194, and 195, and, though the gift may not seem a very valuable one, it will enable any fellow of Harvey's College to satisfy himself abundantly, and within our own walls, as to the real merits of the claimant before us, if the College will allow it to find a place in their library. In the words of Harvey's favourite poet,

"His saltem accumulæ donis et fungar inani
Munere"

In all seriousness it is something to know what a contemporary of Harvey, and he a mathematician of some eminence, could write only some ten years before the actual demonstration of the circulation of the blood was given to the world.

Let me say, however, that I do not think it by any means impossible that Harvey may have read this *Treatise* of Warner's, hard though the labour must have been to him, and little though he could have profited

* Concluded from page 4 of last number.

by it. For, in many parts of Harvey's Treatise, *De Motu Cordis*, we meet with phrases which seem as if they had been used with a special reference to Warner's views; and his dissertation has at least this claim upon my gratitude, that it has made me think that I understand Harvey's meaning the better for having read it. I fancy, in fact, that I recognise such phrases in Harvey's words (*De Motu*, p. 58, p. 56, ed. Willis), "Absque dolore vel colore vel fugâ vacui," and in such words as "longè plus est quàm partium nutritioni congruens est." He might have been alluding to almost any page of Warner's MS. in his repudiation (p. 116, see *Epistola Secunda ad Riolanum*) of the hypothesis of various sorts of spirits. But there is one of Harvey's many noble and candid, whilst measured and well balanced utterances, which seems to me to be admirably suited to serve as a text for an exposition which perhaps some future Harveian orator may undertake, of the exact relation which his discoveries held to the knowledge and the ignorance, not only of Walter Warner, but of all others of his contemporaries or predecessors. These words run thus (*De Motu*, p. 34, ed. 1766, p. 33 ed. Willis), "Sed et hoc" (namely, the transmission of the blood by the action of the heart, from the veins into the arteries, through the ventricles of the heart into the whole body), "omnes aliquo modo concedunt et ex cordis fabricâ et valvularum artificio positione et usu colligunt. Verum tanquam in loco obscuro titubantes cœcutire videntur et varia subcontraria et non cohærentia componunt et ex conjecturâ plurima pronunciant ut ante demonstratum est." This may be translated thus: "But it may be said, that all competent persons accept these views in a more or less modified form, and have been convinced of the truth of them from the structure of the heart, and the contrivance, position, and use of the valves. But they seem to me to make as little use of their eyes as men do who are stumbling about in a dark place, and their account of the matter is made up of heterogeneous, contradictory, and incompatible statements, and very much of it is pure guesswork, as I have already shewn." These words, the Latin ones, not my translation of them, were published, if not written nine years (see p. 5, *Harveii Opera*, ed. 1766, *Dedicatio*) and more after Harvey had first proved the facts of the circulation, and from them we gather that his discovery had, even so early as that date, got out of the stage in which a discovery is considered to be untrue, and got into that in which it is said that everybody knew it before. In no subject could it have been easier to make out a plausible case than in this of the circulation of the blood. Piccolhomini (an acquaintance with whom I owe to Mr. Walter Warner, see his Treatise, pp. 194, 200, and 201), had given a diagram, it is there before you, copied from the copy of his work in our library, of the junction of the portal and hepatic twigs, incorrect enough, no doubt, and obtained by a false method (see Harvey, *Epistola Prima ad Riolanum*, p. 105, ed. 1766), but still something in the way of a working hypothesis (see Piccolhomini, *Anatomica Praelectiones*, Romæ, 1586, p. 117). Servetus had speculated, but rightly, as to the lesser circulation; so had Cæsalpinus; and on Harvey's own showing (p. 15, *Opera*, ed. 1766), Realdus Columbus and Walter Warner, p. 132 (4394 *Birch Coll. MS.*), had spoken of the heart, in 1610, as being "a mere muscle, very strongly and artificially woven, and contrived with omnimodal nervous fibres, direct, transverse, and oblique, as it were of purpose, for dilatation and contraction, according to the fashion of other muscles." And of the action of the auriculo-ventricular and arterial valves, Harvey himself, *nivè animâ*, with untarnished sincerity, repeatedly (see *De Motu*, pp. 14, 51, 53, 67, 81), speaks as of something known to all men, "id omnes norunt" (p. 44). What then, it might have been triumphantly asked, was there left for Harvey to discover, when the action of the valves of the heart, its muscular character, and so much else, was already to be found in the writings or teachings of his predecessors? To all this we can answer, as indeed, it seems probable, was practically answered even within Harvey's lifetime, what was left for Harvey to discover was nothing less than *the circulation itself*. His predecessors had but impinged, and that by guesswork, upon different segments of the circle, and then gone off at a tangent into outer darkness, whilst he worked, and proved, and demonstrated round its entire periphery. His demonstrations and direct proofs were all new, and his indirect arguments nearly all new. Whenever he made use of anything already known, he most punctually acknowledged it. Of his demonstration in the way of injection I have already spoken; of his demonstration of the use of the valves in the veins, and his proof that they are similar in function to the arterial, a fact previously unsuspected (see p. 65 *l.c.*), the 13th chapter of the Treatise *De Motu* speaks with figures; of his indirect, but irrefragable argument, in the eighth chapter, from the quantity of blood thrown out by the heart at each pulsation, an argument which a mathematician such as Harriot, or Warner, might have hit upon, but, so far as I have found, did not, he speaks himself as being "adeo novum et inauditum ut verear ne habeam inimicos omnes homines;" and finally, the argument, which though only

indirect, every morphologist will allow to be not only most exquisite, but also most convincing, for the circulation in the adult warm-blooded animal, drawn from the relations held by the venæ cavæ to the efferent arteries in the embryo, and in all animals with but a single or an imperfectly divided ventricle, "unus duntaxat ventriculus vel quasi unus," and of which I would recommend every one who is not already acquainted with it, to gain a knowledge from the seventh chapter of the same book, was his, and his alone. With regard to all these points, with regard, that is, to the circulation as a whole; with regard to the actual demonstration and exhibition of it as opposed to mere guessing about it; with regard to all, or nearly all, sound reasoning as to any large portion of it, Harvey might have said with Lucretius,

"Avia Pindum peragro loca nullius ante
Trita solo."

or in the words of a poet of another country, and a later age,

"We were the first that ever burst
Into that silent sea."

I do not wish to assert that Harvey was wholly independent of the works of his predecessors; he himself would, as his repeated references to them show, have been the very last man to make any such claim for himself; nor would I say that he owed nothing to the times,

"The spacious times of great Elizabeth,"

in which he lived. It is true, I think, in science, as it is also true in morals and politics, that the times make great men as much as great men make the times. Many metaphors have been used to express this latter half-truth. Such is the metaphor, an acquaintance with which I owe to Mr. Pictou's new and striking work *The Mystery of Matter*, p. 265, used by St. Augustine, in which great men are compared to great mountains, dwelling apart in loneliness, and sending floods of blessings down upon the little hills and plains at their feet. Such, again, is the metaphor used by Wordsworth in apostrophising Milton:

"Thy soul was like a star, and dwelt apart."

Such is the metaphor used by Sir Coutts Lindsay, in his poem on the "Black Prince," where a hero

"Stands like a beacon, throwing light far out
Over the rippling tides of centuries."

Now all these metaphors strive, and profess to express, but half a truth, and they are imperfect even for this imperfect purpose, as they are borrowed from inorganic nature and the arts, and are unfit to be used as illustrations of the complexities of life and thought. I would venture to suggest a metaphor which has struck me, during this investigation, as being more appropriate and close-fitting, even if less beautiful, than those which I have quoted. A group of horsemen are attempting to cross an arm of the sea, up which the tide has been running, and obscuring the ridge, or spit of sand, by which it is fordable. They form themselves into a line, and advance slowly: rider after rider flounders off into deep water, and, if wise, retires towards the rear of the cavalcade of his companions, who still feel and advance upon the bottom beneath them. The line by degrees narrows into a column, and the column, after a longer interval, narrows into a single file. To the foremost horseman courage is necessary, as imagination is to the discoverer, and, impelled by this feeling, he may put a wide interval between himself and his companions, and reaching the opposite bank long before them, may have leisure to look down upon them, may be looked up to by them and by the rest of the world, whilst for some time in solitary occupation of that vantage ground. Such I conceive to be a fair representation, in the way of metaphor, the best and shortest way, perhaps, of representing such complex relations, of the relations held by Harvey, and indeed by most, or all discoverers, to their contemporaries, to their compeers, and to the conditions whereby they are surrounded.

It may be expected, perhaps, that, coming from Oxford, and having been recently elected a Fellow of the College—the wardenship of which Harvey held for something more than a year (April 1645-1646, mid-summer)—I should have made search for whatever records there may be left of him unpublished in Oxford, and especially in Merton College. After diligent search, I have to report that there is but little to be learned of Harvey's history from any unpublished document which I have been able to find in Oxford. The Merton College Register gives an account of his election, from which it appears that, having been nominated by a majority of the Fellows, of whom the distinguished John Greaves was one, to King Charles I, who exercised the functions of visitor after the execution of Archbishop Laud, he was duly elected on receipt of the king's letter, after a dispute, of which it is needless to give an account. A couple of days after his admission to the office, on April 11th, 1645, Harvey summoned the Fellows into the hall and made a speech to them, to the effect that it was likely enough that some of his predecessors had sought the office of Warden to enrich themselves therefrom, but that his intentions were quite of another

kind, wishing as he did to increase the wealth and prosperity of the College. (I would here remark that it was well, perhaps, for the College of Physicians that Harvey was, by the success of the Parliament, forced to vacate the office of Warden, otherwise he would, no doubt, have kept his word, and Merton College would have gained what the College of Physicians, or some others of his legates, would have lost.) He finished his address to the assembled Fellows with an earnest appeal to them to cherish that mutual concord and amity amongst themselves which recent occurrences, we may suppose, had tended to weaken. In the other pages of the Register for the period between April 1645 and the midsummer of 1646, I find the name of Charles Scarborough, the *protégé* of Harvey, and afterwards frequently an office-bearer in this College; but there is little or nothing of special interest to us in the rest of the record beyond the fact, that Harvey appears to have attended the College meetings and so to have discharged his duties, amongst which the providing for the contingency of a siege and famine was one. Dr. George Paget has put on record, as has also Mr. Pettigrew, the fact that Harvey's signature is to be found in the *Liber Computorum* of Merton. The College Register, however, is not so enriched, as I can state upon the authority of Mr. E. Maude Thompson, who compared the pages relating to Harvey's wardenship with the autograph MS. in the British Museum, when I took the Register up to London for that purpose.

Of Harvey's, as of Berkeley's sojourn in Oxford, we know little; little, indeed, has been recorded, with the exception of the somewhat uncertain gossip of the gossiping Aubrey. But what we do know of the place during those years which elapsed between the battle of Edgehill and 1646, makes us certain that scientific, and, indeed, any other work, must have been carried on in it under great disadvantages. We read of the plague, and of the "morbus campestris", described by a former Harveian orator and Linacre lecturer as desolating the town and driving people out of residence. It was, besides, a centre for military operations; and military life has been shown, by the experience of all ages (though this experience appears to have been lost upon the carelessness and ignorance of this), to be out of harmony with the habits of men, old as was Harvey then, young as our undergraduates are now, who are or who ought to be devoted to study. Whatever else of Aubrey's tales of Harvey I may disbelieve, I can believe that the words addressed to Charles Scarborough, "Prithee leave off thy gunning and stay here", were his.

If, however, we wish to have a real and truthful picture and image of Harvey before us, we must do by him as we have to do by Shakespeare, by Aristotle, by Butler, and several other great writers: we must lay our minds alongside of his, as it is revealed to us in his works. It is only the writings of great men which will bear or repay such treatment: no commentary nor any biography can give us the real and vivid sensation of having the men before us which we get from a perusal and reperusal of their books. Having used for this purpose what Mr. Tom Taylor has recently spoken of as "the invaluable three hours before breakfast", I have come to persuade myself that I have obtained something like a trustworthy idea of what Harvey really was. Previously, however, to doing this, I gave Christian burial to much of what Aubrey has left on record about him, feeling more and more strongly as I grew better acquainted with Harvey, that—

"These were slanders: never yet
Was noble man but made ignoble talk."

I will speak first of his scientific *character*, though it may seem strange to speak of scientific *character*, as *character* implies, perhaps, a moral element; and science, so far as it is really science, and based exclusively upon sound reasoning, has no moral element in it; reasoning, so long as it is sound, being of one kind always, and devoid, therefore, of all distinctive or personal factors. Still, the times in which a man lives, even if we do not regard them as making up some considerable part of the man, justify us at any rate in adding something to our quantitative estimate of him if he be seen to have been superior to the disadvantages of an unfavourable, or to have attained just results without the help of a favourable, environment. I do not forget that Harvey was but eighteen years junior to Bacon,

"Whom a wise king and Nature chose
Lord Chancellor of both their laws."

But neither do I forget that the *Novum Organon* was published in 1620, subsequently to the discovery and actual demonstration of the circulation (see *Dedicatio* to the treatise *De Motu Cordis*), if not to the publication of the *Treatise on the Motion of the Heart*; and that the Royal Society, with its motto, "Nullius in verba", was a foundation of a much later date; and consequently, I think, we may feel justified in saying that, so far as the purely scientific factor of a man's nature can be said to have any distinctive or personal character at all, independence, or robustness, or manliness, whichever word we may

like to choose, as shown in superiority to mere authority and the weight of great names, was a distinctive character of Harvey as a man of science. With Riolanus in full vigour, and Van der Linden growing towards maturity, as champions of antiquity, it required not a little manliness to assert, "contra receptas vias per tot sæcula annorum ab innumeris iisque clarissimis doctissimisque viris" (Riolanus is often thus spoken of), "tritam atque illustratam" (*Dedicatio*, p. 5), the claims of simple Nature "quæ nihil antiquius majorisve auctoritatis" (*Epistola Secunda ad Riolanum*, p. 123). This element of real manliness shows itself again, I think, in Harvey's power of abstaining from suggesting a *rationale* of what he felt he did not understand; as, for example, in what is known (out of England, at least) as the "problem of Harvey", (see *De Partu*, p. 549)—a problem which, I think, could not have been answered till the "works and days" of Bernard; and in the cases of several other problems instanced by himself (p. 132, *Epistola Secunda ad Riolanum*), and hidden then, to use his own metaphor (p. 630, *Epistola Prima ad Horstium*), in the well of Democritus.

For the culture which Harvey had bestowed upon his literary faculties, we have better evidence than Aubrey's, better even than that of two more trustworthy witnesses than Aubrey—Bishop Pearson, to wit, and Sir William Temple: we have the evidence of his own writings as to his familiarity with one of the greatest writers of antiquity. Bishop Pearson, as Dr. George Paget has reminded us (see p. 15 of his *Notice of an unpublished Manuscript of Harvey*, 1850), and Aubrey (see p. 32 of *Life* by Dr. Willis, prefixed to the Sydenham Society edition of his *Works*, 1847), have told us of Harvey's high appreciation of Aristotle's writings; but in his own writings he refers to the Stagirate more frequently, I think, than to any other individual. And, as regards Virgil (the Latin author whom probably, if but one Latin author's works could be saved from destruction, most men would choose to be that one, as Aristotle's works would be the similarly to be chosen Greek), Sir William Temple (*Miscellanies*, Part II, On Poetry, p. 314) has told us that "the famous Doctor Harvey, when he was reading Virgil, would sometimes throw him down upon the table and say he had a devil." It was a similar spirit which dwelt in Sir Philip Sidney, who never heard the famous ballad of Percy and Douglas without feeling his "heart moved more than with a trumpet". It is but a small matter to vindicate for our great discoverer claims to a familiarity with Greek; still any one who will look at such passages as the one in the *Exercitatio De Partu*, p. 553, where he speaks of the mischief done by meddling midwives, or other passages (pp. 116, 129, and 133, *Epistola Secunda ad Riolanum*; p. 613, *Ep. ad Siegelium*), will see, I think, that he had Greek in abundance at his command, and used it just when it helped him to express his thoughts more clearly and concisely than any other words at hand at the moment. He used it, in fact, like a man of sense and real learning, when the use of it would save him time or trouble—two things, of one of which he had all too little, whilst of the other he had all too much for his and our good. Let me add that, in the one authentic MS. which we now possess of Harvey's (No. 486, *Sloane Coll.*, British Museum), a MS. never intended for publication, and consisting but of rough notes for lectures to be delivered, I find that he employs Greek words in several places (e. g., p. 656 and p. 87).

His style has been spoken of as being more or less inelegant and unadorned; and the Latin tongue, which he used, lends itself but grudgingly and awkwardly to the purposes of science, being strictly a political language, habituated and framed to describe the march of the legions, the disputes of the forum, or the denunciations of the moralist. Still Harvey's style has always an impressiveness and solidity of its own; and sometimes, as, for example, in the glorious eighth chapter, *De Motu Cordis*, it rises into real eloquence where a great occasion justifies the use of repetitions, of antitheses, and abundance of metaphors. But, though the use of stilted phraseology was common enough among Harvey's contemporaries, and though his imagination was vivid and active enough, his study (for to this I would ascribe it) of the excellent models mentioned saved him, as such a study can save a man, from falling into the use of false or extravagant imagery.

Harvey, besides the advantages accruing from acquaintance with the great minds of the past, enjoyed also those which may be gotten from familiar intercourse with great contemporary minds. These advantages constitute in themselves a second education; and they were at Harvey's command for a period of more than forty years, during which he was prominently before the public. It is recorded of John Greaves (see *Life*, by T. Smith, 1699, p. 44), the once celebrated astronomer and antiquary, and a man whom, as a Fellow of Merton, we can well believe, though I know not that we can prove, to have done more than give a silent vote for Harvey when he was chosen Warden, that he was one of the friends of Harvey. His well known connexion with the Court must have constantly brought him into relation with the states-

men of those stormy times. His legacy to his "good friend Mr. Tho. Hobbs, to buy something to keepe in remembrance" of him, is touching, even if trifling, evidence in the same direction.

Travel, which even in our day confers a kind of culture peculiar to itself, must have been doubly necessary in days when, in the absence of the steamship and the railway, an insular position must have kept its inhabitants very nearly as inaccessible to "the thoughts that move mankind", as it had happily kept them to the Armada. Sir George Ent's interesting and entirely trustworthy account of the interview with Harvey which resulted in the publication of the treatise *De Generatione*, will show any one who will consult it that Harvey had drawn from his opportunities an insight into what might be expected, and what since his time to some extent has been realised, from enlarged opportunities of observing not only "men, manners, cities, climates, governments," but also the wonderful facts of the unequal allotment, in the various parts of the earth, of useful inorganic products, and of that mystery of mysteries, the distribution of organic life. (See *Works*, ed. 1766, p. 162; ed. Dr. Willis, p. 146.)

Having been thus fortunate in securing for himself all the advantages which the various educational agencies of his age would furnish, he added on to all that they had effected, or could effect, the yet more elevating and glorious discipline of long sustained and finally successful labour. He attained a position of mental dignity in which he could feel neither unduly anxious for the applause of his compeers, nor unduly moved by the reproaches and misrepresentations of his enemies (see *Dedicatio*, p. 164; *Epistola Secunda ad Riolanum*, p. 109); the impact of these opposite forces resulting, however, in much benefit for mankind, as without them Harvey might, it is likely enough, have delayed the publication of his works indefinitely. Being self-contained without being self-conscious, he was yet, like all men of real genius, large-hearted and sympathetic. Whilst he could, in a spirit of perhaps a little over-strained charity, make excuses (see p. 614, *Epistola ad Slegelium*) for the irrepressible and pestilent Riolanus, he would, we may be also sure, have felt an emotion of gratitude upon each of the many instances in which his own true-hearted adherents, Sir George Ent and other Fellows of this College, fought his battles for him, and vindicated for him successfully and during his own lifetime his own irrefragable claims. And I can believe that, answering to the character of the dignified and stately man so well drawn by the author whom he often quotes, and considering himself worthy of great respect, being worthy of it, he would not have looked disapprovingly upon our attempt to show him respect by the Tercentenary Memorial to which you, sir, have lent the sanction of your name. I can further conceive of Harvey as entirely sympathising with the men who have now in their hands the torch of knowledge which once passed through his, of applauding without any shadow of jealousy the work of the many workers who in these days are going over the ground trodden by him under far less favourable circumstances and with far less assistance from ancillary sciences and their various and still novel instruments and methods. The same spirit which caused him repeatedly to say (as, for example, to Sir George Ent, p. 163; to Horstius, p. 630), "*hæc cum mirâ, ut solet, promptitudine effundens*," that he doubted not that much now hidden in darkness would be brought to light by the indefatigable industry of the coming age; the same spirit which dictated the provision in his will bidding "his lo. friend Mr. Doctor Ent" sell certain of his "books, papers, or rare collections," and "with the money buy better," would have caused him, could he have been amongst us, to point out, as a matter for congratulation, in how many directions his discoveries had been extended and added to, and how well replaced had been the many works the loss of which had been so "crucifying" to him.

There was not in Harvey's mind that defect in the way of a deficiency of interest in theological questions which constitutes in the minds of some eminent scientific, and some eminent literary, men such a lamentable void. He has, on the contrary, in several places taken pains to state his views upon this highest of subjects. To one of these passages (from the work *De Generatione Exercit. Quinquagesima*, p. 385, ed. 1766; p. 370, ed. Dr. Willis), as Mr. E. B. Tylor has pointed out to me, Professor His of Leipzig, a worker whom Harvey would have hailed as a colleague, has referred to it in one of his always excellent papers, published in the *Archiv für Anthropologie*, Bd. iv, 1870, p. 220, on "*Die Theorien der geschlechtlichen Zeugung*". It is just in the investigation of the problems indicated in these last words that, as has often been remarked, the question of the existence of other than purely material forces presses itself most closely upon the mind; and hence, perhaps, the repetition by Harvey of his views regarding it, more than once or even twice, in his treatise just referred to (see *Exercit.* 49, p. 730; *Ex.* 50, p. 385; *Ex.* 54, p. 419-420). These statements are all to the same purpose. I have chosen one of them—the last one of the

three just cited (not the one quoted by Professor His)—to repeat here, because, besides its philosophical and other interest, it has some literary claims upon our attention, it being not quite impossible, considering its line of thought and arrangement of words, that Pope, who borrowed on all sides, and made acknowledgments on none, may have had it before him when he composed his Universal Prayer. It runs thus:

"Nempe agnoscimus Deum, Creatorem summum atque omnipotentem, in cunctorum animalium fabricâ ubique præsentem esse, et in operibus suis quasi digito monstrari; Cujus in procreatione pulli instrumenta sint gallus et gallina. Constat quippe in generatione pulli ex ovo omnia singulari providentiâ, Sapientiâ divinâ, artificioque admirabili et incomprehensibili exstructa ac efformata esse. Nec cuiquam sane hæc attributa conveniunt, nisi omnipotenti rerum principio; quocunque demum nomina id ipsum appellare libuerit: sive mentem divinam cum Aristotele; sive cum Platone Animam mundi; aut cum aliis Naturam naturantem; vel cum Ethnicis Saturnum aut Jovem; vel potius, ut nos decet, Creatorem ac patrem omnium quæ in cœlis et terris; a quo animalia eorumque origines dependent, cujusque nutu sive effatu fiunt et generantur omnia." (From Harvey's *De Generatione Animalium*, Ex. 54, p. 419, ed. 1766; p. 402, ed. Willis.)

I have detained you far too long; but, feeling that my praise of Harvey has been all too feeble, I am anxious, in ending, to use words in his honour the singular appropriateness of which is only less remarkable than their beauty and force.

"Remember all
He spoke among you, and the man who spoke;
Who never sold the truth to serve the hour,
Nor paltered with Eternal God for power;
Who let the turoid streams of rumour flow
Thro' either babbling world of high and low;
Whose life was work, whose language rife
With rugged maxims hewn from life;
Who never spoke against a foe.

Whatever record leap to light,
He never shall be shamed."

CLINICAL MEMORANDA.

DIARRHŒA IN TEETHING CHILDREN.

In the JOURNAL for June 28, is an extract from a clinical lecture, by Dr. Francis Minot, of Boston, on the treatment of diarrhœa in teething children. Dr. Minot recommends a chalk mixture, containing tincture of kino, with the addition, if necessary, of tincture of opium, in one-drop doses. Such treatment is, no doubt, often very successful, but we frequently find in practice, that unless supplemented by warmth to the abdomen, it fails to produce the desired result.

Teething infants are excessively sensitive to slight changes of temperature, and the protection of the body from impressions of cold should be the first precaution to be adopted in all cases of abdominal derangement in children. It has long been my practice in such cases to recommend the application to the belly of a flannel binder. The binder must be applied low down on the abdomen, and be firmly wrapped round the hips and buttocks. It should be broad enough to cover the body as high as the waist. If properly applied, it retains its position during any ordinary movements of the child, and does not slip up so as to leave the lower part of the abdomen exposed. This, with a dose of castor oil to remove irritating matters from the bowels, will cure at once almost all cases of acute functional diarrhœa in children. Even when the diarrhœa is chronic, the binder is still of very great service, and I have frequently seen cases of apparently obstinate diarrhœa yield readily to the use of this very simple appliance.

There is one other point in the treatment of children's diarrhœa which it is important to be aware of. In all cases where the derangement is obstinate, and the child be not at the breast, milk should for a day or two be excluded from the diet. Its place can be supplied by whey, veal broth, and barley water, in equal proportions; or Mellin's patent extract, dissolved in whey, or barley water.

Few cases will be found to resist this treatment, and if the above precautions be adopted, the kind of astringent to be employed is a matter of very secondary consideration.

EUSTACE SMITH, M.D.

LECTURES ON THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,

Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

LECTURE II.—Wednesday, June 4th, 1873.

THE MUSCLES OF THE UPPER LIMB.

THE MUSCLES OF THE SHOULDER.

IN the preceding lecture, I endeavoured to show that the varieties in the muscles of the trunk and neck are, for the most part, due partly to a want of proper segmentation from the simple undivided form which they present in certain of the lower animals, and partly to a want of proper concentration of the segmented portions or individual muscles into the forms which they should attain, and upon the parts into which they should be inserted, in the well developed human frame. In the present lecture, I propose to indicate that the varieties in the muscles of the upper limb, or most of them, are to be explained in the same way.

The muscles which connect the upper limb with the trunk—the superior ventro-appendicular muscles—are in two sheets, derived from the two strata of the brachio-cephalic extension of the ventral muscle. The superficial sheet consists of the pectoralis, the latissimus dorsi, and the trapezius, with the deltoid, which converge from a wide area upon the upper part of the humerus. The deeper sheet consists of the subclavius, the omo-hyoid, the levator scapulae, and the serratus magnus.

In the primitive form—that is to say, in the lower animals—the components of the superficial sheet, or some of them, extend further upon the limb, and are more blended with the several muscles of the limb, and the several component muscles of the sheet are less segmented from one another, and are more blended with the circumferential muscles, than is the case in higher animals. The sheet, indeed, in some lower animals, is a simple funnel-like expansion of the outer stratum of the ventral muscle upon the limb, extending upon the whole limb, or, at any rate, presenting no definite boundary. We are, therefore, not surprised to find that the most important and most frequent varieties in, and in connexion with, the muscles of this sheet, are in the direction, more or less distinctly, of an approach to that simple and less segmented plan. The best examples of this—and they are also those of most frequent occurrence—are the muscular additions which exhibit a tendency to fill up the axillary interval, and to connect the margins of the pectoralis and latissimus dorsi; though the continuity of the two muscles is rarely, if ever, so far preserved as we find it to be in *Lepidosiren*.* The tendency is exhibited in a variety of ways. Sometimes the range of origin of one or both muscles is extended upon the thorax, so as to approximate their edges and nearly cover the axilla. Such extension is most frequent in the case of the latissimus dorsi; and this is the normal disposition in many of the lower mammals. The fibres arising from this preternaturally extended area, or part of them, or it may be, bundles of the muscle having the usual origin, often pass to the pectoral side of the axilla, constituting the “axillary muscles”, or the “*achsel-bogen*” of the Germans. As many as three of these have been found in the same limb.† They may blend with the pectoralis major or minor; or they may be inserted, independently of those muscles, into the coracoid, into the outer bicipital ridge of the humerus, or into the fascia over the coraco-brachial muscle or over the biceps. Sometimes there is merely a slip from the edge of the latissimus dorsi, crossing the axilla and the axillary vessels, and passing to the edge of the pectoralis major. In such a case, the fibres may usually be traced, in company with the deeper or sternal fibres of the pectoralis, to the humerus. Sometimes these slips are attached above to the coracoid or to the humerus, and radiate below upon the surface, rather than blend with the substance, of the latissimus dorsi. They then resemble the parts of the pannicle which in Rats, Rodents, and many animals, have connections with the coracoid, the humerus, or the pectoral muscle, and expand upon the side of the trunk. Sometimes a slip from the pectoral joins the latissimus dorsi, though this is much more rare than the converse; or slips from both these muscles meet and are inserted into the humerus, or into the coraco-brachial fascia or the coracoid.

The detached portions from the extended edge of either of these muscles, which are inserted into the coracoid, have been named “costo-coracoid” or “chondro-coracoid”; and those inserted into the humerus have been named “costo-humeral”.

Other examples of imperfect segmentation are afforded by the blending of the pectoral with the deltoid. This is sometimes so complete that no areolar interval exists between them; and the line between the two is indicated only by a small aperture for the cephalic vein; and even that guide may be wanting. There is also occasional fusion of the trapezius and deltoid over the spine of the scapula; and intercommunicating slips sometimes pass between the pectoralis major and the pectoralis minor.

As examples of the preternatural widening or imperfect limitation of these ventro-brachial muscles at the base of their cone, in addition to the extension of the costal origins of the pectoral and latissimus dorsi just mentioned, may be adduced the increase, not unfrequently observed, of that blending which ordinarily remains between the pectoralis and the external oblique. In several instances, the continuity of the pectoral fibres has been traced from the humerus to the linea alba; or epigastric slips may arise from the surface of the external oblique or its aponeurosis, resembling the pannicular slips from the surface of the latissimus dorsi just mentioned, and passing into the tendon of the pectoralis major, usually into its deeper surface; or to the humerus, or to the coracoid or the coraco-brachial fascia. In like manner, the latissimus dorsi has been found extending as high as the fourth dorsal vertebra; but I have not found any notice of its blending in this situation with the trapezius or with the rhomboid.

The trapezius sometimes retains its continuity with the sterno-cleido-mastoid near the skull; or it is connected with it by slips, as mentioned in my last lecture; and slips occasionally pass from it, beneath the sterno-mastoid, to the sternal end of the clavicle. Moreover, there are frequently detached slips, resembling the costal slips which are often found related to the axillary parts of the pectoral and the latissimus dorsi. Such slips may lie parallel with the anterior edge of the trapezius, and pass from the occiput to the clavicle. These may be called “cephalo-humeral”, to distinguish them from the closely allied and closely located slips which occupy the interval between the trapezius and the sterno-cleido-mastoid, but which are rather allied to the latter muscle, and to which the name “cleido-occipital” is given. The latter term might, indeed, be well applied to both; but the name “cephalo-humeral” has been applied to corresponding muscles which are often present in the lower animals, and which in them sometimes extend to the humerus. This name also connects them with another similar series of slips—the “cervico-humeral”—which are associated with the deeper surface of the trapezius, and which are also often present in lower animals, and often, especially when the clavicle is abortive, run on to the humerus. The cervico-humeral slips (levator claviculae of Wood) pass from one or more of the cervical transverse processes to the scapular end of the clavicle beneath the trapezius, and are more or less blended with it.* They too are to be regarded as resulting from an imperfect limitation of the trapezius, so that through them its range of origin is extended to the transverse processes of the cervical vertebrae, as is the case in *Lepidosiren* and some other animals.† When the origin of this segment of the trapezius is limited to the transverse process of the atlas, the muscle is sometimes called “atlanto-humeral”. I may here remark that the cephalo-humerals occasionally extend, like the cervico-humerals, beneath the trapezius to the scapular end of the clavicle. Wood found a slip passing from one of these muscles (a levator claviculae) to the sterno-mastoid. In two instances, he found slips from the third cervical transverse process, which failed to reach the clavicle, and were lost in the fascia; and in one case a levator claviculae was present on the one side and a cleido-occipital on the other. These adjuncts to the trapezius—these resultants of the imperfect limitation of that muscle, as I regard them—are of very frequent occurrence as anomalies in Man, and are very common as regular formations in other mammals.

The fibres of the trapezius sometimes blend with those of the deltoid; and in one instance, observed by Wood, a strong aponeurotic slip was given off from near the spine of the scapula, downwards and outwards, to the lower end of the scapula.‡

* The levator claviculae sometimes passes from the transverse cervical processes nearer to the sternal end of the clavicle, immediately external to the sterno-cleido-mastoid.—*Medical Times and Gazette*, December 7th, 1872.

† See my *Observations on Myology*, pp. 30, 72; and *Journal of Anatomy*, vi, 30, 264.

‡ *Proceedings of the Royal Society*, 1867, p. 522. I have observed that in the foetal state the fibres of the trapezius and the deltoid present more continuity, are less interrupted, that is, by the spine of the scapula and the clavicle, than they subsequently become. I noted in the last lecture a similar continuity in the foetal state between the fibres of the sterno-thyroid and the thyro-hyoid.

* *Journal of Anatomy*, vi, 259; and *Observations in Myology*, p. 71.

† Wood, *Proceedings of the Royal Society*, 1867, p. 524. One such slip is found in at least five per cent. of bodies examined.

An analogous segmentation from the deep surface of the trapezius is presented by the "occipito-scapular" of Wood,* which consisted of a muscular band passing from the occiput beneath the junction of the trapezius and the cleido-occipital, this latter muscle being also present. It was inserted into the base of the scapula opposite the spine. Wood found the exact similitude to it in a Rabbit, and I have described a similar muscle in Manis.†

These last mentioned muscles possess an additional interest from their alliance to the rhomboids, which, like them, may be regarded as segments from the under surface of the trapezius. They form, indeed, fragments of a deep trapezius; and in Manis the rhomboid, the occipito-scapular, and the masto-scapular, which is a continuation of the same series forwards, constitute an almost continuous sheet extending along the whole length of the hinder border and the spine of the scapula, and blended posteriorly with the latissimus dorsi.

The absence of the members of the fore part of the subtrapezius sheet, as a rule, in Man, and their presence, as a rule, in other mammals, especially in the non-claviculated mammals, together with the fuller development of the fore part of the trapezius in those animals, has relation to the movement of the scapula to and from the head in them, being freer in Man. In him, the free swing of the limb depends upon the movement of the humerus upon the scapula, rather than upon the movement of the scapula upon the trunk. Still the direction and action of the muscles in question so closely resemble those of the trapezius, that their presence can scarcely be attended with any decided disadvantage to Man; and their frequent appearance in him shows that the disadvantage is not sufficient to enforce rigidly the specialisation which is peculiar to him, and to overcome the tendencies in the developmental processes to conform to the disposition which is generally advantageous in other animals.

The imperfection of limitation at the opposite—that is, the distal or apical—part of the superficial ventro-appendicular cone, is equally common, and appears in a variety of ways. Very frequently the costal slips or detached extensions of the latissimus dorsi, or of the pectoralis major, or of both, instead of following the direction of those muscles to the humerus or to the coracoid, are reflected upon the arm, and descend upon the coraco-brachialis, the biceps, the brachialis anticus, the intermuscular septum, or the internal condyle; thus resembling more or less closely the costo-alaris of the Bird, and forming, when they reach the internal condyle of the humerus, the muscle which has been called "chondro- or costo-epitrochlearis". The extensions of the pectoralis are usually upon the fore part of the arm; whereas the bundles associated with the latissimus dorsi usually take their course behind the intermuscular septum, and fall into relation with the triceps. They thus constitute what has been named, in Man and in lower animals in which it is often present, the "dorso-epitrochlien". It should, however, be remarked that detached or semi-detached portions of the pectoralis have been seen by Hallett and others descending over the biceps and the brachial vessels to the intermuscular septum and the inner condyle, giving origin to some of the fibres of the triceps.

Other parts of these two muscles (pectoralis and latissimus dorsi), besides the detached or semi-detached costal slips just referred to as situated near the axillary margins, may also be continued upon the limb beyond the usual range. Thus the clavicular part of the pectoralis occasionally sends an epitrochlear prolongation along the inner side of the arm; and the tendon of the same muscle often ranges above and below the ordinary space of its insertion.‡ Fibres of the latissimus dorsi are often continued upon or into the long head of the triceps, or, extending to the inner condyle, as I have just said, form, or contribute to form, the dorso-epitrochlien. More rarely, a slip can be traced to the olecranon. The frequent occurrence of a more or less distinct dorso-epitrochlien in Man—it is found in six or seven per cent.—and its presence as a normal feature in *Quadrupeds*, have not failed to attract attention. We must not, however, forget that it is a common muscle in other Mammals as well as in *Quadrupeds*. Indeed, the segmentation of the latissimus dorsi from the triceps, which is at its minimum in the *Cryptobranch*, and increases as we ascend, is scarcely attained even in the normal anatomy of Man; for in him a tendinous slip may commonly be traced, as stated by Henle, from the tendon of the latissimus dorsi to the long head of the triceps. Moreover, a slip from the upper edge of its tendon sometimes ascends to the capsule of the joint; and one from the lower edge has been traced over the brachial artery to the coraco-brachial muscle.§ Further, the tendon,

or part of it, sometimes crosses the bicipital groove to the pectoral ridge of the humerus.

In the trapezio-deltoid sector of the ventro-appendicular sheet, an imperfection of limitation towards the distal angle is sometimes evinced by the connection of the deltoid, through slips, with the infraspinatus or the fascia covering it; or there may be slips to the deltoid from the inferior margin of the scapula between the infraspinatus and the teres minor.* The deltoid also sometimes retains a connection with the muscles lower down. Thus Macalister found it blended with the supinator longus in such a manner that a thick band passed from the acromion to the styloid process of the radius, therein imitating the arrangement in Manis.†

Varieties also occur in the muscles of this layer from deficiency of development and from over-segmentation. Thus the cleft is sometimes preternaturally wide between the clavicular and the sternal portions of the pectoralis; and the sternal portion has been found subdivided. Also the pectoral muscle has been in two planes, reminding us of its disposition in the two-toed Anteater.‡ The cervical and dorsal portions of the trapezius have been found separate;§ and the clavicular and scapular parts of the deltoid have been quite separate. Henle mentions the absence of the clavicular part of the pectoral, and the same of the sternal part. Hallett notes the occasional absence of the upper part of the trapezius, as is the case in Bats, and also of the lower part; and it often does not descend below the ninth or tenth dorsal spine, and occasionally not below the eighth. Henle mentions the absence of the clavicular part of the deltoid.

The pectoralis minor, the rhomboidei, and the scapular part of the latissimus dorsi, are deeper segments of the several muscles of this superficial brachio-cephalic sheet, after the manner of the occipito- and the cervico-humeral and the occipito-scapular segments just mentioned. The rhomboids are liable to vary somewhat in the range of their attachment; and they have occasionally been found divided into two planes. The scapular part of the latissimus dorsi is often absent. The variations in the pectoralis minor are of greater interest.

I have shown|| that this subpectorialis segment is the mammalian representative of muscles which, in the more primitive batrachian, reptilian, avian, and monotremic forms, pass from the coracoid in front of the biceps brachii, are more or less blended with the pectoralis major and the supraspinatus, and are inserted with them, or near them, into the outer bicipital or radial ridge and tubercle of the humerus. In some animals they extend upon the thorax, acquiring origin from the sternum and ribs; and thus in birds they form what is called the "pectoralis secundus" or "levator humeri". In Mammals above Monotremes, the thoracic attachment constitutes the origin of this deep pectoral series, which is now concentrated into the pectoralis minor; and the coracoid process of the scapula, which is distanced from the thorax, becomes in part the seat of its insertion. I say in part, for the muscle very commonly retains, in whole¶ or in part, its primitive connexion with the radial tubercle and ridge of the humerus. In some animals, it blends with the supraspinatus tendon and the capsule of the shoulder-joint, or with the pectoralis major, on its way to the humerus.** In Man, its segmentation is more complete than in other animals; and, in its normal condition, it forms a separate muscle, extending simply from the third, fourth, and fifth ribs to the coracoid. It thus acquires the one function of moving the scapula upon the thorax, and so presents an illustration of the principle of subdivision of function which is observable in the muscular system of the human body even more than in that of other animals. We, however, may frequently find that the boundaries of the pectoralis minor are not thus defined, but that, as we should expect, prolongations of it extend over the coracoid to the radial tubercle and ridge of the humerus; and sometimes they blend with the supraspinatus and the capsule of the shoulder-joint. In some cases the entire muscle, in others only separate slips, take this course. It is worthy of remark, that the upper surface of the coracoid is often grooved by the portion of the muscle which thus passes over it; and it may even be provided with a bursa here, affording an additional evidence that such portion is the homologue of the levator humeri of Birds. In some cases, the whole of the pectoralis minor was

* Henle, *Anat. Muskelehre*, s. 168.

† *Journal of Anatomy*, iv, 40.

‡ *Journal of Anatomy*, p. 25.

§ Wood (*Proceedings of the Royal Society*, 1868, p. 487) remarks that this is so more or less, in the Mole, Echidna, and Agouti.

|| *Observations in Myology*, p. 157.

¶ In Carnivora, it runs entirely to the radial tubercle of the humerus.

** It may pierce the capsule of the shoulder, and join the glenoid ligament. Mr. Perrin (*Medical Times and Gazette*, June 7th, 1873) gives an instance in which part of the pectoralis minor in one arm was prolonged to the acromion, joining the coraco-acromial ligament, and in the other arm perforated the capsule, and joined the tendon of the long head of the biceps. This arm had been the seat of injury and rupture of the biceps tendon.

* *Proceedings of the Royal Society*, 1867, p. 520.

† *Journal of Anatomy*, iv, 31.

‡ J. Beswick-Perrin (*Medical Times and Gazette*, December 14th, 1872) mentions a slip to the coracoid process and the fascia over the coraco-brachialis; and deep slips to the capsule of the shoulder-joint (*tensores articuli humeri*) have been described by Gruber and others.

§ Macalister, *Proceedings of the Royal Irish Academy*, ix.

inserted into the capsule of the shoulder-joint.* Occasionally some of the fibres are inserted into the coraco-acromial ligament, or pierce it.

The fibres of the pectoralis minor sometimes also range at a higher level in their origin or insertion, or both; arising, for instance, from the second rib, and being inserted into the costo-coracoid membrane or the clavicle, so forming a "costo-clavicular muscle".† They may also lie in a lower level than usual. They may arise from the sixth rib; and they may join the coraco-brachial muscle or the fascia of the arm.‡ The pectoralis minor is sometimes connected by slips with the pectoralis major, and, like it, is sometimes segmented longitudinally, or has supplementary slips. These may lie beneath it,§ or may be situated above or below it.

I have spoken of the subclavius as a member of a deeper layer of the brachio-cephalic stratum, thus classing it with the omo-hyoid, the levator scapulae, and the serratus magnus. The forward position of the clavicle throws it, however, into the same level with the pectoralis minor, with which, indeed, it is continuous in some animals, as the two-toed Anteater, though separated from it in Man by the costo-clavicular fascia. It sometimes ranges towards the coracoid or the upper costa of the scapula, so constituting one of the varieties to which the name sterno- or costo- or sterno-costo-scapularis has been applied. The last mentioned anomalous muscle appears sometimes to be a derivative from the subclavius, and sometimes from the pectoralis minor. Its actual relations are, however, not always quite clearly given in the published reports of the instances in which it has been found. In the best marked and most fully described cases, it has been situated above the costo-clavicular fascia, and has appertained to the subclavius rather than to the pectoralis minor. The subclavius is sometimes simply double, the two parts being separated by the cephalic vein or by one of the thoracic veins.||

The comparatively unimportant function of the omo-hyoid, and its frequent absence in Mammals, prepare us for its instability, and for its often recurring varieties in Man. It is an outlying segment of the deep part of the ventral muscle, which has become separated from its next neighbours of the same layer—the sterno-hyoid and sterno-thyroid—with which in some lower animals, as Cryptobranch, it is more continuous, by the out-thrust of the scapula. We found in the last lecture that these muscles sometimes show a tendency to approach to the omo-hyoid, by spreading outwardly along the clavicle; and some of the most frequently recurring varieties of the omo-hyoid indicate the manifestation of a reciprocation of that tendency, forasmuch as they consist in an unusually definite and extensive attachment to the clavicle, on the sternal side of that part of the bone with which the muscle ordinarily has a fascial connection, and in other ways. Thus the anterior belly is sometimes in part, or in the whole of its length, confluent with the sterno-hyoid,¶ or some of its fibres pass beneath the sterno-mastoid to the sterno-hyoid. Sometimes it is attached to the middle, and sometimes, though more rarely, to the sternal end of the clavicle. Hallett also found that in two cases in which the anterior belly of the omo-hyoid was absent, the sterno-hyoid was broad and attached to the clavicle behind the sterno-mastoid. The omo-hyoid is sometimes directly attached to the clavicle without any intermediate tendon, the posterior belly being in such cases liable to be absent. Again, the gap between the omo-hyoid and the sterno-hyoid is not unfrequently in part occupied by an additional anterior belly, which passes from the hyoid bone to the clavicle, and which may be more or less confluent with the sterno-hyoid, as mentioned by Henle. Wood** found the anterior belly

in one case receiving a slip from, and in another contributing a slip to, the sterno-hyoid. In a third case, there were two anterior bellies; the upper being attached by fascia to the stylo-hyoid muscle which did not reach the hyoid bone, thus affording an example of the persistent connection of the pre- and post-hyoidean muscles, which is rarely met with in Man. In a fourth case, the anterior belly was triple, the middle portion having the normal insertion, the anterior being inserted into the cervical fascia, and the hinder being implanted into the upper horn of the thyroid cartilage.

The varieties in the posterior belly of the omo-hyoid resemble those in the anterior, in being for the most part remnants of a more extensive connection of the ventral sheet with the shoulder-girdle; and they are remarked by Turner to be more numerous than those in the anterior belly. The fibres are sometimes attached directly to the clavicle; or there is an additional belly which is attached directly to the clavicle, and which diminishes or obliterates the posterior inferior triangle of the neck. The additional posterior belly may be associated with an additional anterior belly, both being directly attached to the clavicle. The fibres sometimes spread along the whole superior costa of the scapula, and may extend upon the coracoid. In some instances the posterior belly is in great part tendinous. The following accidental slips, mentioned by Hallett as arising from the scapula in contact with the omo-hyoid, are curious instances of the retention of the primitive connection of the posterior belly with surrounding muscles and parts. One ran to the upper part of the sterno-clavicular articulation; another, observed by Soemmering, fell short of this point, but crossed in front of the brachial plexus and the subclavian artery, to the cartilage of the first rib; another blended with the fibres of the sterno-mastoid; in a fourth instance, the fasciculus was partly attached to the transverse process of the sixth cervical vertebra, and was partly lost in the substance of the serratus anticus muscle.

In some instances, the two bellies have been more or less confluent, owing to the partial or complete absence of the intermediate tendon; and in some, one or both bellies have been absent on one or both sides. When the posterior belly is absent, the anterior commonly runs directly to the clavicle; and in like manner, in the case of absence of the anterior belly, the posterior usually attaches itself to the clavicle. The latter has, however, been found in some such cases radiating into the fascia, or attaching itself to the first rib. The omo-hyoid thus furnishes a good illustration of the observation, that the opposite kinds of irregularity—those, viz., of exceeding, and those of not attaining to, the normal standard, the irregularities from multiplication and those from deficiency, are liable to affect the same muscle. It may be further observed, that neither of these forms of irregularity—neither the total absence of the muscle nor its existence in a greatly enlarged or in a multiplied condition—are attended with any perceptible impairment of the movements of the shoulder or neck.

Of the other two deep ventro-appendicular muscles connecting the trunk with the scapula—the serratus and the levator anguli scapulae—the irregularities in the former consist chiefly in preternatural divisions between different parts of it, or deficiencies of certain parts of it. Thus the portion derived from the first rib has been wanting. The absence has also been observed of the lower part,* and still more frequently of the middle part. On the other hand, the insertion of the serratus is sometimes extended upon the upper border of the scapula beneath the omo-hyoid; and it sometimes acquires additional slips from the ribs which join its deeper surface. Such slips occasionally retain their individuality up to their insertion into the scapula.

In the levator scapulae, imperfection of concentration is shown by occasional blending with some of the surrounding muscles, and by an extension of its area of attachment. Thus it may be united with the serratus magnus, with which muscle it retains its continuity as a normal condition in so many animals. The union in Man is commonly effected by slips passing from the one to the other. It sometimes derives slips from the trapezius, or from the upper dorsal spine beneath the trapezius;† and the cervico-humeral bands, described in the last lecture as passing from the cervical transverse processes to the trapezius and the clavicle, constitute another link of connection between the two muscles. Intercommunicating bands are also not unfrequent between the levator scapulae and the scaleni; and the former muscle is also sometimes connected in this way with the splenius capitis, with the serratus posticus superior, with the rhomboidei, and with the transversalis colli.‡ A slip has also been found passing from it across the subclavian artery to the subclavius muscle;§ and

* De Souza, *Gazette Médicale*, 1855, No. 12; and Benson, *Cyclopaedia of Anatomy*, i, 359.

† Wood, *Proceedings of the Royal Society*, 1866, p. 231; 1867, p. 524. An extension of this muscle towards the sternum, at the one end, and towards the coracoid or the upper costa of the scapula, at the other, constitutes one of the varieties which have been called sterno- or sterno-costo-scapularis.

J. Beswick Perrin (*Medical Times and Gazette*, December 14th, 1872) describes a prolongation of the pectoralis minor over the coracoid, dividing into two tendons: one joining the coraco-acromial ligament, and the other inserted into the outer extremity of the clavicle. In a second case, a partial prolongation pierced the capsular ligament of the shoulder, and was inserted into the summit of the glenoid cavity.

‡ *Guy's Hospital Reports*, xiv.

§ Meckel's *Archiv*, v, 119.

¶ A muscle, described and figured in *Guy's Hospital Reports*, xvi, passing from the coracoid to the clavicle, may be regarded as a derivative from one or other of the pectorals; or as an intermediate between the pectoralis minor and the subclavius, which latter was absent. The description, however (p. 351), appears not quite to agree with the representation in the plate.

‡ Turner (*Edinburgh Medical and Surgical Journal*, 1861) found this in four cases, the inscription in the sterno-hyoid being continued into the omo-hyoid. He found irregularities in this muscle in twenty out of three hundred and seventy-three subjects. Wood met them in five out of seventy.

** *Proceedings of the Royal Society*, 1867, p. 519; *ib.*, 1864, p. 300. He mentions a "double omohyoid": the upper one digastric, the lower uninterrupted by tendon attached to base of coracoid process."

* Hallett noticed this in two cases.

† Meckel, *Archiv*, v, 115.

‡ Wood, *Proceedings of the Royal Society*, 1868, p. 487; and *Transactions of the Royal Society*, 1869. Also Perrin, *Medical Times and Gazette*, June 7th, 1873; and Curnow, *Journal of Anatomy*, vii, 304.

§ *Guy's Hospital Reports*, xiv.

Kelch saw a slip passing to the fascia upon the thorax. Its origin has ranged as low as the transverse process of the seventh cervical vertebra, and as high as that of the atlas. The origin from the atlas corresponds with the most common origin of the cervico-humeral bands just referred to; the difference being, that the muscular fibres in that instance take the course of the trapezius, whereas in this case they take that of the levator scapulæ. The insertion of the levator scapulæ sometimes encroaches upon the upper border of the scapula; and it occasionally advances upon, or sends a slip to, the spine of the scapula. It may also be segmented into separate pieces corresponding in number with that of the vertebrae from which it arises.

In the deep muscles passing over the shoulder, the varieties are few and unimportant. The infraspinatus is sometimes blended with the teres minor, as it is in some Mammals, or partially with the deltoid, as it is in the Pig. The teres major has been wanting.* The subscapularis is not unfrequently divided into two or more parts; or segmented slips pass from the inferior costa of the scapula to the capsule of the shoulder-joint, forming the coraco-scapularis, as it has been called, or they pass over the capsule to the humerus between the subscapularis and the teres major. Such segments extending upon the base of the coracoid process, or arising from it, are mementoes of the primitive junction of the coraco-brachialis and the subscapularis, which is retained in some Reptiles.†

THE MUSCLES OF THE ARM.

This leads me on to say that the adducto-flexor mass of the arm and fore-arm, which is represented in Man by the coraco-brachialis, the biceps, and the brachialis anticus, is in the primitive state, as just mentioned, less segmented. In that state it forms a more connected mass, extending from the coracoid, where it involves the subscapularis, along the ulnar side of the humerus, to the bones of the forearm: and in the irregularities or varieties which have been met with in the muscles of this region in Man, some of which are of frequent occurrence, may often be recognised evidences of a retention of the primitive blended condition. This will be seen as we proceed.

In the normal condition of Man, the coraco-brachialis consists of two parts, with the musculo-cutaneous nerve passing between them; and the two parts are combined into the one muscle, which is inserted into a narrow space on the humerus. The most simple variety is presented when this concentration is less complete—when, for instance, the lower part of the muscle extends further downwards than usual along the shaft of the humerus, connecting itself with the internal intermuscular septum, and perhaps extending as low as the internal condyle, like the coraco-brachialis longus of a Reptile or a Monotreme. In some of these cases a supracondylar process was present, and the muscle was inserted into it; or the upper part of the muscle may extend upwards towards the ulnar tubercle of the humerus, so forming a coraco-brachialis superior; and the two parts may be more separate than is usually the case. Further, an additional muscle may be present, passing, as I have just mentioned when speaking of the subscapularis, from the coracoid near its root, to the ulnar tubercle of the humerus, or close to it, above the teres major and latissimus dorsi, and forming a coraco-brachialis brevis. This wider range of insertion and more distinct division into two or more muscles is common in Quadrumana and some other Mammals; it is also prevalent in Monotremes and Reptiles, where the coracoid is large and reaches to the sternum. It represents, indeed, merely an early or simple stage of coraco-brachial segmentation from the primary adducto-flexor mass.‡ In some instances, the coraco-brachialis has presented a still simpler, though more extended, condition; forasmuch as the divisions into parts was indistinct, and the muscle was inserted into a continuous line along the ulnar side of the humerus, nearly from the tubercle to the condyle, bridging over the tendons of the teres major and latissimus dorsi.

The lower part of the coraco-brachial muscle is more variable than the upper. Sometimes it is nearly or quite absent; and the musculo-cutaneous nerve passes in front of, or superficial to, the entire muscle. Sometimes the lower part of the muscle extends over the brachial artery and median nerve, which pass through an aperture in its muscular or

aponeurotic extension; and sometimes, as just said, it reaches the internal condyle. The descending muscular or aponeurotic extension does not always blend with the intermuscular septum, but may, as described by Struthers and others, remain distinct from it, and be situated behind it, covering the ulnar nerve.* The imperfect limitation of this lower part of the coraco-brachialis is also sometimes evidenced by a larger or smaller portion of it being continued into the brachialis anticus.

Great as are some of these deviations from the normal contracted form of the muscle, yet it is evident that they would not much modify its action as an adductor of the arm; they would simply increase its power. I have not found any instances of absence of the muscle, or any in which the variation was in the direction of deficiency; though in some Mammals, as Manis, where the coracoid is abortive, the coraco-brachial muscle is absent.

The continuity of the humeral adductor with the prebrachial flexors is to some extent maintained in the normal condition by the intimate relations of the short head of the biceps with the coraco-brachialis; and a still closer connection is not unfrequently retained by means of slips passing from the coraco-brachial itself, or more frequently by slips arising from the humerus near to the insertion of the coraco-brachial, and to some extent continuous with it, and joining the biceps. Such slips or portions constitute what is usually called the third head of the biceps. They lie commonly on the lateral aspect of the brachial artery, but have been seen crossing over it. The fibres may run into either or into both of the regular parts of the biceps; and they may often be traced on into the bicipital adjunct to the fascia of the forearm. Hallett in one case observed them passing directly into this fascia. They are not unfrequently also connected with the brachialis anticus at their origin, and thus the union of the three adducto-flexor muscles is preserved: or the union between the brachialis anticus and the biceps only may be retained by slips passing from the former to the latter, and more rarely by slips passing from the biceps to the brachialis anticus.

The biceps has also occasionally other connections with the humerus. An additional slip, coincidently with the third head or without it, may arise from the neighbourhood of the ulnar tubercle, and less frequently from the radial tubercle; or it may arise from the proximity of the insertion of the pectoralis or of the deltoid.† Meckel records an instance in which the biceps had five heads—that is, three in addition to those usually present; viz., one from near the coraco-brachialis, a second from the capsule of the shoulder-joint,‡ and a third from near the insertion of the deltoid.§ I have not met with the account of any case in which fibres of the deltoid were continued into the biceps as they are in *Orycteropus*. That this is not the case, or is so rare, and that the biceps seldom derives fibres from the pectoralis,|| is no doubt due partly to the fact, that it harmonises in its action with these muscles less than it does with the coraco-brachialis and the brachialis anticus, and that it is less associated with them in the direction of its fibres and in its development. It may seem not a little remarkable that it now and then receives a slip from the supinator longus. It must, however, be remembered, that both this muscle and the biceps act as flexors as well as supinators of the radius; and the supinator longus, though appertaining to the dorsal series of the arm, yet is so much inclined upon the palmar aspect as to acquire flexor relations as well as a flexor action.

Other varieties of the biceps have been observed which cannot quite be classed with those just mentioned: thus Dursy found the two bellies with two distinct tendons, and only connected by an intermediate fleshy mass.¶ Macalister and Otto noticed the absence of the long head; the latter remarking that the bicipital groove was faint and without cartilage, and that there was no aperture in the capsule; and Macalister found the long head passing between the tendons of the sternal and the

* See Wood, *Journal of Anatomy*, i, 46.

† Wood found one of these having a separate insertion into the radius, and so forming a "brachio-radial".

‡ Mr. J. Beswick Perrin notes a third head from the capsule of the shoulder-joint. It was small, and joined the coracoid factor. (*Medical Times and Gazette*, December 7th, 1872.) Dr. Curnow (*Journal of Anatomy*, vii, 306) gives an example of four origins, short, long, humeral, and an extra-coracoid, with a few fibres from the capsular and coraco-acromial ligaments. The last joined the humeral head. This biceps muscle gave off a tendinous slip, which divided to the radial origin of the flexor sublimis, to the condyloid origin of the pronator teres, and was a substitute for the coronoid origin of that muscle.

§ Henle also saw five heads: one from the inner edge of the bicipital groove, another from near the insertion of the coraco-brachialis, which joined the inner side of the regular short head, and a third from near the insertion of the deltoid, which joined the outer side of the regular long head.

¶ Macalister mentions its receiving fibres from the pectoralis major, as in *Hylabates*. Gruber (*Mélanges Biol. de l'Acad. des Sc. de St. Petersburg*, 1848, p. 426) found a third head arising from capsule and under surface of pectoralis major, and a fourth head from pectoralis major and deltoid.

¶ *Journal of Anatomy*, iii, 196.

* Dr. Curnow (*Journal of Anatomy*, vii, 305) gives an instance in which the latissimus dorsi did not extend to the bicipital groove, but was attached to a prominent tubercle, three-quarters of an inch long, just internal to its upper lip; a tendinous band ran upwards from it, in front of the triceps tendon to the axillary margin of the scapula. Into this band and into the long head of the triceps, the teres major was inserted. The specimen thus furnishes another variety of persistent blending of the latissimus dorsi and teres major with the triceps.

† Observations on *Myology*, pp. 34, 155; *Journal of Anatomy*, vi, 34, 243.

‡ The approximation of these varieties to the normal form of the adductor parts of the adducto-flexor in the lower limb has not escaped attention; and it affords an additional evidence in support of the view which I have given in the *Observations on Myology*, pp. 155, 158, that the coraco-brachial is the concentrated serial representative of the adductores femoris.

clavicular fibres of the pectoral muscle.* Meckel notes an instance in which the short head was absent. Although in lower animals the tendon of insertion of the biceps is in many instances implanted into the ulna as well as into the radius, its action as a supinator of the radius prevents this diversion of a part to the ulna from taking place as a frequent variety in Man.† It is, however, sometimes connected with the pronator teres and with the flexor carpi radialis; and Gruber saw a slip detached from the short head, accompanying the brachialis anticus, and inserted into the capsule of the elbow-joint and into the ulna, as well as blended with the ulnar origin of the pronator teres. Henle traced a slip from the same part into the fascia over the brachial vessel; and Theile traced a slip from the long head into the capsule of the elbow-joint.

The instances of imperfect segmentation of the brachialis anticus from the coraco-brachialis and the biceps I have already noticed. The blending of the fibres of the brachialis anticus with those of the supinator longus,‡ with those of the pronator teres, and with those of the flexor digitorum sublimis, is also not unfrequently observed; but not, so far as I know, with those of the deltoid, although the origin of the brachialis anticus stands in such close relation to the insertion of that muscle: neither have I found any mention of the blending of the brachialis anticus with the triceps. The brachialis anticus is sometimes divided into two parts, both inserted into the coronoid process, as in the Rabbit and the Agouti;§ or a separate piece may arise from the middle of the anterior surface of the humerus. The imperfection of concentration of the muscle is further shown by the occasional passage of slips from it to the elbow-joint, the radius, the semilunar fascia, or the fascia on the outer as well as on the inner side of the arm; also by slips crossing over the brachial artery and median nerve, and rejoining the muscle. Gruber|| found a separate slip passing, from the humerus below the deltoid, to below the tubercle of the radius and to the pronator teres; also a slip from the inner side of the brachialis anticus to the radius, the ulna, and the pronator teres. He describes, also, instances of supernumerary muscles. In one such, a muscle arose from the intermuscular septum and from a tendinous arch passing from the septum over the brachial vessel and nerve.

The simple function and disposition of the triceps and its comparative uniformity in different animals prepare us for the fact, that the varieties of this muscle are few. The long head may range to a greater extent than normal upon the inferior costa of the scapula; or it may be here supplemented by an additional tendinous origin, and it may have more extensive connections than usual with the latissimus dorsi. The humeral origins may be more separate or more blended than usual, and there may be a separate fourth origin from the inner side of the humerus near its head, or from the capsule of the shoulder-joint, or from near the insertion of the subscapularis. An internal anconeus, or anconeus epitrochlearis, bridging over the ulnar nerve from the internal condyle to the ulna and olecranon, is said by Wood and Gruber to be present in a tenth or more of the subjects examined. Branches of the ulnar nerve were traced into this muscle by Gruber, which is a point of some interest, forasmuch as all the remainder of the triceps is supplied by the radial nerve. It is one of the many instances indicating that nerve-supply is regulated chiefly by convenience in the distribution of nerve-branches.¶

[To be continued.]

PENSIONS TO MEDICAL MEN AND THEIR WIDOWS: A PROPOSITION.

By E. C. GARLAND, L.R.C.P.Ed., President of the West Somerset Branch.

THE following memorandum I intended to read at our last annual meeting of the West Somerset Branch, but there was no time. The importance of the subject treated may render it worthy of insertion in the JOURNAL.

In common with several other members of the British Medical

* In a similar case observed by Louth, the absence of the long head was compensated for by the thickness of the short head, and in another by an accessory origin from the humerus. In a case related by Moser, the short head was double, there was a third head arising at the usual seat of the third head, and a fourth head from the radial tubercle.—Henle, *Muskellehre*, 177.

† In *Guy's Hospital Reports*, xvi, a slip is described arising from the deep and internal aspect of the biceps near its middle, and inserted into the coronoid process of the ulna.

‡ Found by Wood in six out of one hundred and two.

§ Wood, *Proceedings of the Royal Society*, 1868, p. 497.

|| *Mélanges Biologiques de l'Acad. des Sc. de St. Petersburg*, 1867, vi, p. 389. The author gives a résumé of the varieties of this muscle, with additional observations by himself. See also by the same anatomist in *Müller's Archiv*, 1848, p. 428.

¶ See remarks on this in my *Observations in Myology*, p. 56.

Association, I have long felt that there ought to be, in connection with our profession, some plan of providing pensions to widows of medical men, and to medical men themselves after a certain time of life. Various suggestions and experiments have been made with a view to establishing a fund or club for this purpose, but hitherto without any permanent result; so that at the present moment there are many members of this Association who are not in position to contemplate with complacency the circumstances in which they would leave their widows were they to die soon, nor what their own circumstances may be in the later years of life. After giving the subject some attention, and after some correspondence with a gentleman in London experienced in such matters, I am desirous of inviting attention to this widely felt want.

I apprehend that, in order to be satisfactory to the profession, any plan proposed would need to be somewhat as follows.

1. A purely business arrangement, dependent entirely on the payments of the members, and independent of the irregular and uncertain aid of benevolent persons outside.

2. Definite benefits to be guaranteed for definite payments, so that no one, after paying for a number of years, during which large pensions have been given to other persons, may find that, through an excess of claims, the pensions have to be reduced at the time when he begins to receive his.

3. The number of members and the invested fund would need to be sufficiently large—the former to yield an average duration of life, the latter to command confidence, and both to secure a moderate rate of expense of management.

I find that if several thousands of healthy persons of the age, say, of thirty, were each to pay £30 yearly into a common fund, those payments, with accumulations of compound interest, would suffice to yield £1,000 at each death before the age of sixty, and eventually £1,000 to each who lived to the age of sixty.

Suppose that one of those persons dies at the age of 50, leaving a widow of the same age: if she be a delicate person, she will rather take the £1,000 in cash, than a pension which will terminate with her life; if she be healthy, she may choose to exchange the £1,000 for a life income, in which case she may have £65 yearly while she lives.

Should the husband live to sixty, he may similarly either take the £1,000 in cash, or exchange it for a yearly income of £96 during his own life, or of £83 during his wife's life, or of £70 as long as either of them is alive.

Such is the plan I would recommend for adoption. It is extremely simple, and adapts itself to all circumstances. The medical man may be married or not at the time of joining; his wife may be any number of years older or younger than himself, or he may never marry at all; his wife may die before him and he may not marry again, or he may marry a lady of a different age; none of these circumstances entails a loss.

Whatever plan be decided upon, the important question remains, How the fund is to be organised, the selection of healthy members made, the funds invested safely and profitably, the contributions received from members, and the payments made to them. It is clear to me that it would be extremely hazardous to have a separate organisation at the outset. The time and expense necessary to secure a sufficiently large constituency would be so great, that I believe it would be better to attach ourselves at first to an established institution, from which we could withdraw if eventually we were strong enough to form a separate fund. At the same time it would be of advantage to act as a body in treating with an established institution, in order to secure the discount obtained now-a-days by co-operation. With reference to this point, I have much satisfaction in stating that I find, on inquiry, that the Edinburgh Life Office is open to make special terms with this Association, provided that each gentleman, on wishing to avail himself of the plan, communicates direct with the office in London, so as to avoid agency expenses. The Edinburgh Life Office is one of the various first-class companies; it is fifty years old, and has over £1,130,000 of cash invested. Its business has reference to human lives only, and does not comprise fire, marine, or fidelity guarantee risks.

I have no less satisfaction in intimating that provision would be made for the cases of gentlemen who from any cause were unable to continue their contributions until death or the age of sixty. It would be matter of regret if any member who could not keep up his payments were to feel that he had lost what he had paid; and, accordingly, I have had some calculations specially made by the actuary, and have elicited that the Edinburgh office will meet such cases as follows.

Should a member at any time cease paying, the result will be that a larger sum than he has paid will be returned by the office when he reaches the age of sixty, or at his death, should he die before sixty. Thus taking as before the case of a member joining at the age of thirty, in seven years he will have paid £212 12s. 6d. Supposing he does not

pay any longer, the office will pay the sum of £233 6s. 8d. on his reaching the age of sixty, or at his death if previous. Should he prefer it, the sum of £93 ros. will be paid to him in cash, or nearly that sum will be lent to him at interest. It must be borne in mind that the office will have run the risk of paying the £1,000 at his death during the seven years, and that it will have paid £1,000 at each death which has occurred during the seven years.

I am anxious to draw attention to this most important subject, and to have it well ventilated, with a view to something definite being done.

ON THE TREATMENT OF CHRONIC INFLAMMATORY DISEASES OF THE LARYNX.*

By JAMES SAWYER, M.B.Lond., etc.,

Physician to the Queen's Hospital, and extra-Acting Physician and Pathologist to the Children's Hospital, Birmingham.

FOR some years I have systematically used the laryngoscope in the diagnosis and treatment of all the cases of disease of the throat and upper part of the respiratory passages which have come under my notice, to which the employment of that instrument seemed applicable. My experience has been mainly in the practice of a large general hospital. It will, I am sure, be acknowledged by all who have given attention to the subject, that the efficient use of the laryngoscope, and the successful application of local remedies under its guidance, require—and it is unfortunate that such should be the case—a degree of dexterity which few have either the time or the opportunity to acquire. It is very far from my desire to exaggerate the difficulties of laryngoscopy; that art is being gradually extended and improved, and its practice is almost daily being made more easy. The use of the throat-mirror is one of those acquirements which can only be learned at considerable disadvantage in private practice; no excuse, however, can be offered for the student who passes through his hospital curriculum without at least overcoming the preliminary difficulties in the way of the employment of the laryngoscope. Of all the methods of investigating disease which have been devised or adopted during the last twenty years, laryngoscopy will be held to be the completest and the best; the completest, because as an art it is almost perfect; and the best, because it is the most useful, inasmuch as it aids as directly in the treatment of a large class of important disorders about which we were formerly literally in the dark. Much, perhaps all, of what I am about to say has been said, and better said, before. Here, in Birmingham, the laryngoscope met with early favour, and among its first and warmest advocates were my friends Dr. Russell and Mr. Furneaux Jordan; but I believe the use of the little mirror of the Hungarian physician will soon become as universal in our profession as the employment of the stethoscope, and in the hope of helping, even in ever so small a degree, to hasten the day of its general adoption, I venture to lay before you, very briefly, some of the teachings of my own experience in the treatment of certain diseases of the larynx.

For the topical treatment of the vast majority of laryngeal affections, nothing very complicated is required in the way of appliances. We need a concave reflector, about three inches and a half in diameter with a small circular hole in its centre, having a focal distance of eighteen or twenty inches, and firmly attached by a ball and socket-joint to a stout spectacle frame. We ought to have three or four laryngeal mirrors; these, made of silvered glass, should be about the size of a shilling, and soldered, at an angle of about 120 deg., to a German silver shank, which is fixed in a wooden handle. The sliding handles with screws are objectionable. For illumination, Dr. Mackenzie's rack-movement lamp is the best arrangement I am acquainted with. We must be supplied with half a dozen suitable brushes of camel's hair. I like them cut square at the end, mounted on strong aluminium wire, and bent, at a little more than a right angle, a couple of inches from the end of the brush. The handle of the brush should be of wood; and in shape it should be angular rather than cylindrical, so that we may hold it firmly and direct it with precision. Four solutions for topical application will suffice for the majority of cases. I use the following, prepared according to the *Pharmacopœia* of the Hospital for Diseases of the Throat: Solution of sulphate of copper, fifteen grains to the ounce of water; of nitrate of silver, sixty grains to the ounce; of perchloride of iron, sixty grains to the ounce; and of chloride of zinc, fifteen grains to the ounce. In each ounce of one of these "collyria" I have found it useful to include half a drachm or so of glycerine.

Chronic laryngitis is by far the commonest affection of the larynx. Although this disorder may have many causal antecedents, it is found

most generally to result, so far as I have seen, from one or more attacks of acute or subacute catarrhal laryngitis. It gives rise to much annoyance and suffering; it is very persistent, and I think I may say it can only be cured by means of topical applications; when so treated, considerable benefit in all cases, and perfect recovery in many, may be confidently expected. Chronic laryngitis is most commonly met with in adult males; because, doubtless, such persons are most exposed to the conditions which give rise to catarrh. The patient usually complains of a tickling in the throat, and sometimes a burning or aching pain is felt. The vocal phenomena are very characteristic. The voice is impaired or lost; it is generally weak, harsh, and hoarse; speaking may be painful, or accomplished only with effort; there is an almost constant desire to hawk and "hem" and clear the throat; there is always a little cough, and this is sometimes the most troublesome symptom; there is frequently a vague sense of discomfort about the throat; and in a small number of cases a little pain in swallowing is experienced. On laryngoscopic examination, the mucous membrane of the larynx is found to be reddened and thickened, and a few patches of adherent mucus are sometimes seen. The hyperæmia is usually general, but it is often partial. Perhaps the most striking condition is the change in the appearance of the vocal cords—from the pearly white of the healthy larynx to the deep red colour of chronic laryngitis. The epiglottis is deepened in colour and swollen; its arborescent vessels may appear injected, and its edges are sometimes eroded. We may frequently observe that the vocal cords do not readily and perfectly approximate when phonation is attempted, the congestion of the parts and the sub-mucous infiltration interfering with the action of the laryngeal muscles, and impeding the movements of the arytenoid cartilages. Ulceration is rarely seen; it is never extensive in simple chronic laryngitis.

There is a variety of this disease which has been called chronic glandular laryngitis, dysphonia clericorum, and (though improperly, for the glands of the larynx are not follicles) follicular laryngitis. This disorder is most frequently met with among those who use the voice to a great extent: continuous vocal exertion in the open air seems very commonly to give rise to it. This form of laryngeal disease, however, often arises without any very evident cause, and it has been thought by Trousseau and others to be due to the "herpetic diathesis". The symptoms are the same as those of a simple case of chronic laryngitis. With the laryngoscope, the enlarged orifices of the glands may be seen, about the arytenoid cartilages and at the base of the epiglottis. The vocal cords, as a rule, are pretty healthy in appearance.

In a very large proportion of cases of chronic pulmonary phthisis, some affection of the larynx is found. I am quite sure—and on this point I would lay particular stress—that the laryngoscopic appearances in the majority of cases of phthisical laryngitis are sufficiently characteristic to enable us to decide with the laryngoscope alone as to the nature of the affection. In the early stages, there is anæmia of the laryngeal mucous membrane. Afterwards, to use the words of Dr. Morell Mackenzie, "the ary-epiglottic folds look like two large, solid, pale, pyriform tumours, the large ends being against each other in the middle line." The epiglottis is usually thickened and granular; its leaf-like shape and the sharply cut appearance of its edges are lost. Sooner or later, ulceration sets in, and slowly extends. I have frequently found the earliest and deepest ulceration at the junction of the cartilaginous and ligamentous portions of the true vocal cords. The destructive lesions may progress until large portions of the cartilaginous framework of the larynx break down in *débris* or *necrose en masse*.

The subjects of syphilis are extremely liable to laryngeal disorders. We meet with different laryngeal phenomena at different periods of the constitutional disease. It may be laid down as a general rule, that the laryngeal affections of secondary syphilis are comparatively trivial, while those of the tertiary stage are always serious and often fatal. Of this I have had abundant evidence. Simple erythema of the mucous membrane of the larynx, giving rise to a little hoarseness and uneasiness in the throat, is often met with in connexion with syphilitic roseola and psoriasis; the parts appear deepened in colour and slightly swollen. The mucous membrane occasionally becomes ulcerated. Condylomata of the larynx, in my experience, are very rare. In syphilitic individuals, we often find a troublesome chronic hyperæmia of the larynx, which persists for years. In the tertiary period, the epiglottis is frequently destroyed. At that epoch of the constitutional malady, extensive ulceration of the mucous membrane of the larynx is common. The cartilages may become carious, or they may necrose in large portions; and death not unfrequently results either from asthenia or asphyxia.

Gargles are of no use whatever in the treatment of these chronic affections of the larynx. Gargles probably rarely reach beyond the posterior pillars of the fauces. In simple chronic catarrhal laryngitis, we can always do much good—we can usually effect a cure—by the

* Read before the Birmingham and Midland Counties Branch.

local application of remedies in solution by means of the laryngeal brush. So far as I have seen, we can very generally remove the chronic laryngitis; but a little weakness and huskiness of the voice nearly always remains. In these cases, I usually apply nitrate of silver or chloride of zinc. I am not sure which is the best; but, on the whole, I am inclined to prefer the nitrate. I must say, however, that it will generally be found to cause more smarting and uneasiness than the chloride of zinc. At first, until very decided improvement be manifested, the applications should be made daily; afterwards, every other day; and then once or twice a week, until the cure is effected.

Chronic glandular laryngitis will be found a more tedious disorder to deal with; but we may do much good by restricting vocal exertion, and by the topical application of nitrate of silver or perchloride of iron in solution. In phthisical laryngitis, a weak solution of nitrate of silver will generally be found the best local remedy. The disease may be retarded and alleviated, but never cured. Of course, the hygienic, medicinal, and general treatment suitable for pulmonary consumption must not be neglected. In the treatment of syphilitic affections of the larynx, the constitutional disease must never be forgotten. I have the fullest faith in mercury. In the earlier stages of the malady, it is always best to bring the patient gently under the influence of that valuable drug. In the later phases of the disorder, iodide of potassium, in doses of twenty grains three times a day, will often act like a charm. When the laryngeal disease is slight, a solution of sulphate of copper is the best local application; when there is much ulceration, I would recommend the use of a very strong solution of nitrate of silver. The solid nitrate may be applied to ulcers in the larynx. For this purpose, a little of the caustic must be fused on the tip of a probe which has been suitably bent; and in this way nitrate of silver may be safely introduced into the larynx by the aid of the laryngoscope.

In the treatment of laryngeal diseases, much benefit may be derived from "inhalations". Medicated steam-inhalations are very valuable; for these, I would recommend the eclectic inhaler of Mackenzie. Inhalations of atomised fluids are of great utility; and for these we have Siegle's apparatus, Clark's hand-ball spray-producer, and other contrivances. Of inhalation and other useful methods and adjuncts in the treatment of laryngeal disease, I fully recognise the value; but my object in this paper has been to bring forward in outline an account of the chronic inflammatory affections of the larynx, and to give my testimony to the great advantage to be derived in their treatment from the systematic topical application of remedies in solution by the aid of the laryngoscope.

THERAPEUTIC MEMORANDA.

OXIDE OF ZINC IN INFANTILE DIARRHŒA.

IN the last number of the JOURNAL is a quoted paragraph, recommending chalk and kino; I can speak still more highly of oxide of zinc. This use of it is not generally known or mentioned, but has been referred to by Dr. Waring-Curran (*Lancet*, October 1868), and specially treated of by Dr. Brakenridge, who has well pointed out (in the *Medical Times and Gazette*, February 15th, 1873) that this oxide has tonic and antispasmodic as well as astringent properties—a combination in a non-irritant substance exactly suited to many cases of the malady referred to. Chalk is good, but sometimes irritates, and sometimes fails. Acids are good, but sometimes gripe, and sometimes injure teeth. Opium should be absolutely forbidden for infants that cannot be closely watched. Bismuth is very good; and zinc resembles it, with better nerve-tonic power (a minor point, but I observe the quoted price of carbonate of bismuth to be 13s. per lb.; of oxide of zinc (Hubbuck's) 1s. 4d.). Zinc oxide will give us, in many cases, the maximum of good with least liability to harm—an advantage to be desired, especially in out-patient and distant cases. Without implying that it is always the best remedy, I may say that it has—suitable diet being premised—given me excellent results in all the varieties of infantile diarrhœa; notably in those complicating nerve troubles and whooping-cough; it is not to be forgotten in the profuse sweating of rachitis. The dose may be one grain for any age under two years, and may be well given with a little syrup, mucilage, and dill-water three or four times daily—not on an empty stomach, or a larger dose may nauseate.

EDWARD MACKEY, M.B.,
Physician to the Children's Hospital, Birmingham.

EAST AND WEST FLEGG.—Mr. J. T. Waller has been appointed Health Officer for three years, at a salary of £80 per annum. Population, 9,500; area, 26,000 acres.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 12TH, 1873.

A SEMI-ANNUAL RETROSPECT.

THE year of the Association dates from its annual meetings; and it is in commencing the volume of this half-yearly period that we find the most appropriate occasion for reviewing our position, and for inquiring how the Association progresses in carrying out its functions and in maintaining its status.

One great function of the Association is to elicit, to foster, and to diffuse scientific thought and practice throughout the profession. The Branch meetings bring together practitioners in the remotest parts of the country; they encourage, and indeed almost compel, the busiest of them to collate their experience, to note it down, and to record it. Men who are locally known to have large means of experience are called upon by the secretaries and by the voice of the members of the Branch to prepare papers: taking their turn of office, they feel bound to exert themselves for the scientific instruction of their fellows, and stores of information are elicited from men who would never otherwise have been induced to put pen to paper.

For the publication of their papers they have no unworthy audience; they have more than five thousand weekly readers in the three kingdoms—a medical audience such as no authors could ever before thus secure for their papers.

It is interesting to note how any new view or interesting subject presented to this audience is instantly, as it were, analysed, torn to pieces, and reconstructed. Thus this year the subject of uterine medication, once started by Dr. Matthews Duncan of Edinburgh, has been debated most minutely and exhaustively in our pages by Henry Bennet, Robert Barnes, Lombe Atthill of Dublin, Graily Hewitt, Bassett of Birmingham, Heywood Smith, and several others. The subject of the most appropriate kind of anæsthetic, and its administration, started in our editorial columns, was discussed in every aspect by Jonathan Hutchinson, Clover, Green of Bristol, Morgan of Dublin, Annandale of Edinburgh, McGill of Leeds, Skinner of Liverpool, Jones and Warrington Haward of London, Marshall of Bristol, and Lawson Tait of Birmingham; our American brethren joining in the debate, Joy Jeffries, Packard, and Weller of Boston, forward their contributions to this discussion. So much for the scientific development of medicine, in which the Association is at this moment, and has during the year, taken a more active part than ever during its existence. Of its activity in State Medicine, the contributions of Rumsey of Cheltenham, Dyke of Merthyr Tydfil, Clegg of Epsom, and others, bear ample witness.

On the subject of the political and social action of the Association during the year, we may point out that, in respect to

Medical Reform, the Association has pursued the resolutions of repeated annual meetings in favour of Direct Representation of the Profession on the Council; and, while public opinion has retrograded on the other subjects of medical reform, it has advanced in this; so that, in bringing forward the Bill of Mr. Headlam, it is found that no parliamentary or ministerial opposition is offered to the principle of Direct Representation, but chiefly to those parts of the Bill requiring amalgamation of the examining bodies which were part of the original Government scheme, and were four years since the subject of universal agreement.

On the subject of the Position of Army Medical Officers, which our Association strenuously and successfully laboured to ameliorate some years since, retrogressive steps having been taken by Mr. Cardwell in the recent Army Medical Warrant, the Parliamentary Bills Committee of the Association have collected a mass of evidence, and have laid before Mr. Cardwell, at an interview with him, detailed requisitions to which he has promised his most serious attention, and which are now under consideration.

In other matters relating to the Registration of Still-born Children, and to the Remuneration of Poor-law Medical Officers for work to be required of them in connexion with the Public Health Bill of Sir C. Adderley, parliamentary action has also been taken in furtherance of social and medical interests.

Two important subjects have arisen during the year which may require further consideration by the profession and in the Association. First. Ought country Fellows of the College of Surgeons of England to be required year after year to come up to London to record a personal vote—at great cost and sacrifice of time and exertion—when by writing on a slip of paper the same object might be effected? They learn nothing and add nothing to the knowledge of others by coming; no discussion of any sort takes place; they simply place in a glass a piece of paper which they might have transmitted by post with the same effect; and, while London Fellows do so without any inconvenience, country Fellows are taxed in sums which may be variously estimated at from £1 to £10, in order to exercise a privilege which in theory is, and in fact ought to be, equally accessible to all Fellows.

A second question, likely to be much discussed, is, How are general practitioners to regard the proposed arrangements between the College of Surgeons of England and the London College of Physicians, which propose to make the joint diplomas of the Colleges indispensable to English general practice at a cost of thirty guineas? It appears that that sum is considerably more than sufficient to defray the expenses of the examination and the diploma, and a large balance will be handed over to the Colleges. That of the College of Surgeons will be expended mainly on its Library and on the Hunterian Museum. This few will grudge. The Hunterian Museum is the common possession of members and Fellows, and the heritage of the nation (which ought, perhaps, for that very reason to contribute to support it). But the sum to be appropriated for the general purposes of the College of Physicians will go for purposes not yet defined, and in which it does not as yet appear that those who are taxed have any share or interest. This appears on the face of it to amount to a surplus taxation of the licentiates; but they have not been consulted as to the propriety of im-

posing it; it does not appear that they are likely to be consulted as to the mode of expending it, or how they will be benefited by that expenditure. The licentiates have little share, so far as we know, in the privileges of the College, or part in its acts; they do not enjoy even the privileges of admission to its lectures and its receptions; they are to a great extent outside of it.

Now, this Association has for one of its objects the maintenance of the rights of the whole body of associates and of the profession at large. General practitioners and consulting practitioners stand here shoulder to shoulder, on an equal footing; and it cannot but appear, seeing that it is only here that they can make their voice heard with an associated and united force on such matters, and that they have convenient opportunities for considering them harmoniously and in common council, that it may occur to them to consider whether, if the College of Physicians claim to receive so large an annual bonus from general practitioners of the future, these ought not to have some further recognition from it than they now receive. This is spoken with feelings of the utmost friendliness to the College, which can only gain from a position of extended justice to all.

Of the financial and numerical progress and prosperity of the Association, more may be said. We shall meet this year, being probably more than five thousand in number. We met in 1862 in this same city, being little more than two thousand. The progress made by the Association during the last ten years has been most remarkable. It has existed during forty years. In a few years, it reached the number of nearly two thousand, and then oscillated above and below that number for a series of years; the numbers entering at each annual place of gathering and at the Branches being balanced by annual deaths and resignations. But now those who come to us annually, come to us in larger numbers, and they stay with us. They are satisfied with what they get during the year as the return for their modest annual subscription; and they not only remain with us, but propose their friends as members; so that, notwithstanding the large annual losses consequent upon death and retirement in so large a body as we have now become, the returns, with the exception of the years 1869-71, show an annual balance of increment averaging fully four hundred. This permanence in the relation of those of whom many are, in the first instance, attracted only by the annual general meeting or local meetings of the Association, is a most encouraging fact; it is so especially to us. This Association stands in a very different position from associations such as the British Association and the Social Science Association. They appeal to the educated millions outside of any profession. They enrol annually some thousands of members, who are so only for the week, and who are attracted by the programme of the meeting and its brilliant displays, contribute some thousands of pounds gate-money and a couple of thousand in subscriptions for the expenses of the meeting, and who cease with that week to have any further connexion with the Association till it meets again in their neighbourhood. The permanent members of those Associations are few in number; their bond of union during the year is slight and almost imperceptible; but they have inexhaustible resources of population and of funds to draw upon at each successive place of meeting, and so they pursue a peripatetic ex-

INDEX TO VOLUME I. FOR 1873.

- A.**
- Abdomen, pistol-ball in muscles of, 161; Dr. Humphry on varieties in muscles of, 665
- Aberdeen, fever-breeding in, 42, 152; correspondence of, 146; medical school of, 520
- Abortifacient, quinine as an, 562
- Abscess, chronic, hemorrhage into sac of, 620
- Academy of Medicine, secretary of, 291
- Actinae, Dr. Hollis on action of drugs on, 637
- Acturus, Liston v Leland and rice *versâ*, 10; O'Flanagan v Shaw, 128, 292; Balmforth v. Buckley and Fletcher, 150; Johnson v. Mallard, 180; Thompson v. Bell, 264; Pearce v. Dixon, 264
- Adams, Mr. E. J., rare dislocation of the humerus, 728
- Dr. R., rheumatic gout, *rev.*, 90, 117
- Adulteration of food, prosecutions for, 17, 233, 622, 634, 681, 728; proceedings of Manchester Sanitary Association, 99; report of General Purposes Committee of City of London, 186; of milk, 233; of bread, 295; of food, Act for preventing, 80; Dr. Stevenson's report on, 494; the act in Wiltshire, 540; of milk, 568, 594, 683; Dr. Corfield's report on act, 622
- Advertisement, an, 51
- Advertising, medical, 715, 717, 745
- Aque and floods in Somerset, 203
- Ague-plant, the, 54
- Aiken, Dr. L., sanitary state of Rome, 311, 341
- Albumen in urine, Dr. G. Johnson on tests for, 3; signification of, 132; Dr. G. Johnson on various causes of, 579, 605; etiology of, 674
- Alcohol, Dr. Dickinson on morbid effects of, 8; letter on action of, 52; injection of into tumours, 569
- Algiers, climate of, 123
- Alibut, Dr. T. C., diet in health and disease, 586
- Alopecia, congenital, 614; Mr. Gaskoin on, 642
- Alveolar ridge, excision of, 63
- America, cholera in, 736
- American Pharmacopœia, 124
- Ammonia, action of on actine, 610
- Amputation, Syme's, of foot, 227; at shoulder joint, 258; of leg, 286; through metatarsus, 287; at hip, 471; Chopart's, 587; of foot, peculiar, 651
- Angustines, Mr. Clover on death from, 10; ether and chloroform compared, 23; Dr. Peaselee on choice of, 95; Mr. J. Hutchinson on choice of, 247; Dr. Skinner on inhalers, 353; Dr. Crombie on self-administration of, *rev.*, 672; report of Dublin Committee, 709. See Chloroform, Ether, and Nitrous Oxide
- Analysts, public, appointment of, 158, 540
- Anatomical models, 295, 413
- Anderson, Mr. John, gift by, 622
- Aneurism of thoracic artery, 47, 48, 155, 612, 627, 677; of common femoral artery, 199; subclavian artery partially cured, 211; of basilar artery, 213; of heart, 329; of femoral artery, Mr. Myers on, 341; of abdominal aorta, 477; of femoral artery simulating malignant disease, Mr. Gloag on, 534; abdominal, treated by pressure, 674
- Animal Mechanics, Rev. Dr. Haughton on principles of, *rev.*, 589
- Animation, suspended, 51
- Ankle, malignant disease of, 153; excision of, 285, 745
- Ankylosis of hip, 155; of elbow, operations for, 520
- Anstie, Dr. F. E., pathology of sick-headache, 61
- Anthropological Institute, officers of, 95; psychological committee of, 274
- Antidysenteric, a new, 652
- Antiseptic dressings, 97
- Antivaccination mania, 482
- Antivaccinator, a prophetic, 413
- Anus and rectum, artificial dilatation of, 124
- Aorta, thoracic, aneurism of, 47, 48, 155, 211, 612, 627, 677; disease of, 238, 627; rupture of, 638; abdominal, embolism of, 210; aneurism of, 477, 674
- Apothecaries, Ancient English, 242; Welsh, 263
- Society of and the Conjoint Examining Boards, 371; pass lists. See Medical News in each number
- Appeal, an urgent, 570
- Archer, Mr. R. S., ether as anæsthetic, 36
- Arcus senilis, letter on, 218
- Arm, tumour of, 102
- Armstrong, Mr. H. E., embolism of middle cerebral artery, 609
- Army, British, promotion of medical officers for military services, 52; new regulations, 240; hospital stoppages, 260; dental surgery in, 262; the medical warrant, remarks on, 289, 492, 539, 705; promotions in medical service, 316, 196; letters on the warrant, 558, 520, 660, 689; sanitary regulations for field service, 417; medical school at Netley, 467; Dr. De Chaumont's introductory address, 625, 653 proceedings in Parliament regarding warrant, 518; correspondence between Mr. Cardwell and Dr. Lyon Playfair, 606; Sir T. G. Logan's memorandum, 596; proceedings of Parliamentary Bills Committee, 599; representation of medical officers, 623; deputation to Mr. Cardwell, 710
- English, Dr. Smart on history of medical staff of, 111, 139, 169
- Indian, candidates for medical appointments, 244, 301; medical officers of and the new warrant, 384
- Saxon, medical school of, 681
- Arsenic, Mr. J. Morley on cases of poisoning by, 85
- poisoning by, Mr. W. M. Clarke on disease from, 698
- Arteries of brain, topography of, 91
- Arterio-capillary fibrosis, Dr. G. Johnson on, 59; Dr. Beale on, 32
- Artery, tibial, subcutaneous wound of, 43; iliac, Mr. Butcher on ligature of, *rev.*, 65; femoral occlusion by avulsion, 77; pulmonary, disease of, a cause of disease of right ventricle, 130; external carotid, secondary hemorrhage from, 197; common femoral, aneurism of, 199; subclavian, aneurism of, 211; central of retina, embolism of, 213; pulmonary, embolism of, 213; basilar, aneurism of, 213; subclavian, ligature of, with amputation at shoulder, 258; external iliac, unusual course of, 286; femoral, Mr. Myers on aneurism of, 341; innominate, ligature of, 543; aneurism of simulating malignant disease, Dr. Gloag on, 584; middle meningeal, ligature of, 589; middle cerebral, Mr. H. E. Armstrong on Embolism of, 669
- Artificial respiration and transfusion, Dr. T. I. Brunton on, 555
- Artists, medical, 565
- Ascites with abdominal tumours, 729
- Ash closets, Mr. Peaselee on, 570
- Aspirator, use of the, 235; in strangulated hernia, 567
- Assistants, drunken, letters on, 278, 420, 432; unqualified, 636
- ASSOCIATION, BRITISH MEDICAL, proceedings regarding medical reform, 432, 492; proceedings of Committee of Council, 477, 555; organisation of Branches, 495; list of officers and Council, 497; list of members, 499; proposed new Scottish Branch, 564; preparations for annual meeting, 523, 592, 712; deputation to the Marquis of Ripon on the Medical Act Amendment Bill, 597; meeting of Parliamentary Bills Committee, 599; photographic portraits of members at the Birmingham meeting, 683; notices of motion for alteration of laws, 655; remarks on annual meeting, 733; programme, 743
- Aberdeen, Banff, and Kincardine Branch, ordinary meetings, 22, 59, 413
- Bath and Bristol Branch, ordinary meetings, 77, 268, 478, 634
- Birmingham and Midland Counties Branch, general meetings, 43, 163, 236, 516; pathological and clinical section, 43, 99, 236, 477, 745; microscopical section, 269, 478, 518, 636
- Cambridge and Huntingdon Branch, annual meeting, 650
- Cumberland and Westmorland Branch, spring meeting, 574
- East York and North Lincoln Branch, annual meeting, 715
- Irish Medical, annual meeting, 685
- Lancashire and Cheshire Branch, special meeting, 665
- Metropolitan Counties Branch, ordinary meetings, 298, 354
- Midland Branch, ordinary meeting, 518
- Northern Branch, spring meeting, 518
- North Wales Branch, intermediate general meeting, 418
- Shropshire Scientific Branch, annual meeting, 42
- South-Eastern Branch, East Kent district meetings, 517; West Kent district meetings, 355, 634; East Surrey district meetings, 99; East Sussex district meetings, 518, 656
- South Midland Branch, annual meeting, 689
- South Wales and Monmouthshire Branch, ordinary meeting, 210
- West Somerset Branch, spring meeting, 516
- Yorkshire Branch, spring meeting, 418; annual meeting, 688
- Association, Belgian Medical, report on Intemperance, 318
- Dublin Sanitary, suggestion of, 207; meetings of, 255, 709
- Hospital Out-patients' Reform, meeting of, 296
- Lower Rhine Sanitary, 316
- Manchester and Salford Sanitary, and the Adulteration Act, 99
- Association, Midland and Western Scottish Medical, proceedings regarding death certificates, 435
- Poor-law Medical Officers', annual meeting, 243; presidency of, 292; meeting on Public Health Act, 450
- Poor-law Medical Officers' in Ireland, meeting of, 42
- St. Andrew's Medical Graduates', Dr. Lyon Playfair's address to, 165; general session, 180
- Social Science, sanitary and educational exhibition at meeting of, 682
- Asylum, Glasgow Blind, annual meeting, 97; Glasgow Royal Lunatic, annual meeting, 16; Poplar and Stepney, Mr. Stansfeld's visit to, 434; central London Sick, proceedings in parliament, 548; Carlisle, 682
- Asylums, metropolitan, 413
- Athletes, scientific, 290
- Athletic sports, united hospitals, 742
- Atkinson, Mr. E., invalid crane or bed hoist, 533
- Atropine, subcutaneous injection of in rheumatism, 258
- Austria and Hungary, cholera in provinces of, 39, 122, 350, 413, 540, 664, 737; surgeons in, 319; state medicine examinations in, 564; medical service of poor in, 738
- Aveing, Dr. J. H., English midwives, *rev.*, 258; instruction, examination, and registration of midwives, 308, 354
- B.**
- Baby-farming, case of, 94
- Bacteria, origin of, 120
- Bugshawe, Dr., complication and sequelæ of measles, 513
- Bahia, yellow fever in, 485
- Baker, Mr. J. D., obituary notice of, 356
- Bakewell, Dr. R. H., emigrant ships, 621
- Balmforth v. Buckley and Fletcher, meeting regarding, 150
- Barclay, Dr. J., enemata of chloral hydrate in puerperal convulsions, 611
- Barnes, Dr. B., application of remedies to the internal surface of the uterus, 30; lectures on convulsive diseases of women, 391, 421, 453, 483
- Barnicks for married soldiers, 343
- Bartlett, Mr. T. H., remarks on dislocation, 63
- Bartlett, Mr. W., obituary notice of, 480
- Barwell, Mr. R., amputation at the hip, 471; foreign body in bronchus, 473
- Bastian, Dr. H. C., anatomical relations of phthisis to tubercle, 363
- Bassett, Mr. J., induction of premature labour, 225
- Bastardy Laws Amendment Bill, 265
- Bath, order of, conferred on army and navy medical officers, 622
- Bath, overheated, death from use of, 652; portable Turkish, 704
- Baths, cold, in pyrexia of phthisis, 46
- Batrachia, metamorphosis of within ovum, 495
- Battle-field, pathology of, 468
- Beale, Dr. L. S., arterio-capillary fibrosis, 32; relations of phthisis to tubercle, 367
- Beales, Mr. E., on dislocations, 497
- Bear, an ungrateful, 593
- Beard, Dr. G., on youth and old age, 425
- Becker-Muirhead battery, 710
- Bed hoist, Mr. E. Atkinson on, 533
- Beef-tie, Baron von Liebig on, 94
- Bellamy, Mr. E., dislocation of the patella on its edge, 10
- Bennet, Dr. J. H., the offices of the uterus, 196, 583
- Bennett, Dr. Hughes, Text-book of Physiology, *rev.*, 464, 612
- Bequests, 295, 331, 654, 697
- Berlin, typhus in, 348; new physiological institute in, 469; medical officers of poor in, 739
- Betel, use of, 51
- Bewley, Dr. E., contemporary medical biography, 79
- Bicycle clubs, 706
- Biddle, Mr. C., poisoning with carbolic acid, 611
- Bile-duets, dilatation of, 77; obstruction of with vitellin-goidæ, 210
- Biography, contemporary medical, remarks on, 38, 150; letters on, 78
- Birch-Hirschfeld's researches on pyæmia, 706
- Birmingham, special correspondence from, 615
- Birt, Mr. G., paper as a dressing for wounds, 567
- Births, monstrous, 262, 320
- Births, registration of, 494
- Black, Dr. J. G., treatment of ulcer of the leg, 608
- Bladder, extroversion of, 47; Mr. Teevan on stone in, 60; abscess from forcible catheterisation, 78; chronic

- inflammation, of a cause of calculus, 103; deficient, 286; puncture above pubis, 304; cancer of, 475; chronic inflammation treated by carbolic acid injections, 536; Dr. Handfield Jones on paralysis of, 667; action of ergot on, 703
- Blaise, Messrs. Louis and Co., instruments in international exhibition, 732
- Blister treatment of rheumatism, Dr. Peacock on, 55
- Blood, death from general coagulation of, 78; parasites in, 147, 170, 185, 229, 271, 618; histology of, in the insane, 546; transfusion of, 593
- Bloodletting in convulsions of women, 484; effects of, 617
- Blumenbach travelling fund, 651
- Blunt, Mr. T., chemical history of eruptions following use of chloral, 197
- Bolton, Mr. W. T., erysipelas after vaccination, 221
- Boud, Dr. F. T., resolution concerning, 603
- Bott, Dr. T. B., marks of successful vaccination, 559
- Boulton, Dr. P., dilatation of the os uteri, 4
- Bowles, Dr. R. L., paracentesis of chest, 517
- Bowman, Mr. G., death from heart-clot during convalescence from parturition, 646
- Boyd, Dr. R., histology of the blood of the insane, 547
- Bradley, Mr. S. M., trichilian human heart, 33; syphilitic gummatous tumour of brain, 643
- Brain, topography of arteries of, 91; papilloma of, 270; Dr. J. C. Browne on cancer of, 425, 455; hæmorrhage in, 497; extension of scarlatinal parotitis to, 497; cyst in, 519; preternatural cavities in, in the insane, 547; hæmorrhage in, as a cause of hemiplegia, 560; hydatid of, 627; Mr. Bradley on syphilitic gummatous tumour of, 643
- Brawn, irritant poisoning by, Dr. Mackey on, 533; Mr. E. W. S. Davis on, 559
- Bread, adulteration of, 295
- Breast, cancer of, treated by chloride of zinc and incisions, 574
- Breech-presentation with legs extended, Dr. H. M. Jay on, 559
- Brewing, use of salt in, 17
- Bright's disease, Dr. G. Johnson's lectures on, 1, 27, 61, 100, 161, 191, 275, 303, 527, 579, 605, 696, 725; committee on, 95
- Broadbent, Mr. S. W., testimonial to, 93
- Bromide of potassium, therapeutic value of, 148; Dr. R. Barnes on use of, 484, in traumatic tetanus, Mr. C. R. Thompson on, 727
- Bromo-iodine water, Mr. R. Cuffe on cases treated by, 534
- Bronchocele, cystic, 286, 324; acute, 370
- Brouches, foreign body in, 473
- Brookhouse, Dr. J. O., methylene ether as an anæsthetic, 343
- Brown, Dr. F. J., female medical education, 690
- Dr. G. G., obituary notice of, 556
- Mr. I. B., appeal on behalf of, 106; obituary notice of, 158
- Browne, Dr. J. C., cancer of the brain, 425, 455
- Brunton, Dr. T. L., artificial respiration and transfusion, 555
- Brydon, Mr. W., obituary notice of, 480
- Bucharest, medical report on, 708
- Bulletins, private medical, 231, 262, 273
- Burrows, Sir J. Cordy, 124
- Dr. G., address to Royal College of Physicians, 436
- Butcher, Mr. R. G. H., Ligature of the Iliac Artery, *rev.*, 65
- Butter, adulteration of, 17
- C.**
- Cæsarean section in the dead body, 264
- Calabar-bean, action on iris, 134
- Calculi, cases of, 77; oxalate of lime, 298; vesical, from India, 269; mulberry, 628
- Calculus, chronic inflammation of bladder a cause of, 103; Sir H. Thompson on renal disease with, 250; branched renal, 678
- Callao, sanitary state of, 682
- Callender, Mr. G. W., removal of needle from heart, 237
- Calomel, Dr. Chesdale on salivation after single dose of, 89
- Calvert's carbolic vapouriser, 616
- Canada, medical legislation in, 290
- Cancer, disseminated, of internal organs, 10; mediastinal, 47, 199; of neck, 47; of tongue, 77, 171; uterine, 191; of ileum, 210; of mesentery, 239; of stomach, diagnosis from simple ulcer, 257; of duodenum, 269; of brain, Dr. J. C. Browne on, 425, 455; of bladder, 475; of breast, treated by chloride of zinc and incision, 574; of spleen, 627; of breast following ovarian disease, 671; of breast, 678
- Cancer-cures, 630, 748
- Canine madness, Dr. E. P. Philpots on, 254
- Cannula for puncture of bladder through the rectum, 673
- Carbolic acid, poisoning by, 47, 151, 208; dressings of in erysipelas, 143; Dr. Ferrier on case of poisoning by, 167; as a cerebro-spinal poison, Mr. D. J. Hamilton on, 226; gangrene after incautious use of, 264; dressing of, 303, 318; Dr. J. A. Eames on injection of in inflammation, 490; Mr. W. H. Day on injections of in chronic cystitis, 536; Dr. Header on poisoning by, 584; Mr. C. Biddle on poisoning by, 611; vapouriser for, 616; effect of on pus, 704
- Carbonic acid, injection into pharynx, 542; action on actinia, 639
- oxide, poisoning by, 178
- Carden, Mr. H. D., obituary notice of, 25; note on, 40; resolution of Birmingham and Midland Counties Branch concerning, 183
- Carpenter, Dr. A., on the supposed dangers of sewage-farms, 382
- Carter, Dr. H. V., pathology of leprosy, 471
- Castor-oil, atropised, Mr. Lloyd Owen on use of, 536
- Casualties and the Licensing Act, 594
- Cataract and stricture, 206; Mr. Cheshire on section of the orbicular muscle as a preliminary to, 369; flap-extraction of, 548
- Catarrh, Dr. L. W. Sedgwick on chlorate of potash in, 226
- Catheter, Dr. Ferrier on septicæmia after use of, 429
- Catheterisation, forcible, vesical abscess from, 78
- Cats, military tubercle in, 231
- Cayley, Dr., tubercle and phthisis, 386
- Ceely, Mr. R., on health-officers, 215
- Celenta, Egypt, 538
- Cerebellum, cysts in, 101; tumour of, 561
- Cerebral exhaustive, Dr. Radcliffe on, 395
- Cerebro-spinal meningitis, 636
- Cerebrum, Dr. Ferrier on functions of, 457
- Certificates of death, for club-patients, 246; gratuitous, 690
- Champagne for paupers, 464
- Chapman, Dr. E., Hysterology, *rev.*, 12
- Charity-cavassing, 68
- Cheavin's filters, 673
- Chemistry, Physiological, Dr. C. H. Ralfe on, *rev.*, 614
- Cheshire, Mr. E., section of the orbicular muscle, 369
- Chest, phonometric examination of, 265; paracentesis of, 517
- Chest-protector, Newbery's, 13
- Chilblains, treatment of, 143
- Child, diseased liver and spleen in a, 548
- Children, American protectorate of British, 177; weakly, education of, 262; copper coins swallowed by, 303; European, life of in India, 493
- Chloral, treatment of cholera by, 28; poisoning by, 43, 231, 566; Mr. Blunt on eruption following use of, 197; hydrate of in tetanus, 455, 463; Dr. Barclay on enemata of in puerperal convulsions, 611
- Chlorate of potash in catarrh, Dr. L. W. Sedgwick on, 226
- Chlorodyne, case of Browne v. Freeman, 495
- Chloroform, compared with ether, discussion in Surgical Society of Ireland, 28; letters on, 52, 182, 242, 274; Mr. A. Prichard on accidents from, 194; deaths from, 205, 207, 321, 567, 595, 708, 739; in infantile convulsions, Dr. Madge on, 226; Dr. H. Marshall on administration of, 283; Dr. Sansom on administration of, 403; Dr. Skinner on inhalers, 407; inhalation of in convulsion, Mr. G. Mowat on, 670; Mr. R. McL. Fraser on, 670; action on actinia, 639; in heart disease, 731. See also Anæsthetics.
- Cholera in Austro-Hungary, 17, 39, 70, 122, 178, 261, 317, 350, 413, 540, 651; and water-supply in India, 40; in Russia, 178; in Bohemia, 136; in Prussian Poland, 654, 708, 737; in America, 739; treatment of by chloral, 28; researches of Messrs. Cunningham and Lewison on, 200, 314; Dr. J. Murray on Pettenkofer's views of, 219; hæmorrhagic endometritis in, 287; in insular positions, 467; preparations for in Germany, 593
- Chorda tendineæ, rupture of, 627
- Chorea in pregnancy, Dr. Barnes on, 422; senile, 660
- Choroid, sarcoma of, 236; bony deposit in, 478
- Christmas at children's hospitals, 40
- Chyluria and hæmatozoa, 147, 185, 271
- Cinchona, cultivation of in India, 178
- Cirrhotis and ascites complicating pregnancy, 143; of lung, 476
- Clarke, Mr. W. M., arsenical disease, 698
- Clavicle, Mr. Erichsen on comminuted fracture of, 637
- Clegg, Mr. J., operation of the Public Health Act, 609
- Clinical Medicine, Dr. Sturge's Introduction to Study of, *rev.*, 730
- Closets, water, earth, ash, and carbon, Mr. Eassie on, 570
- Clover, Mr. J. T., death from anæsthetics, 10, 242; inhaler for administering ether, 282
- Club, Edinburgh University, annual meeting, 206; quarterly dinner, 568; medical, in Paris, 541
- Clubs, letters on, 52; patients of, and death-certificates, 246
- Cocoa, adulteration of, 622
- Coffee, chemistry of, 72
- Cold, effect of in frogs, 204; catching of, 735
- Coleman, Mr. A., alleged death from nitrous oxide, 164; a surgical lathe, 330
- College, Grant Medical, report of, 179
- King and Queen's, of Physicians in Ireland, pass lists, 193, 272, 389, 576, 635, 747; report on army medical warrant, 624
- Queen's, Cork, resignation of Sir R. Kane as president, 623
- Queen's, Galway, report of, 233
- Royal Medical Benevolent, free medical scholarships in, 41
- College, Royal, of Physicians of London, pass lists, 159, 217; proceedings regarding fellowship, 209; lectures at, 261; Dr. Liveing's Goulstonian lectures, 277, 305, 338; Dr. Radcliffe's Croonian lectures, 333, 359, 395; Dr. Barnes's Lumleian lectures, 391, 421, 443, 483; president's address, 436; Harveian oration, 736
- Royal, of Surgeons of Edinburgh,
- Royal, of Surgeons of England, election of examiners, 40; lectures, 96, 122, 595; pass lists, 132, 357, 523; remarks on Mr. Hancock's Hunterian oration, 202; Mr. Flower's lectures, 263; statistics of examinations, 494; country members of Council, 649; councillors of, 735; Jacksonian prize, 736; examiners at, 737
- Royal, of Surgeons in Ireland, Carmichael prizes, 544; new scheme of examination, 623; funds of, *ib.*
- Royal, of Physicians in Edinburgh, opinion of counsel on rights of licentiates, 821
- University, prizes at, 595; memorial tablets in, 622
- Colon, ulceration of, 269
- Colonies, health of, 563
- Colotomy, cases of, 236, 473, 671
- Colour, influence of food on, 482
- Colouring matters, poisonous, 149
- Concussion, case of, 142
- Congress, German Surgical, 467
- Conims, therapeutic value of, 476
- Conjunctiva, papilloma of, 48
- Consultation, unprofessional, 574
- Convalescent home at Kilmore, 684
- Convulsions, infantile, Dr. Madge on chloroform in, 226; epileptiform, Dr. Hughlings Jackson on investigation of, 531; Mr. G. Mowat on chloroform inhalation in, 607; puerperal, Dr. J. Barclay on chloral hydrate in, 611; puerperal, Dr. J. G. Swayne on, 668; Mr. R. M. Fraser on chloroform in, 670; puerperal after delivery, Dr. A. D. Mackay on, 701
- Convulsive diseases of women, Dr. R. Barnes's lectures on, 391, 421, 453, 483
- Cooke, Mr. M., obituary notice of, 549
- Dr. W., obituary notice of, 301
- Cooper's effervescent lozenges, 673
- Cooper's, Mr. White, recollections of eminent surgeons, 722
- Copenhagen, registration of disease in, 205
- Copper-coins swallowed by children, 303
- Cortfield, Dr., report on adulterated food, 622
- Coroner's inquests, instructions to police in Suffolk concerning, 679
- Cotton for dressing wounds, 519
- Cough-medicine, poisoning by, 380
- Counter-practice, Mr. Sandford's remarks on, 262, 290, 303, 332
- Crane, invalid, Mr. Atkinson on, 538
- Crispatura tendinum, 476
- Crockett, Mr. E., carbolic acid dressings, 348
- Croft, Dr. C. P., obituary notice of, 522
- Mr. John, excision of knee, 271
- Mr. T. H. W., the charge against, 264
- Crombie, Dr. J. M., Self-Administration of Anæsthetics, *rev.*, 672
- Cross, Mr. J., carbolic acid dressings, 303
- Crystalline lens, ossification of, 678
- Cuffe, Mr. R., edible and poisonous mushrooms, 51; cases treated at Woodhall Spa, 534
- Cunningham, Dr. W., treatment of supposed stricture of the cervix uteri, 461
- Cunningham, Dr. D. D., researches on cholera, 200, 314
- Cunningham, Dr. J., self-deception as to pregnancy, 662
- Curvature of femur, 47
- Customs and receipts, 736
- Cyst, abdominal, 48, 475; in pleura, 476; in brain, 519
- Cystitis, chronic, Mr. W. H. Day on carbolic acid injections in, 536; acute, simulating Bright's disease, 605
- Cysts in the cerebellum, 101
- D.**
- Dactylitis, specific, 629, 630
- Dalby, Mr. W. B., traumatic rupture of membrane tympani, 658
- Dalby, Dr., disease of the right side of the heart, 103
- Dalton, Dr. W., proposed college for daughters of medical men, 26
- Davies, Mr. Joseph, obituary notice of, 746
- Davis, Dr. J. Hall, instruction of midwives, 355
- Mr. E. W. S., brown-poisoning, 569
- Davy, Mr. R., walking boot for talipes, 562; new cannula for puncture per rectum, 673
- Day, Mr. W. H., chronic cystitis treated with carbolic acid injections, 536
- Dead bodies, discovery of, 206
- Death-rate at sea, 641
- Deaths, registration of, 413, 662
- De Chaumont, Dr., introductory address at army medical school, 525, 551
- Delirium tremens, Dr. H. B. Dow on hydrocyanic acid in, 610
- De Morgan, disease of neck necessitating tracheotomy, 534

Denmark, medical legislation in, 205; medical benevolent fund in, 206
 Dental surgery in the army, 262
 Dentists, British, a compliment to, 18
 Dermatology, cases of, 626
 Diabetes treated with lactic acid, Dr. J. W. Ogle on, 253; treated with skimmed milk, 658, 660
 Diaphragm, Dr. Handfield Jones on paralysis of, 606
 Diarrhoea, in *Encyrtus* in, 626; in teething, 731
 Dickinson, Dr. W. H., morbid effects of alcohol, 8; disseminated suppuration of the kidneys, 323
 Diet, Dr. Radcliffe on, 398; in health and disease, Dr. Allbutt on, 586
 Digitalis in acute diseases, 240
 Dinneford's horsehair flesh-gloves, 118
 Diphtheritic nephritis, 614
 Diplomas, spurious, 15, 179, 214
 Disease, registration of in Denmark, 205; liability to, 415; memorial of British Medical Association on registration of, 686
 Disinfectants, action of, 434, 435
 Dislocation of patella on its edge, Mr. E. Bellamy on, 10; Mr. Marsh Jackson on, 34; case of, 63; of femur, 63, 629; of humerus, 63, 632; of bones of forearm, 63; of humerus, with rupture of axillary artery, 184; old standing, of elbow, 236; of shoulder, unusual, Mr. Stokes on, 519, 646; Mr. E. J. Adams on, 728
 Dislocations, Mr. E. Heales on, 400
 Dispensaries, Poor-law, 715
 Dispensing, charges for, 96
 Dixon, Mr. J., recurrent syphilitic keratitis, 228
 Dobell, Dr. H., the case of the Emperor Napoleon, 79; tongue-holder and spatula, 238
 Dogs, new entozoon in, 18; Dr. E. P. Philpots on madness in, 254
 Dolbean, M., perineal lithotomy, 573
 Doncaster, sanitary state of, 261
 Donkin, Dr. A. S., skimmed milk in diabetes, 658, 660
 Dorsal, sanitary measures in, 249
 Douglas, Dr. F., obituary notice of, 216
 Dow, Dr. H. B., hydrocyanic acid in delirium tremens, 610
 Downey, Mr. P., the Public Health Act, 242
 Drainage, Mr. Essie on rules for, 75; of Southport, 295; on suppuration of the knee-joint, 704
 Dress, modern, 434
 Dropsy in acute Bright's disease, 192; in chronic Bright's disease, 308, 725
 Drutt, Dr. R., testimonial to, 106, 218, 423, 691
 Drunkards, habitual, bill for, 349, 381, 680
 Dryden, Mr. G., obituary notice of, 622
 Drysdale, Dr. C. R., on Syphilis, *rev.*, 313
 Dublin, sanitary condition of, 181; health of, 569
 Duckworth, D., preparations of *ipococcus*, 271
 Duke, Dr. V., obituary notice of, 216
 Dukes, Mr. C., etiology of heart-disease, 285
 Duncan, Dr. J. M., mechanical dilatation of the cervix uteri, 85; orifices of unimpregnated uterus, 251
 Duncald, new, 203
 Dundee, proposed medical school for, 20, 382
 Duodenum, cancer of, 269
 Dura mater, tumour of, 666; spindle-celled sarcoma of, 678
 Dyke, Mr. T. J., medical officers of health, 488
 Dysentery, chronic, in the Seamen's Hospital, 102
 Dyspepsia, Dr. Wilson Fox on, 256
 Dyspnoea, urgent and prolonged, after labour, Dr. J. J. Phillips on, 489

F.

Eames, Dr. H., obituary notice of, 356
 — Dr. J. A., carbolic acid injections in deep seated inflammations, 490
 Ear, pointed, in man, 317; clinic for diseases of in Vienna, 681
 Earth-closets, Mr. Essie on, 570
 Eassie, Mr. W., traps and trapping, 21; rules relating to drainage, 75; warming and ventilation of houses, 208; water, earth, and carbon closets, 570
 Eczema, chronic, treated by Woodhall Spa waters, 536; constitutional, 629
 Edinburgh, epidemic scavengering in, 20; fever-breeding in, 125; barracks for married soldiers in, 543
 Egypt, British hospitals in, 651
 Elam, Dr. C., results of treatment in affections of the nervous system, 546
 Elbow-joint, dislocation of, 63; excision of, 102, 517, 680; old dislocation of, 298; suppuration of treated by puncture, 472; operation for ankylosis of, 520
 Electricity, Dr. Wilks on therapeutic uses of, 28; modern application of, 184; local paralysis treated by, 730
 Electric and galvanic instruments, report on, 44, 144, 344, 740
 Elephantiasis Arabum, 269; Gracorum, Dr. R. Liveing on, 277, 305, 338
 Elliot, Mr. John, obituary notice of, 186
 Elmelle, Dr. W., obituary notice of, 50
 Embolism, cerebral, 32, 560; gangrene from, 210; pulmonary, 213; of arteria centralis retinae, 218; pulmonary, after parturition, 355; of middle cerebral artery, Mr. H. E. Armstrong on, 669
 Emigrant ships, Mr. Bakewell on, 621; Dr. W. P. Nesbitt on, 693
 Emmeragogue, Dr. J. Sawyer on guaiac as an, 647
 Empyema, subperitoneal, of uterus during pregnancy, 287; of lungs, 677
 Empyema, paracanthosis for, 36, 43, 101, 298; with psoas abscess, 77; from hepatic abscess, 77; with pneumothorax, 102; chronic, 560
 Endometritis, 157; decidual hemorrhage in cholera, 287
 Engineer, sanitary, Mr. Eassie on, 21, 75
 Engineers, a plea for, 39
 Entozoon, new, in dog, 18
 Entropion, Snellen's, treatment of, 11
 Epidemic scavengering, 20
 Epidemics, contagion theory of, 543
 Epilepsy, Dr. Barnes on relation of to pregnancy, 421; in non-pregnant women, 453; Dr. Hughlings Jackson on anatomical investigation of, 531; after injury of a nerve, 590
 Epispadias, case of, 116
 Epistaxis, Mr. P. Hewett on clinical importance of, 189; Mr. D. S. Skinner on sponge-tent in, 490; Dr. J. Young on, 559
 Epithelioma of labium, 47; of scrotum, 116; of penis, 171; of palate, 678
 Epithelium, urinary, 478
 Epizooty, last words about the, 524
 Ergot, Mr. T. C. Jones on use of, 115; action of in bladder, 703
 Erichsen, Mr. J. E., comminuted fracture of clavicle, 637; illness of, 737
 Eruptions following use of chloral, Mr. T. P. Blunt on, 197
 Erysipelas, Mr. Savory on nature and affinities of, 13; carbolic acid dressing in, 143; after vaccination, Mr. W. T. Bolton on, 221
 Ether as an anæsthetic, Mr. A. F. McGill on cases of administration of, 9; notes on, 18; compared with chloroform, 23; use of in hospitals, 85, 62, 83, 116, 142, 247; Dr. B. J. Jeffries on, 48; Mr. S. Fielden on, 59 letters on, 80, 103, 154; inhalers for, 98, 154, 174, 200, 282, 353, 681; discussion in Liverpool Medical Institution, 234; Mr. Hutchinson on death after use of, 247; administration of in America, 297, 330; methylene, *see* Methylene; Dr. Packard on, 403; Mr. V. Jackson on, 731
 Ewens, Mr. John, repeated abdominal presentations, 526
 Excision of the knee, Mr. Butcher on, *rev.*, 65; of hip-joint, 99, 213; of elbow-joint, 102, 517, 680; of head of femur, 171, 286; of knee, 226, 237, 251, 330, 678; of shoulder-joint, 255, 285; of ankle, 285, 745; subperiosteal of part of lower jaw, 611; subperiosteal of hip, 659; of upper jaw, 671; of knee, osseous union after, 677
 Exercise and Training, Dr. R. J. Lee on, *rev.*, 589
 Exhibition, educational, in Vienna, 412
 — international, surgical instruments in, 18, 69, 94, 124, 319; report on instruments in, 732
 — international, in Vienna, sanitary preparations, 348
 Exophthalmos, 267
 Exostosis of alveolar ridge, 69; of femur, 171; of humerus, 671
 Extroversion of bladder, 47
 Eye, foreign body in, 48, 468; glioma of, 236; displacement of by mucous cyst, 267
 Eyelids, hypertrophy of cellular tissue of, 477

F.

Factories and workshops Acts, 493
 Factory Acts in France, 177
 Falk, Dr., geography of traumatic febrile diseases, 124
 Farquharson, Dr. R., the action of mercury, 158
 Farr, the late Mr., resolution concerning, 625
 Farrar, Mr. J., testimonial to, 345
 Fatty degeneration, general, of viscera, 660
 Fess, medical, letters on, 50; in Italy, 233; tariff of Ulster Medical Society, 320; resolution of Northumberland and Durham Medical Association, 360
 Femur, dislocation of, 63, 629; necrosis of, 77, 171; exostosis of, 171; fracture of neck of, 213, 239; sarcoma of, 269; excision of head of, 286
 Ferrier, Dr. D., poisoning with carbolic acid, 167; septimania and the catheter, 420; experimental researches in cerebral anatomy and physiology, 457
 Fever breeding in Aberdeen, 42, 146; in Glasgow, 97; in Edinburgh, 125
 Fever, mechanical theory of, 176, 229; and flowers, 346; and Cholera from a New Point of View, Dr. A. Smith on, *rev.*, 613
 — continued, Dr. C. Maclean on pathology and treatment of, 644
 — syphilitic, 687
 — typhoid, at Moseley, 10, 98; treated by cold baths and India-rubber pad, 213; spread of from infected milk, 291; from foul water supply, 296; in the flying squadron, 414; death from phthisis after, 476; etiology of, 476

Fever, typhus, in Berlin, 348
 — yellow, in Rio de Janeiro, 412; in Bahia, 465
 Fibrin, artificial, as a dietetic substance, Dr. J. Goodman on, 559
 Fibrosis, arterio-capillary, Dr. G. Johnson on, 4; Dr. Beale on, 32
 Fibrous sarcoma of upper jaw, 130
 Fibula, tumour on after a blow, 89
 Fielden, Mr. S., ether as an anæsthetic, 59
 Filters, Cheavin's, 673
 Fistula, recto-vesical, colotomy in, 473
 Flesh-gloves, Dinneford's, 118
 Floods and agues, 293
 Flour, Mr. Wanklyn on testing of, 342
 Flowers and fevers, 346
 Fetal life, temperature as an indication of, 469
 Fetus, malformed, 43; with arrested development, 155; position of in utero, 636
 Food, act on adulteration of, 380; influence on colour, 482; Dr. Stevenson on adulteration of, 494
 Foot, Chopart's amputation of, 687; peculiar amputation of, 631
 Forceps, Dr. A. B. Steele on the, 285
 Foreign body in eye, 48, 468; in larynx, 77; in bronchus, 473; in vagina, Dr. A. Peerse on, 728
 Forfar, small-pox in, 235
 Fothergill, Dr. J. M., the Heart and its Diseases, *rev.*, 61; significance of albuminuria, 132; steam in its relation to the circulatory organs, 281
 Fournier, M., on syphilitic fever, 687
 Foveaux's battery, 145
 Fox, Dr. Tilbury, dermatolysis a pachydermatocoele, 626
 — Dr. Wilson, Disease of the Stomach, *rev.*, 266; anatomical relations of tubercle and phthisis, 266, 325, 441; the temperature, pulse, and respiration in phthisis, 675
 Fracture of temporal bone, 62; of radius and ulna, ununited, 62; of pelvis, 102; of base of skull, 129, 477, 519, 677; of ilium from muscular action, 134; of neck of femur, 213, 239; of radius, Colles', Dr. J. A. Macdonald on, 223; compound, of legs, 286; compound comminuted of scapula, Dr. W. Rosser on, 559; of patella, treatment of, 630; of clavicle, comminuted, Mr. Erichsen on, 637
 France, population statistics of, 123, factory acts in, 177
 Fraser, Mr. R. McL., convulsions treated by chloroform, 670
 Frigate, death from, 631
 Frogs, effect of cold on, 204
 Fund, British medical benevolent, donation to, 291
 Funds, medical benevolent in Denmark, 206
 Fungus-disease, 47

G.

Gaiffe's batteries, 144
 Gairdner, Dr. W. T., fever-breeding in Glasgow, 97
 Galezowski, M., marriage of, 267
 Gall-bladder, dilated, 18
 Galliez, M., Ovarian Cysts, *rev.*, 13
 Galvanic. *See* Electric
 Galvanism in infantile paralysis, 102
 Gangee, Mr. J. S., testimonial to, 616
 Gangrene from embolism, 210; hospital, 575; of scrotum, 647
 Gant, Mr. F. J., excision of knee-joint, 237
 Gaskoin, Mr. G., relation of psoriasis with nerve-diseases, 430; alopecia and vitiligo, 644
 Gastritis, Dr. W. Fox on, 257
 Gastrotomy in extrauterine gestation, 237, 628; for structure of esophagus, 588
 Gazette, Irish Hospital, 20
 Geneva, faculty of medicine in, 72; convention of, and the Shah of Persia, 742
 Genito-urinary organs, male, extensive disease of, 129; disorders of, 517
 Geography of traumatic diseases, 124; of disease, 320
 Glasgow, small-pox in, 29
 Glioma, acute, 131
 Glioma of eyeball, 236
 Glog, Dr. G. A., femoral aneurism simulating malignant disease, 584
 Godrich, Mr. A., modification of stomach-pump as an aspirator, 330; plugging the posterior nares, 400
 Goitre, exophthalmic, 227
 Good service pension, 510
 Goodman, Dr. J., artificial fibrin as a dietetic substance, 559
 Gordon, Dr. W. E., obituary notice of, 186
 Gospel of youth, 465
 Gould, Dr. F., obituary notice of, 522
 Gout, sarcosin in, 143
 Grange-over-Sands, sanitary condition of, 412, 479, 520
 Gray, Dr. R., propylamine in acute rheumatism, 587
 Green, Dr. T. H., phthisis and tubercle, 489
 Greenhalgh, Dr. R., division of the os uteri, 4
 Greenhow, Dr. E. H., acute muscular atrophy, 575; treatment of diabetes with skimmed milk, 658; abdominal aneurism treated by pressure, 674
 Greenslade, Mr., his instrument for slitting the punctum lacrymale, 673

Greyness, premature, 207
 Griffith, Mr. T. T., testimonial to, 350, 418
 Griffiths, Dr. Handzel, Posological Tables, *rev.*, 491
 Grocers' Company, donation to London Hospital, 495
 Guaiac as an emmenagogue, Dr. J. Sawyer on, 647
 Guarana in sick-headache, 36; Dr. Mackey on, 115;
 Greenaults, 288
 Gull, Mr. F., complicated paracentesis, 617
 — Sir W., report on case of Emperor Napoleon, 73

H.

Hæmatocele, cases of, 462
 Hæmatoma auris, Dr. W. Yeats on, 702
 Hæmatometra, 258
 Hæmatoma and chyluria, 147, 185, 271, 324
 Hæmaturia in chronic Bright's disease, 520; traumatic, 561
 Hæmorrhia, Dr. J. W. Legg on urine in, 141
 Hæmorrhage in peritoneal cavity, Dr. A. W. Tomkins on, 33; in renal disease, 192; secondary, from external carotid artery, 197; *post partum*, injection of perchloride of iron in, 211; in case of chronic abscess, 629; *post partum*, Dr. I. Savage on transfusion in, 640
 Hæmorrhoids, treatment of, 212
 Hair, changes of colour in, 102
 Hutton, Mr. J. P., obituary notice of, 272
 Hamilton, Mr. D. J., carbolic acid as a cerebro-spinal poison, 226
 Hammond, Dr. W. A., Diseases of the Nervous System, *rev.*, 172; chronic basilar meningitis, 665
 Hancock, Mr. H., his Hunterian oration, 202
 Hare-lip, Dr. K. King on a peculiar kind of, 388
 Hare, lymphadenoma of heart in, 475
 Harris, Dr. H., the late Emperor Napoleon, 134
 Harrison, Dr., and the Irish Court of Probate, 544, 569
 Harrison, Mr. J., obituary notice of, 522
 Harvey tercentenary memorial, 708
 Harvey, Dr. A., Syllabus of Materia Medica, *rev.*, 401
 — Mr. W., obituary notice of, 350; resolution concerning, 381
 Haughton, Rev. Dr. S., Principles of Animal Mechanics, *rev.*, 539
 Haward, Dr. J. W., enlargement of tonsils as a cause of nightmare, 645
 Haynes, Mr. J. B., obituary notice of, 271
 — Dr. S., repeated abnormal presentations, 580
 Health, medical officers of, Mr. T. J. Dyke on, 488
 Hearder, Dr. G. J., poisoning by carbolic acid, 584
 Heart, tricuspid, Mr. Bradley on, 33; new method of auscultation, 46; Dr. Shapter on feeble impulse of, 83; and its Diseases, Dr. J. M. Fothergill on, *rev.*, 64; with four aortic valves, 100; disease of right side of, 103; hypertrophy of right ventricle from disease of pulmonary artery, 139; hypertrophy of in renal disease, 192, 529; removal of needle from, 237; Schoff on innervation of, 259; congenital disease of, 269; Dr. Fothergill on effect of strain on, 281; overstrain of, 299; cases of disease of, 329, 519, 611, 631; Mr. J. H. Hill on dissecting rupture of, 463; lymphadenoma of in a hare, 475; death from clot in after parturition, Dr. G. Bowman on, 646; effect of chronic strain on, 676; chloroform in disease of, 731
 Heat, action of on actinia, 639
 Hepatic ducts, stricture of with vitiligoidea, 210
 Hernia with ovarian tumour, 48; strangulated, pneumatic aspirators in, 567; umbilical, reflex action had for, 590; sciatic, 677; strangulated omental, 678; obturator, Mr. C. Mayo on, 726
 Heroism, professional, 231
 Heubner, Dr., topography of arteries of brain, 91
 Hewett, Mr. P. G., address to the Clinical Society of London, 189
 Hewitt, Dr. Grally, clinical importance of acquired deformities of uterus, 553
 Hill, Mr. J. H., dissecting rupture of the heart, 403
 Hinton, Mr. Joseph, cases of animal poisoning, 670
 Hip-joint, ankylosis of, 155; excision of, 213
 Hobson, Dr. B., obituary notice of, 355
 Hodges, Mr. T. H., ether as an anæsthetic, 35; death from anæsthetics, 274
 Holland, Dr. F., rupture of jejunum from a fall, 203
 — Mr. P. H., chloroform deaths, 59; salubrity of places on north-west coast, 106
 Hollis, Dr. W. A., a source of mercurial poisoning, 536; action of drugs on lower organisms, 638
 Holmes, Mr. T., thyrotomy, 530
 Hopkins, Mr. J., his contributions to a hospital in Baltimore, 493
 Horny growth, case of, 236
 Horse, calculi in, 368
 Hospital, in Baltimore, Mr. Hopkins's donation towards, 493
 — Cancer, the report of, 650, 758
 — Charing Cross, appointment at, 466; prizes at medical schools, 737
 — for Children, circular regarding, 124; annual dinner, 205
 — for Children, East London, appeal on behalf of, 412
 — for Children, North-Eastern, enlargement of, 379

Hospital for Children at Penderbury, 69, 98
 — for Children, Royal Edinburgh, annual meeting, 97; appointment, 684
 — for Consumption, Brompton, enlargement of, 261; proposed payments to assistant-physicians, 543
 — for Consumption, Royal National, donation from Queen to, 290; donation to, 470
 — Convalescent, at Birmingham, 434
 — Convalescent, at Kilmun, 684
 — Convalescent, Lancashire, 151
 — Convalescent, at Lenzie, 125
 — Dental, of London, proposed removal of, 17, 392
 — Edinburgh, Royal Maternity, annual meeting, 295
 — Epidemic, for Aberdeen, 320
 — Fever, at Kilmarnock, 265
 — Glasgow Lying-in, 97, 152
 — Guy's, appointments at, 205; examinations of candidates for College of Surgeons at, 380; new fives court, 381; improvements at, 738
 — for Incurables, visits to, 41
 — for Incurables at Oxford, 541
 — in Japan, new, 261
 — King's College, students' dinner, 683
 — Leith, new, 207
 — London, proposed enlargement of, 203, 261, 349; donation from Grocers' Company, 495; suggestions regarding, 594
 — Middlesex, Report for 1871, *rev.*, 65; resolution regarding cases of delirium tremens, 203; appointment in, 467
 — National Orthopædic, appointments at, 69
 — Norfolk and Norwich, offer to, 467
 — Ophthalmic, Royal London, meeting of, 264
 — Royal, for Diseases of the Chest, annual meeting, 349
 — Rotunda, Lying-in, report of, 289
 — Royal Eye, at Manchester, donation to, 183
 — Royal Victoria, at Netley, retirement of Surgeon-General Innes, 434
 — St. Bartholomew's, new scholarship, 434; appointment, 619; presentation of portrait of Sir James Paget, 738
 — St. George's, appointment at, 71; proceedings regarding medical relief, 179, 214, 319
 — St. Mark's, remarks on advertisement of, 19
 — St. Mary's, appointments at, 348; special lectures at, 683
 — St. Peter's, for Stone, donation to, 177
 — St. Thomas's, changes at, 680
 — for Skin-Diseases, removal of, 72; anniversary festival, 349
 — Small-pox, for Partick, 42
 — at Stockton-on-Tees, new, 16
 — Training, at Tottenham, report of, 654
 — University College, appointment in, 69
 — Vienna General, department for diseases of ear, 681
 — Westminster, changes in, 494, 619; nursing at, 512
 — for Women, Birmingham, 98
 — for Women in Vienna, opening of, 18, 231
 Hospital dietary and economy, Dr. Steele on, 317
 Hospital Saturday in Birmingham, 98
 Hospital Sunday for Stamford Infirmary, 19; in London, 92, 95, 202, 349, 379, 680; in Liverpool, 119, 263; in Sheffield, 179; in Preston, *ib.*; in Manchester, 188, 201; in Oxford, 493; in Norwich, 651
 Hospitals, British, in Egypt, 651
 — French, Mr. J. F. West on, 567
 — of London, Lord H. Seymour's bequest to, 292, 529
 — Military, new regulations regarding, 295
 — Mr. Jardine and Mr. Deuman on abuses of, 67; meetings regarding out-door practice, 69, 231, 296; letters on abuse of out-patient departments, 155, 274; remarks on out-patient departments, 175, 315; alleged abuses of in Manchester, 293
 Humerus, unreduced dislocations of, 63; old dislocation, with rupture of axillary artery, 184; Mr. Stocks on unusual dislocation of, 519, 646; dislocation of, 632; exostosis of, 671; Mr. E. J. Adams on rare dislocation of, 728
 Humphry, Dr. G. M., the universities and the conjoint examination, 241; medical study at Cambridge, 478; varieties of muscles in man, 663, 693
 Hunter, Mr. C., St. George's Hospital and delirium tremens, 214
 — Dr. W. B., unusual case of paracentesis abdominis, 558
 Husband, Dr. H. A., Handbook of Practice of Medicine, *rev.*, 313
 Hutchinson, Mr. J., communication of syphilis by vaccination, 127; death in coma after use of ether, 247
 Hüter, Dr., mechanical theory of fever, 176
 Hydatids, uterine, Dr. S. T. Smyth on, 61; of brain, 627
 Hydros, case of, 10
 Hydrocele of tunica vaginalis, treated with tapping and iodine injection, 256; of seminal vesicle, 287; suppurating, 647
 Hydrocyanic acid in delirium tremens, Dr. H. B. Dow on, 610; poisoning by, 737
 Hydrofluoric acid, poisoning by, 155

Hydrophobia, reputed recovery from, 65; Dr. T. Partridge on case of, 142; case of, 621
 Hydrophthalmia, congenital, 477
 Hysteria, Dr. Barnes on, 453
 Hysterology, Dr. E. Chapman on, *r. v.*, 12

I.

Ichthyosis, case of, 709
 Ikin, Mr. J. L., contribution to history of public medicine, 57
 Ileum, cancer of causing dilatation, 210
 Ilium, fracture of from muscular action, 134
 Incomes, professional, 414
 India, cholera and water-supply in, 40; vital statistics in, 291; life of European children in, 493
 Infants, galvanism in paralysis of, 102; rules for management of, 181; unlawful disposal of bodies of, 373; closure of sinus pectoralis in, 615; French proposal for preservation of lives of, 684
 Infection, period of in epidemic diseases, 474; prevention of, 516; researches concerning, 618
 Infirmary, Aberdeen Royal, fever accommodation, 42; proceedings of committee regarding, 685
 — Arbroath, and epidemic disorders, 72
 — Bedford General, case at, 123
 — Derbyshire, Dr. Ogle on defects in, 653
 — Dundee Royal, arrangement in, 20; annual meeting, 634
 — Edinburgh Royal, reception of fever cases in, 20, 125; legacies to, 20 and lady medical students, 20, 42, 98; new buildings, 42, 97; collection of contributions, 350; special ward in, 435
 — Epilepsy and Paralysis, new premises, 72
 — Glasgow Royal, and small pox cases, 20; annual report, 43
 — Glasgow Western, report on, 568
 — Greenock, report of, 98
 — Hull General, remarks on, 681
 — Inverness, legacy to, 654
 — Manchester Royal, election of medical officers, 183
 — Tunbridge Wells, alleged refusal of a patient at, 203
 — Wigan, new, 654
 Windsor, opening of convalescent wards, 540
 Inflammation, deep-seated, Dr. J. A. Kames on injection of carbolic acid in, 490; secondary, 542; infective product of, 591, 601
 Inglis, Mr. James, obituary notice of, 634
 Inhalers, Mr. Nourse's, 200, 246; Mr. G. E. Norton's, 353; Dr. A. B. Steele on, 353
 Inhumanity, case of, 381
 Insane, histology of blood of, 547; cavities in brain of, 547
 Insanity, incipient, Dr. Radcliffe on, 359; and meteorology, 410
 Instruments at the International Exhibition, report on, 732
 Insurance, simple form of, 592
 Intemperance, Belgian medical report on, 318; semecology of, 520
 Intestine, obstruction of, 43; intussusception of, 269
 Intussusception of small intestine, 269
 Iodide of potassium, increased price of, 204
 Ipecacuanha, preparations of in *British Pharmacopœia*, 183, 271; in diarrhoea, 626
 Ireland, discussion on conjoint examining board in, 374, 375; registration of births and deaths in, 470; poor relief and sanitary service in, 649; medical benevolent fund society of, 685
 Iron, injection of perchloride of in post partum hæmorrhage, 211; Dr. H. L. Snow on administration of perchloride of, 724
 Italy, population statistics of, 123; medical fees in, 293

J.

Jackson, Dr. J. H., palsy of vocal cord from intracranial syphilis, 86; anatomical investigation of epilepsy, 531
 — Mr. R. S., obituary notice of, 521
 — Mr. W. F. M., dislocation of the patella on its edge, 34
 Jacobs, Dr. A. H., ether as an anæsthetic in ophthalmic cases, 103
 Jam, royal, 151
 Japan, engineering college in, 467
 Jaw, lower, subperiosteal exostosis of part of, 611; myeloid growth of, 745; upper, fibrous sarcoma of, 130; excision of, 671
 Jay, Mr. H. M., breech-presentation with legs extended, 559
 Jeffries, Dr. B. Joy, ether as an anæsthetic, 48
 Jejunum, Dr. E. Holland on rupture of from a fall, 703
 Jelly, Dr. W., medical practice in Spain, 604; traumatic paraplegia, with remarkable growth of hair, 671
 Jenner, Dr. E., an unpublished letter of, 707
 Johnson, Dr. George, lectures on Bright's disease, 1, 27, 81, 109, 161, 191, 275, 303, 527, 579, 605, 696, 726; ar-

terio-capillary fibrosis, 4; hypertrophy of the arterial walls, 59; etiology of albuminuria, 674
 Jones, Dr. C. H., paralysis agitata, 221, 248; paralysis of the diaphragm, 606; paralysis of bladder, probably of catarrhal origin, 667
 — Dr. H. Bence, proposed testimonial to, 316
 — Dr. H. M., nitrate of potash and quinine as febrifuges, 221
 — Mr. Sydney, excision of knee, 330
 — Mr. T. E., the use of ergot, 115
 Jordan, Mr. J., obituary notice of, 521
 Journals, new, 41, 204, 134
 Jump from London Bridge, a, 167

K.

Klein's museum, 151, 295, 413
 Ker, Lady Charles, recovery of, 292
 Keratitis, recurrent syphilitic, Mr. Dixon on, 223
 Khiva, red cross at, 363
 Kidd, Dr. G. H., address to Dublin Obstetrical Society, 130
 Kidder's batteries, 345
 Kidney, Dr. G. Johnson's lectures on diseases of, 1, 27, 81, 109, 161, 191, 275, 303, 527, 579, 605, 696; structure of, 1; general definition of diseases, 27; acute Bright's disease, 81, 109; sarcoma of, 99; chronic Bright's disease, 161, 191; malignant disease of, Sir H. Thompson on, 228; disease of in calculous patients, 250; large white, 275, 303; general fatty infiltration of, 304; disseminated suppuration of, 322; surgical, 324; movable, 475; degeneration of, with dilated ureters, 477; abscess of opening into colon, 519; lardaceous or waxy, 527; various conditions of producing albuminuria, 579; contracted, with painful arterial pulsation, 587; atrophy and suppuration from retention of urine, 605; disease of simulated by cystitis, 605; waxy degeneration of, 631; purulent urine from calculous disease of, 648; dilated, 657; pulsating tumour of, 667; branched calculus in, 678; treatment of acute Bright's disease of, 696; treatment of chronic Bright's disease of, 725
 King, Dr. Kelburne, peculiar kind of hare-lip and its treatment, 363
 Kingstown, sanitary state of, 207
 Klein, Dr. E., on practical physiology, 400
 Kneel, Mr. Butcher on excision of, 65; cases of excision of, 222, 297, 678; letters on, 271, 330; loose cartilages in, 627; disease of, 629; drainage in suppuration of, 704

L.

Labiolum, epithelioma of, 47; cystic tumour of, 213
 Laboratory, physiological and pathological, 108
 Labour, premature, Mr. Bassett on induction of, 225; statistics of, 239; Dr. R. Barnes on relation of to convulsions, 393; Mr. Molony on liability to malpresentation during, 394; Dr. Barnes on induction of in convulsions, 463; Dr. Phillips on urgent dyspnoea after, 469
 Lactic acid, Dr. J. W. Ogle on treatment of saccharine diabetes with, 253
 Laryngitis complicating measles, 518
 Laryngotomy, case of, 117
 Larynx, foreign body in, 77; varicose oedema of, 210; Dr. Morell Mackenzie on removal of growths from, 458, 486; disease of, 627
 Latham, Dr. P. W., sick-headache, 7, 113
 Lathes, surgical, 330
 Lawrence, Mr. H. C., sequelae of pneumonia and pleurisy, 285
 Lead as an application to ulcers, 65
 Leared, Dr., visit to a leper-village, 402
 Leclanché's batteries, 44
 Lectures on Bright's disease, Dr. G. Johnson, 1, 27, 81, 109, 161, 191, 275, 303, 527, 579, 605, 696, 725; on erysipelas, Mr. Savory, 5; on therapeutic uses of electricity, Dr. Wilks, 29; on the examination of patients before operation, Mr. Savory, 58, 107, 135; on the varieties of phthisis, Dr. Southey, 137, 581; on paralysis agitata, Dr. Handfield Jones, 221, 248; on sanitary science, in Dublin, 233, 296, 320, 351, 415, 435, 470, 543; on death after the use of ether, Mr. J. Hutchinson, 247; on renal disease in calculous patients, Sir H. Thompson, 250; Goulstonian, on elephantiasis Græcorum, Dr. R. Living, 277, 305, 338; Croonian, on mind, brain, and spinal cord, Dr. Radcliffe, 338, 350, 395; Lumsden, on convulsive diseases of women, Dr. R. Barnes, 391, 421, 453, 468; on cancer of the brain, Dr. Crichton Browne, 425, 455; on the treatment of peccans and other large abscesses, Mr. Simon, 530; on acquired deformities of the uterus, Dr. Graily Hewitt, 553; on disease of the neck and dyspnoea, Mr. Campbell de Morgan, 554; on paralysis of the diaphragm, Dr. Handfield Jones, 606; on comminuted fracture of the clavicle, Mr. Erichsen, 637; on varieties in muscles of man, Dr. Humphry, 663, 693; on chronic basilar meningitis, Dr. Hammond, 665; on pneumonia, Dr. A. T. H. Waters, 698; on recollections of eminent surgeons, Mr. White Cooper, 722
 Lee, Dr. R. J., Exercise and Training, rev., 589

Leg, recurrent sarcoma of, 101; compound fracture of, 286; Dr. J. G. Black on treatment of ulcers of, 608
 Legz, Dr. J. W., urine in hemophilia, 141
 Leper-village, Dr. Leared on a visit to a, 402
 Leprosy, skin eruptions in, 48; Dr. R. Living on, 277, 305, 338; of Bible, Dr. A. D. Walker on, 313; pathology of, 471
 Leshe's pliable plasters, 538
 Lewis, Dr. T. R., researches on cholera, 200, 314
 Libel, charge of, 264
 Licensing Act, influence on casualties, 594
 Liebig, Baron, on beef-tee, 94; obituary notice of, 468; successors of, 651; memorial of, 671
 Liebreich, Mr. R., contribution to school hygiene, 86
 Light, influence of on complexion, 94; influence on retina and optic nerve, 406, 543
 Limbs, upper, congenital absence of, 270
 Liquors, consumption of in workhouses, 594
 Lithotomy, recent history of, 238; case of, 671
 Lithotripsy, perineal, 573
 Litré, M., and the French Academy, 687
 Living, Dr. R., elephantiasis Græcorum, 277, 305, 338
 Liver, action of mercury on, 15; Dr. A. Ogston on acute yellow atrophy of, 57; abscess of causing empyema, 78; spindle-celled sarcoma of, 155; disease of in a child, 548; changes in from high temperature, 627; pleuropneumonia complicating cirrhosis of, 632
 Liverpool, health of, 317
 Locomotor ataxy, acute, 560
 Logan, Sir T. G., memorandum in army medical war-rant, 596
 London, health of, 332, 295; slaughter-houses in, 414
 Longevity, 42, 175, 202, 265
 Lougher, Mr. R., repeated abnormal presentation, 611
 Louis, Dr., legacy of, 69
 Lunacy law, case bearing on, 377
 Lumley, Mr. W. G., ancient English apothecaries, 242
 Luaga, gangrene of, 239; multiple cirrhosis of, 476
 Lyell, Dr., testimonial to, 686
 Lymphadenoma of heart of a hare, 475
 Lymphatic, obstruction and suppuration of, 155
 Lymphoma, cases of, 120
 Lytton, Lord, death of, 93

M.

Macclesfield, sanitary proceedings in, 121
 McCrea, Dr., idiopathic neuritis, 585
 Macdonald, Dr. J. A., Colles's fracture of the radius, 233
 McDonnell, Dr. R., antiseptics and disinfectants, 435
 McGill, Mr. A. F., cases of ether administration, 9; testimonial to, 387
 McGregor, Mr. A. J., obituary notice of, 661
 Mackay, Dr. A. D., puerperal convulsions after delivery, 701
 McKendrick, Dr. J. G., testimonial to, 435
 Mackenzie, Mr. L., administration of ether, 35
 — Dr. Morell, removal of growths from the larynx, 168, 486; the discussion on thyrotomy, 518
 Mackey, Dr. E., guarana, 115; irritant poisoning from pork brawn, 533
 Maclean, Mr. C., action of alcohol, 52; pathology and treatment of continued fever, 614
 Macnab, Dr. D., obituary notice of, 301
 Madge, Dr. H. M., chloroform in infantile convulsions, 226
 Malpresentation during labour, Mr. Molony on liability to, 394
 Manchester, alleged abuse of charities in, 293; special correspondence from, 657
 Marchal de Calvi, M., death of, 263
 Marshall, Dr. H., administration of chloroform, 283
 — Mr. J., chloroform accidents, 312
 Massachusetts board of health, report of, 567
 Massy, Mr. H., obituary notice of, 243
 Materia Medica, Drs. Harvey and Davidson's Syllabus of, rev., 491
 May, Mr. H., registration of deaths, 662
 Mayer and Meltzer's Farado-galvanic apparatus, 344
 Mayo, Mr. C., strangulated obturator hernia, 726
 Measles, complications and sequelae of, 518
 Meat, preservation of, 245; diseased, 514, 709
 Meatus, auditory, tumour in, 478
 Mediastinum, tumour of, 102; cancerous growth in, 199
 Medical Act, prosecution for contravention of, 415
 — Act in Nova Scotia, 566
 — Acts Amendment Bill, Mr. Headlam, remarks on, 432, 465, 492, 538, 610; petitions, 572; deputation to the Marquis of Ripon, 597; petitions for and against, 634
 — advertisement, a, 51
 — artists in the Royal Academy, 565
 — assistants, drunken, 273, 420, 482
 — Benevolent Fund, election of annuitants, 68; annual meeting, 71; donation to, 261; annual report, 571
 — Benevolent Fund in Denmark, 200
 — biography, contemporary, remarks on, 88, 150; letters on, 78, 79
 — bulletins, private, 231, 262, 273

Medical charges to club-patients, 52
 — charities in Glasgow, Lord Provost's donation to, 41
 — Club in Paris, 541
 — Congress, international, in Vienna, 350
 — Council, session of, 351, 371, 404; president's address, 351; restoration of names to Register, 353, 376, 407; the Apothecaries' Society and the conjoint examining board, 371, 372; returns from Army Medical Department, 372; visitation of examinations, 373, 408; case of J. Permewan, 374; conjoint examining board in Ireland, 374, 375; charges of infamous conduct, 375, 376; results of examinations, 375; report of Pharmacopœia Committee, 376; alleged forgery of certificate by a student, 376; medical qualification of women, 376, 404; Executive Committee, 376, 408; medical education, 407; report of finance committee, 407; qualification in state medicine, *ib.*; names erased from Register, *ib.*; new premises, *ib.*; restoration of names to Register, 418; deputation to Privy Council, *ib.*; conjoint examinations and medical legislation, 409; vote of thanks to president, 409; remarks on meeting, 377; arrangements for visitation of examinations, 592
 — diplomas, spurious, 214
 — education, Dr. Lyon Playfair on relation of universities to, 165; Dr. Humphry on, 241; and the committee of reference, Dr. Rumsey on, 388
 — examining board for England, proceedings of Committee of Reference, 229, 345; proceedings of Medical Council regarding, 371
 — examining board for Ireland, 374, 375
 — etiquette, 41, 70
 — examining boards, conjoint, Dr. Humphry on, 241; resolution of Medical Reform Committee of British Medical Association on, 470
 — fees in Austria, 17; letter on, 50; in Italy, 293; tariff of Ulster Medical Society, 320; resolution of Northumberland and Durham Medical Association, 380
 — Institution, Liverpool, proposed alteration of laws, 41; proceedings of, 329
 — legislation in Denmark, 205; in Canada, 320
 — man, heroism of a, 231
 — men, proposed college for daughters of, 26, 577
 — officers of health. See Public Health
 — papyrus, an Egyptian, 593
 — practice, curiosities of, 245
 — practice in Spain, 604
 — profession in Prussia, statistics of, 233
 — promotion for military services, 52
 — record, the London, 70
 — reviewing, remarks on, 71
 — School, the Army, Dr. De Chaumont's introductory address, 525, 551
 — students in Aberdeen, 320
 — students, female, and the University of Edinburgh, 181, 739; in Paris, 233; proceedings in Birmingham regarding, 615, 654, 683; at Zurich, 604, 737
 Medicine, public, Mr. Ikin on history of, 57; new faculty of in Geneva, 72; Dr. H. A. Husband's Handbook of Practice of, rev., 343; specialism in, 682
 Melanotic sarcoma, 269
 Meningitis with acute miliary tuberculosis, 632; chronic basilar, Dr. W. A. Hammond on, 665
 Menstruation, partial varicose, 43; duration of, 615
 Mercury, action of on liver, 15; Dr. Farquharson on action of, 134; Dr. Hollis on a source of poisoning with, 536
 Mesentery, scirrhus of, 239
 Metatarsus, amputation through the, 287
 Meteorology, Dr. J. W. Mure on bearing of on health and disease, 400; and insanity, 410
 Methylene ether as an anæsthetic, 321, 353, 662; Dr. J. O. Brookhouse on, 343
 Meyner, Dr., his researches, 151
 Midwifery, irregular, 124, 261
 Midwives, examination of by Obstetrical Society, 71; English, Dr. Aveling on, rev., 238; Dr. Aveling on instruction, examination, and registration of, 308, 354; Dr. J. H. Davis on, 355; education of in Russia, 404; proceedings in Medical Council regarding, 404; deputation to Mr. Stansfeld on registration of, 415
 Milnia surgeons, 625
 Milk, communication of disease by, 68, 291; adulteration of, 242, 508, 594; skimmed, treatment of diabetes with, 658
 Mind, brain, and spinal cord, Dr. Radcliffe on, 333, 359, 325
 Misinterpreted figures, 738
 Mistake, a dangerous, 18
 Mole, hairy, 210
 Molluscum fibrosum, peculiar form of in children, 322; case of, 323
 Molony, Mr. P., liability to malpresentation of fœtus during labour, 394
 Monckton, Mr. M., paracentesis abdominis, 250
 Menstruous births, 329, 431
 Moore, Dr. J. W., meteorology in its bearing on health and disease, 400
 Morals, good, and bad English, 604
 Morgan, Dr. J., administration of ether, 103

Morgan Mr. John, copper coins swallowed by children, 803
 Morley, Mr. J., cases of arsenical poisoning, 88
 Morocco, drugs in, 151
 Moutard-Martin, M., 235
 Mouth, inflammation of, 117
 Mowat, Mr. G., convulsions treated by chloroform, 607
 Moxon, Dr. W., tubercle and phthisis, 385
 Munro, Dr. A. D., obituary notice of, 356
 Murrin, diastolic, production of, 43
 Murie, Dr., letter concerning, 72; proposed testimonial to, 350; appointments conferred on, 435, 739
 Murray, Dr. J. (Inspector-General), Pettenkoffer's views on cholera, 219

Dr. John, peculiar form of molluscum fibrosum, 322
 Muscles, pectoral, partial absence of, 209; Dr. Humphry on varieties of in man, 663, 693
 Muscular wasting with syphilitic paralysis, 172; fibre, structure of, 411; paralysis, pseudo-hypertrophic, 547; atrophy, acute, 575
 Museum, the annual, at Birmingham, 234
 Mushrooms, edible and poisonous, 51
 Mutton, preserved, 739
 Myeloid growth of jaw, removal of, 745
 Myers, Mr. A. B. R., aneurism of femoral artery, 341
 Myrtle, Dr. A., psoriasis, 225, 369

N.

Nævus of left cheek, 171; of face, 623; intraorbital, 626
 Napoleon III, the Emperor, case of, 37, 66; post mortem examination of, 73; French report on health of, 74; letter on, 79, 134
 Natural Philosophy, Mr. Rodwell's notes of Lectures on, rev., 614
 Navy, admission to medical service of, 217
 Neck, Mr. De Morgan on, disease of necessitating tracheotomy, 554; varieties in muscles of, 694
 Necrosis of femur, 171
 Needham, Mr. J., testimonial to, 345
 Needle, removal of from heart, 267
 Nerve, portio dura, wound of, 46; fourth, paralysis of, 183; epilepsy after injury of, a, 590
 Nerves of heart, Schiff on, 259; Mr. Gaskoin on relation of psoriasis with disorders of, 430
 Nervous System, Dr. W. A. Hammond on Diseases of, rev., 172; results of treatment in affections of, 546
 Nesbitt, Dr. W. P., emigrant ships, 638
 Neurosis, Dr. C. B. Radcliffe on, 361
 Neuritis, idiopathic, Dr. McCrea on, 565
 Neuro-retinitis, 476
 Newbery's chest-protector, 18; ophthalmic ointments, 588
 Newman, Dr. W., ether as an anæsthetic, 142
 Nightingale, the "two headed," 294
 Nightmare, Mr. J. W. Howard on enlarged tonsils as a cause of, 645
 Nitrous oxide gas, death after use of, 126, 149, 153, 154; personal experience of, 214; automatic supply of, 500
 North-west coast, salubrity of places on, 106
 Norton, Mr. G. E., administration of ether, 85, 154; ether inhaler, 353
 Nose, replacement of, a, 212
 Nourse, Mr. W. E. C., administration of ether, 88; ether inhalers, 154, 200, 246
 Nova Scotia, Medical Act for, 566
 Nursing as a profession, 14; at the Westminster Hospital, 542

O.

Obituary, Mr. J. Startin, 25; Mr. H. D. Carden, 26; Mr. A. H. Walpole, *ib.*; Dr. W. Elmslie, 50; Mr. R. Metcalfe, 104; Dr. D. T. Taylor, *ib.*; Mr. N. Smedley, *ib.*; Mr. I. B. Brown, 158; Mr. W. Riddon, 158; Mr. J. Elliott, 186; Dr. F. Smith, *ib.*; Dr. W. E. Gordon, *ib.*; Dr. V. Duke, 216; Dr. F. Douglas, *ib.*; Dr. G. B. Payne, *ib.*; Mr. H. Mossy, 243; Mr. J. B. Haynes, 271; Mr. H. Sterry, 272; Mr. W. P. Ruddock, *ib.*; Mr. J. P. Halton, *ib.*; Dr. D. Macnab, 301; Dr. W. Cooke, *ib.*; Dr. E. L. Ormerod, 319; Dr. J. Walsh, 331; Mr. R. Partridge, 348; Dr. B. Hobson, 355; Mr. J. D. Baker, 356; Dr. A. D. N. Munro, *ib.*; Dr. H. Eames, *ib.*; Mr. R. Dowse, *ib.*; Mr. W. Harvey, *ib.*; Dr. G. G. Brown, *ib.*; Dr. Hamilton Roe, 434; Mr. B. F. Matthews, 449; Baron von Liebig, 468; Mr. W. Brydon, 480; Mr. W. M. Wooler, *ib.*; Mr. W. Bartlett, *ib.*; Mr. J. Jordan, 521; Mr. R. S. Jackson, *ib.*; Sir W. Rae, *ib.*; Mr. J. V. Lane, 522; Mr. G. Dryden, *ib.*; Mr. J. Harrison, *ib.*; Dr. J. K. Walker, *ib.*; Mr. J. S. Wilkinson, *ib.*; Dr. F. Gould, *ib.*; Dr. C. P. Croft, *ib.*; Mr. M. Cooke, 549; Dr. D. Skae, *ib.*; Mr. T. Charles, 576; Mr. J. Inghs, 634; Mr. T. Robinson, *ib.*; Mr. A. J. McGregor, 661; Mr. J. R. Rouch, 746; Dr. J. Willis, *ib.*; Mr. J. Davies, *ib.*
 Odontalgia, chronic, 370
 Oesophagus, gastrostomy for stricture of, 588
 O'Flanagan, Mr., and the judge of the Durham County Court, 123, 232

Ogle, Dr. J. W., saccharine diabetes treated with lactic acid, 253
 Ogston, Dr. A., acute yellow atrophy of liver with abortion, 67
 Olozaga, M., accident to, 379
 Operation, Mr. W. S. Savory on preparation of patients for, 53, 107, 135
 Ophthalmia in schools, 379, 413; granular, in Posen, 654; sympathetic, 676. *See Eye.*
 Ophthalmic cases, ether as an anæsthetic in, 103; ointments, 538; institution in Aberdeen, 654; practice, Mr. White Cooper's recollections of, 723
 Orbit, malignant disease of, 43
 Ormerod, Dr. E. L., death of, 319; proposed memorial of, 381
 Orton, Dr. J., clot in heart and cerebral embolism, 52
 Os calcis, disease of, 227
 Osteosarcoma, recurrent, 657
 Ovaries, Works on Surgery of, rev., 12
 Ovary, tumours of, 43, 48, 477, 659, 745; medullary sarcoma of, 431, 631; colloid cancer of, 631; scirrhus of breast following disease of, 671; cases of disease of, 729
 Overcrowding, case of, 71; in Lambeth, rules regarding, 348
 Owen, Mr. D. C. L., atropised cod-liver oil, 536
 Professor R., companionship of Bath conferred on, 592
 Oxalic acid, suicidal poisoning by, 88
 Oxygen, effect of on actinia, 632
 Ozone, solution of in water, 152; relation of to public health, 180

P.

Pachydermatocoele, cases of, 626
 Packard, Dr. J. H., sulphuric acid as an anæsthetic, 403
 Page, Dr. J., administration of chloroform, 752
 — Mr. F., inhalation of ether, 237
 Paget, Sir James, presentation of portrait of, 738
 Palmer, Dr., testimonial to, 559
 Pancreas, fatty, 47
 Paper as a dressing for granulating wounds, Mr. G. Birt on, 587
 Papilloma of conjunctiva, 48; of brain, 270
 Papillomatous growths, case of, 236
 Papyrus, an Egyptian medical, 593
 Paracentesis abdominis, cases of, 185; Mr. M. Monckton on, 250; Dr. W. B. Hunter on unusual case of, 559; Dr. J. B. Yeo on, 586; Mr. F. Gull on, 647; thoracic, cases of, 213, 517
 Paralysis, acute ascending, 12; facial, from wound of portio dura, 46; of vocal cord from intracranial syphilis, Dr. Hughes Jackson on, 86; infantile, galvanism in, 102; syphilitic, with muscular wasting, 172; agitans, Dr. Handfield Jones on, 221, 248; of diaphragm, Dr. Handfield Jones on, 606; of bladder, Dr. Handfield Jones on, 667; local, treated by electricity, 723
 Paraphimosis, treatment of, 590
 Paraplegia, traumatic, Dr. W. Jelly on a case of, 371
 Paris, correspondence from, 73, 319, 431, 653
 Parotid tumor, malignant tumour of, 270
 Partridge, Mr. R., obituary notice of, 348
 — Dr. T., case of hydrophobia, 142
 Parturition, Mr. G. Bowman on death from heart clot after, 646
 Patella, dislocation of on its edge, Mr. Bellamy on, 10; Mr. Marsh Jackson on, 84; case of, 63; treatment of transverse fracture of, 630
 Pathological laboratories, 524
 Payne, Dr. G. B., obituary notice of, 216
 — Dr. J. F., tubercle and phthisis, 387
 Peacock, Dr. T. B., the blister-treatment of rheumatism, 55
 Pearce, Dr. A., foreign body in the vagina, 728
 Peaslee, Dr. Ovarian Tumours, *rev.*, 12; choice of anæsthetics, 95
 Peat, utilisation of, 296
 Pelvis, fracture of, 102
 Penis, fibrous tumour of, 156; epithelioma of, 171; condylomata of, 637
 Pericarditis, traumatic, 102
 Pericardium, thickening of, 78; chronic latent, 633; case of, 677
 Perithreatitis with cystic growth, 475
 Perils of health-resorts, 318
 Peritonæum, Dr. A. W. Tomkins, on hamorrhage into, 33
 Pharmacopœia, the American, new edition of, 124, 263, 298; British, the reprint of, 182; preparations of ipæacuanha in, 271; report of committee in, 376
 Pharynx, syphilitic disease of, 117; wound of and injury of spinal cord, 575
 Philanthropist, a Spanish, 697
 Phillips, Dr. J. J., urgent and prolonged dyspnoea after labour, 489
 Philpots, Dr. E. P., canine madness, 254
 Photometric examination of chest and abdomen, 205
 Photograph of Birmingham meeting, 653, 718
 Phthisis, pyrexia of treated by cold baths, 46; Dr. Southey on varieties of, 137, 581; Dr. Powell on varieties of, 170; anatomical relations of tubercle to,

266, 325, 363, 385, 438; supposed syphilitic, 524; acute, without pyrexia, 370; treatment of, 563; observations on temperature, pulse, respiration in, 675
 Physiological institute in Berlin, 469; experiments on lower animals, 662
 Physiology, Practical, Works on, rev., 464, 490, 537, 672
 Pigeon-tation of tongue, 47
 Pistol-ball in abdominal muscles, 184
 Plasters, pliable, 533
 Playfair, Dr. Lyon, universities in their relation to professional education, 165
 Pleura, hydatidiform cysts in, 476
 Pleurisy, Mr. H. C. Lawrence on sequelæ of, 285
 Plugging the posterior nares, Mr. A. Godrich on, 400; the trachea, 590
 Pneumonia, Mr. H. C. Lawrence on sequelæ of, 285; lobular, with latent scarlatina, 632; Dr. A. T. H. Waters on, 668
 Poisoning by chloral, 43; by arsenic, Mr. Morley on, 88; by cold gloves, 44; by carbolic acid, 151, 167, 203, 226, 584, 611; by hydrofluoric acid, 155; by carbonic oxide, 178; by arsenic in head, 285; by coloured socks, 494; by pork brawn, Dr. Mackey on, 533; Mr. E. W. S. Davis on, 559; mercurial, Dr. Hollis on, 536; Dr. T. L. Branton on artificial respiration and transfusion in, 556; animal, Dr. J. Hinton on, 670
 Pollock, Mr. G., case of molluscum fibrosum, 333
 — Dr. J. E., tubercle and phthisis, 440
 Polypus, naso-pharyngeal, 117; fibrous, of nares, 129; uterine fibrosis, 745
 Poor, dwellings of, 739; medical officers of in Berlin, 739
 Poor-law Medical Service, England and Wales, appointment, 24; resolution of Warminster Guardians, 24; proceedings of Baccup local board, 41; dispensaries, 715
 — Ireland, superannuation, 207; refusal to increase salary, 590
 Poor Relief and Sanitary Service in Ireland, 649
 Posological Tables, Dr. H. Griffiths', rev., 491
 Potash, nitrate of as a febrifuge, Dr. H. M. Jones on, 224
 Powell, Dr. R. D., the varieties of phthisis, 170; tubercle and phthisis, 387
 Pregnancy complicated with cirrhosis and ascites, 143; extrauterine, gastrostomy in, 237, 628; subperitoneal emphysema of uterus during, 237; Dr. R. Barnes on convulsive diseases in, 391, 421, 483; tubal, 518; repeated abnormal presentation in, Mr. Molony on, 528; Dr. S. Haynes on, 580; Mr. R. Lougher on, 611; syphilis during, 615; self-deception as to, 652
 Prescriptions, abuse of, 434
 Priestard, Mr. W. O., hamatozoa and chyluria, 185
 Prizes, the Hastings, 26; of *La Spérimentale*, 149; of Paris Faculty of Medicine, 425; Carmichael, 544; of Emperors of Germany, 565, 680; at University College, 595; at Charing Cross Hospital, 737
 Propylamine, formula for administration of, 204; use of in rheumatism, 235, 567, 587
 Provident dispensaries, 349, 380, 657
 Prudence, professional, 595
 Prussia, the medical profession in, 233
 Psoas abscesses, Mr. Simon on treatment of, 530
 Psoriasis, Mr. B. Squire on, 141, 312; Dr. A. S. Myrtle on, 225, 389; Mr. G. Gaskoin on relation of with nerve disorders, 430
 Public Health Act, appointment of medical officer of health, Dr. J. Rogers on, 24, 419; letters on, 130, 158; Mr. R. Ceely on, 215; Mr. P. Downey on, 242; meeting of Poor-law Medical Officers on, 450; Dr. Rumsey on, 461, 479; Mr. T. J. Dyke on, 488; proceedings regarding in Wales, 746; appointments of medical officers of health, at Ormskirk, 24, 131, 331; Bedminster, 77; Shropshire, 104; Cheshire, 104; Berkshire, 131; West Derby, 132, 153; Leicestershire, 139; Oxton, 158; Nottingham, 158; Leicestershire, 158; Frome, 155; Scarborough, 165; Canterbury, 185; March, 186; Knaresborough, 186, 450; Hargraves, 186; Peterborough, 216; Taunton, 216; Dorset, 243; Burnley, 243; Tottenham, 243; Southport, 330; Ripon, 331; West Bromwich, 331; Hunslet, 357; Ilkley, 357; Sunderland, 359; Southam, 389; Newton-in-Makerfield, 451; Richmond, 461; Northamptonshire, 480; King's Norton, 480; Havant, 480; Sheffield, 480; Crowle, 480; Spilby, 480; East Kent, 480; Bakewell, 480; Brixworth, 522; Sheffield, 522; Worley, 522; Stocksbridge, 573; Neath, 572; Dallington, 634; Bradford-on-Avon, 634; Westmorland, 634; Kirkstun, 634; Huddersfield, 634; Huddington, 634; Winchcombe, 715; West Ebie, 715; Galashiels, 715; Salford, 715; Bridgwater, 715; Newcastle-on-Tyne, 715; St. Columb Major, 746; plea for engineers, 89; decision under in Scotland, 72; remarks on combination for appointments, 123; bill, proceedings regarding, 548, 576, 635; proceedings of Parliamentary Bills Committee, 600; remuneration of poor-law medical officers, 625; Dr. H. W. Rumsey on working of, 719
 Puerperal mortality, excessive, 566; albuminuria, Dr. G. Johnson on, 579
 Pus, effect of carbolic acid on, 704
 Pyæmia, geographical distribution of, 124; researches on, 706
 Pyelo-nephritis following cystitis, 475
 Pye-Smith, Dr. P. H., hamatozoa and chyluria, 871

Pylorus, stricture of, 236
Pyrexia of phthisis treated by cold baths, 40

Q.

Quackery, case of at Hull, 19
Quacks, fund for prosecuting, 52; *prosecution of*, 205
Quinine, administration of in coffee, 143; in *prodromata of small-pox*, 143; effect on *uterus*, 191; as a *febrifuge*, Dr. H. M. Jones on, 224; in *odontalgia*, 370; as an *abortifacient*, 562; in *whooping-cough*, 562; new *substitute for*, 652

R.

Radcliffe, Dr. C. B., on *mind*, 333; *incipient insanity*, 369; *neuritis*, 361; *cerebral exhaustion*, 395; *resignation of*, 494
Radii, Dr. J. A. Macdonald on Colles' fracture of, 223
Rae, Sir W., *obituary notice of*, 521
Rain and health, 38, 90
Ralfé, Dr. C. H., *Physiological Chemistry, rev.*, 614
Ransome, Dr. A., *weather and disease*, 469
Rat, Dr. Shepherd on sarcoma in the, 728
Rattray, Dr. A., *ship-air and its effects*, 100
Reciprocity of practice on the Belgio-German frontier, 434
Rectum, treatment of prolapse of, 212; *tumour of*, 629; *tissue of stricture of*, 656
Rectus muscle, superior, tenotomy of, 77; *external, paralysis of*, 99
Redding, the ex-convict, 651
Rees, Inspector-General J., *good service pension awarded to*, 510
Reeves, Dr. W., *certificates of death*, 625
Registration of disease in Copenhagen, 205; of *disease, petition on*, 686; of *still-births*, *deputation to Mr. Stansfeld*, 383; of *deaths*, 413; *payment for certificates of*, 625, 635; of *midwives*, *deputation to Mr. Stansfeld*, 415
Respiration, artificial, and transfusion, Dr. Lauder Brunton on, 555
Rest in cerebral exhaustion, 399
Retina ossification of, 43; *action of light on*, 496, 513
Retinitis, albuminuric, 48
Reviewing, medical, 71
Rheumatism, Dr. Peacock on blister-treatment of, 55; *connection with tonsillitis*, 236; *subcutaneous injection of atropine in*, 259; *veratrum viride in*, 560; *propylamine in treatment of*, 567, 567
Rheumatic Gout, Dr. R. Adams on, rev., 90, 117; *fever and pericardial effusion*, 473
Richardson, Mr. B. Wille, ether-inhaler, 561
Rickets, enlargement of spleen from, 475; *osseous deformities in*, 673
Rigden, Mr. W., *ether as an anæsthetic*, 35
Rio de Janeiro, yellow fever in, 412
Robur, notice of, 288
Rodent ulcer of orbit, 43
Rodwell, Mr. G. F., *Notes of Lectures on Natural Philosophy, rev.*, 614
Roe, Dr. Hamilton, death of, 434
Roger, M., *intestinal worms*, 431
Rogers, Dr. Joseph, the *Public Health Act*, 21; *Mr. Corrance and the Public Health Bill*, 119
Romberg, Dr., *death of*, 738
Rome, Dr. L. Aiken on sanitary state of, 311, 341
Rosser, Dr. W., *compound comminuted fracture of scapula*, 559
Rouch, Mr. J. R., *obituary notice of*, 746
Ruddock, Mr. W. P., *obituary notice of*, 272
Rumsey, Dr. H. W., *medical education and the Committee of Reference*, 388; the *Public Health Act*, 451; *working of the Public Health Act*, 710
Russia, education of midwives in, 404

S.

Salivation from a single dose of calomel, 89
Salpetrière, ball at, 267
Salt, use of in brewing, 17
Salt's ether-inhaler, 200
Sanderson, Dr. J. B., *Practical Physiology, rev.*, 490, 497; *secondary inflammations*, 542; the *infective product of inflammation*, 601
Sandford, Mr., and *counter-practice*, 262, 303, 332
Sanitary affairs in Whitehaven, 16; in *Macloesfield*, 121; *South Horsey*, 122; *Kingstown*, 207; *Dublin*, 207; *India*, 291; *Southport*, 295; *Rome*, 311, 341; *Liverpool*, 317; *Grange-over-Sands*, 412, 479, 620; the *British colonies*, 593; *Callao*, 682; *Bocharost*, 708
Sanitary engineering, Mr. Easloe on, 21, 208; *reform, Mr. Ikin on progress of*, 57; *misrule*, 121; *legislative proceedings in Parliament regarding*, 167, 217; *science, lectures on in Dublin*, 233, 296, 320, 351, 415, 435, 470, 543, 569
Sansom, Dr. A. E., *administration of chloroform*, 403
Sarcoma of kidney, 99; *recurrent, of leg*, 101; *fibrous, of upper jaw*, 130; *spindle-celled of liver*, 155; *of lung*

and *brain*, 211; *secondary, of lung and mediastinum*, 211; of *choroid*, 236; *melanotic, of liver and lungs*, 269; of *femur*, 269; *large medullary of ovary*, 631; of *dura mater*, 656; *spindle-celled, of dura mater*, 678; in a *rat*, *Dr. Shepherd on*, 728
Sarcosin in gout, 143
Savage, Dr. T., *transfusion in post partum hæmorrhage*, 610
Savory, Mr. W. S., *erysipelas*, 5; *examination of patients before operation*, 63, 107, 185
Sawyer, Dr. James, *gualac as an emmenagogue*, 617
Scalp, removal of by machinery, 475
Scapula, Dr. W. Rosser on compound fracture of, 559
Scarification of the gums, 562
Scarlatina, latent, case of, 632
School, proposed medical, for Dundee, 20, 382; the *Aberdeen medical*, 320; of *medicine in Paris*, *lecture in*, 320; *medical, at Netley, opening of session*, 467
Schools, Mr. Liebreich on hygiene of, 86
Science, natural, at Cambridge, 262; and *politics*, 264
Scrotum, epithelioma of, 116; *gangrene of*, 647
Sea, death rate at, 541
Seamen, sick and wounded merchant, Dr. Smart on claims of, 427
Sedgwick, Dr. L. W., *potassium chlorate in catarrh*, 226
Seminal vesicle, hydrocele of, 287
Septicæmia and the catheter, Dr. Ferrier on, 429
Sewage, disposal of in Birmingham, 98; *fama, supposed dangers of*, 383; *utilisation of in Dublin*, 685
Shah of Persia and the Geneva Convention, 742
Shannon, Mr. J., *testimonial to*, 661
Shapter, Dr., *diseases of the lungs and heart*, 83
Sharpey, Dr., *operation for cataract on*, 651
Shepherd, Dr. A. B., *sarcoma in a rat*, 728
Ships, analysis of air of, 100; *supply of water to*, 179
Shoulder, joint, excision of, 255; *amputation at*, 258; *Mr. Storke on unusual dislocation of*, 519
Sick headache, Dr. P. W. Latham on, 7, 113; *report on treatment of*, 36; *Dr. Anstie*, 61; *Dr. Mackey on guarana in*, 115
Signatures, doctrine of, 19
Silver, crystallised nitrate of in chronic catarrh of stomach, 258
Simon, Mr. J., *treatment of psoriasis and other large abscesses*, 530
 — *M. Jules, and medicine in France*, 593
Sinus pularis, disease of in infants, 615
Skae, Dr. D., *obituary notice of*, 549
Skin, pigmented disease of, 43; *tuberculosis of*, 614; *Mr. B. Squire on influence of age in causation of disease of*, 641
Skinner, Mr. D. S., *sponge-tent in epistaxis*, 490
 — *Dr. T.*, *anæsthetics and inhalers*, 353, 470
Skull, fracture of base of, 129; *compound depressed fracture of*, 477; *fracture of*, 519, 632, 677; *cubic capacity of*, 654
Slaughter-houses in London, 414
Sleep, effect of position on, 390
Small-pox, repeated, 17; in *Glasgow*, *hospital accommodation for*, 20; in *Vienna*, 39, 178, 206, 292, 681; *quinine in prodromata of*, 143; in *Lurgan*, 152; in *Forfar*, 233; in *Birmingham*, 615; *how spread*, 707
Smart, Dr. W. R. F., *history of medical staff of English army*, 111, 139, 168; *claims of sick and wounded merchant seamen*, 427
Smedley, Mr. N., *obituary notice of*, 104
Smith, Dr. A., *Fever and Cholera from a New Point of View, rev.*, 613
 — *Dr. E.*, *obituary notice of*, 186
 — *Dr. Heywood*, *dilatation of cervix uteri*, 106
 — *Rev. H. R.*, *Grange-over-Sands*, 529
 — *Mr. Priestley*, *ether as an anæsthetic*, 116
 — *Dr. Shingleton*, *ether as an anæsthetic*, 36
 — *Mr. W. A.*, *private medical bulletins*, 273
 — *Dr. W. Tyler*, *the late*, 652
Smyth, Dr. S. T., *uterine hydratids*, 61
Snake-bites, artificial respiration in, 150; *Dr. Lauder Brunton on artificial respiration and transfusion*, 558
Snow, Dr. H., *administration of perchloride of iron*, 724
Society, Aberdeen Microscopical, office-bearers, 283
 — *Charity Organisation, resolution on the provident system*, 349
 — *Clinical, of London, meeting in Christmas week*, 17; *officers and Council*, 40; *reports of*, 46, 101, 156, 270, 298, 472, 574, 626, 658; *remarks on proposals regarding*, 71; *Mr. Prescott Hewett's address*, 189
 — *Epidemiological, reports of*, 474
 — *Harveian, officers and Council*, 93
 — *Leeds and West Riding Medico-Chirurgical, annual meeting*, 622
 — *Liverpool Medical Missionary, annual meeting*, 180
 — *Medical, of College of Physicians of Ireland, reports of*, 164, 240, 476, 520
 — *Medical, of London, reports of*, 101, 212, 238; *centenary meeting*, 294
 — *Medical, of Manchester, reports of*, 48, 212, 475, 519; *annual meeting*, 94
 — *Medico-Chirurgical, of Edinburgh, reports of*, 77, 129, 184, 213, 238, 519, 547
 — *Obstetrical, of Dublin, reports of*, 129, 157, 239, 630
 — *Obstetrical, of London, officers and Council*, 19;

examination of midwives by, 71; *programme of transfusion committees*, 150; *reports of*, 211, 628
Society, Odonto-Chirurgical, in Edinburgh, annual dinner, 320
 — *Pathological, of Dublin, reports of*, 78, 120, 213, 230, 475, 630, 659
 — *Pathological, of London, officers and Council*, 17; *annual meeting*, 40; *reports of*, 47, 100, 155, 211, 260, 324, 627, 657; *Sir W. Jenner's address*, 93; *remarks on debates at*, 288, 316, 433; *discussion on phthisis and tubercle*, 266, 325, 385, 438
 — *Pharmaceutical, and admission of ladies*, 70; *annual meeting of Northern Branch of*, 569; *annual meeting*, 603; *new president*, 736
 — *for Relief of Widows and Orphans of Medical Men, quarterly meeting*, 122; *annual meeting*, 542
 — *Royal, new medical members of*, 566
 — *Royal Dublin, lectures on public health*, 265, 296, 320, 351, 415, 435, 470, 543, 569
 — *Royal Medical and Chirurgical, reports of*, 100, 127, 237, 322, 471, 545, 601; *remarks on Mr. Hutchinson's paper at*, 119; *annual meeting*, 266; *address of Dr. Williams*, 294
 — *Royal Microscopical, officers and Council*, 180
 — *Surgical, of Ireland, reports of*, 23, 240, 476, 548, 575, 627
 — *Vienna Medical, resolution regarding foreign practitioners*, 592, 654
 — *West Kent Medico-Chirurgical, reports of*, 102
Socks, coloured, poisoning by, 494
Soldiers, married, barracks for in Edinburgh, 543
Southern hemispheres, health-resorts of, 543
Southam, Mr. G. F., the *Council of the College of Surgeons*, 686, 709
Southey, Dr. R., *varieties of phthisis*, 137, 581
Southport, drainage of, 295
Spain, medical practice in, 604
Specialism in medicine, 662
Spina bifida cured by injection, Mr. J. R. Watt on, 462
Spinal cord, strumous disease of, 129; *lowered temperature in injury of*, 166; *injury of from wound of pharynx*, 575
Spine, case of injury of, 11
Spleen, lardaceous, 475; *primary cancer of*, 627; *action of cold water on*, 703
Sponge-tent, death after use of, 18; in *epistaxis*, *Mr. D. Skinner on*, 490, *Dr. J. Young on*, 552
Squire, Mr. B., *pathology of psoriasis*, 141; *etiology of psoriasis*, 317; *influence of age in causation of skin-disease*, 641
 — *Mr. P.*, *ether-inhalers*, 147, 174
 — *Mr. W.*, *period of infection in epidemic diseases*, 474
Stables, dwellings over, 707
Stansfeld, Mr., *deputation to, on registration of still-births*, 383; *deputation on registration of midwives*, 415; *repentance of*, 603
Starlin, Mr. James, *obituary notice of*, 24
State medicine, proceeding in Medical Council regarding qualification in, 407; *examinations in Austria*, 564
Steele, Dr. A. B., the *forceps*, 285
Sterry, Mr. H., *obituary notice of*, 272
Stethoscope, composite, 475
Still-births, deputation to Mr. Stansfeld on registration of, 383
Stockings, old, use for, 561, 662
Stokes, Mr. A. W., *rare dislocation of the humerus*, 646
Stohrer's batteries, 344
Stomach, Dr. Wilson Fox on Diseases of, rev., 258; *crystallised nitrate of silver in chronic catarrh of*, 258; *collection of foreign matter in*, 677
Stomach-pump modified as an aspirator, 330
Stone in the bladder, Mr. Teevan on, 60
Strain in relation to circulatory organs, Dr. J. M. Fothergill on, 281; *discussion on*, 298, 299
Street accidents in Paris, 122
Strike in South Wales, 180, 203; *among surgeons*, 262
Students' Journal, the, 41
Sturges, Dr. O., *Introduction to Clinical Medicine*, 730
Suburbs, sweet, 122
Sugar, testing of, 162
Sunlight for the sick, 780
Suppuration, extrathoracic, with discharge into lungs, 288
Suprarenal capsules, disease of, 657
Surgeon, charge of libel against a, 264; *action for libel by a*, 264
Surgeons, strike among, 262; in *Austria*, 319; *German, congress of*,
Surgical instruments in International Exhibition, report on, 732
Sutherland, Dr. H., *histology of blood of insane*, 547
Swayne, Dr. J. G., *case of puerperal convulsions*, 668
Sycois, microscopical features of, 518
Sympathetic nerves, changes of in syphilis, 614
Syncope, death from, 677
Syphilis, intraocular, Dr. Hughlings Jackson on paralysis of vocal cord from, 86; *after vaccination*, 119, 127; *Mr. P. Hewett on after effects of*, 190; *Dr. Drysdale on, rev.*, 313; *infantile, treatment of*, 562; *changes of sympathetic nerve in*, 614; *during pregnancy*, 615
Syphilitic paralysis with muscular wasting, 172; *keratitis, Mr. J. Dixon on*, 223; *gummatous tumour of brain, Mr. Bradley on*, 643; *fever*, 687

Tait, Mr. L., gastrotomy in extrauterine gestation, 237; methylene ether, 353
 Talipes, new walking-boot for cases of, 563
 Tar, local application of derivatives of, 562
 Tattooed leucoma, 48
 Taylor, Mr. D. T., obituary notice of, 104
 Tea, Dundee, 469
 Teeth, false, 93
 Teething, diarrhoea in, 731
 Temperance Society, French, 187
 Temperature, lowered, in injury of spinal cord, 156; as an indication of fetal life, 469
 Temporal bone, fracture of, 62
 Testimonial to Mr. J. W. Broadbent, 93; to Dr. Druitt, 106, 218, 420, 691; to Mr. J. Needham, 345; to Mr. J. Farrer, 345; to Mr. T. T. Griffith, 350, 418; to Mr. A. F. McGill, 387; to Dr. McKendrick, 435; to Dr. Palmer, 569; to Mr. J. Shannon, 691; to Dr. Lyell, 686
 Tetanus, hydrate of chloral in, 455, 463; case of, 629; Mr. C. R. Thompson on treatment of with bromide of potassium, 727
 Thames, sanitary supervision of, 654
 Thermometer, pocket clinical, 648, 748
 Theses, manufacture of, 653
 Thiers, M., health of, 292, 592
 Thigh, malignant disease of, 78
 Thompson, Mr. C. R., traumatic tetanus treated with bromide of potassium, 727
 — Sir H., renal disease in calculous patients, 250
 — Dr. Symes, elevated health-resorts of southern hemispheres, 545
 Thorax, Dr. Humphry on varieties in muscles of, 693
 Thorogood, Dr. J. C., chronic inflammation of the bladder as a cause of calculus, 103
 Thrombosis, Mr. R. Hewitt on, 189
 Thyrotomy, cases of, 270; Dr. Morell Mackenzie on results of, 458, 486; Mr. Holmes on, 530; letter on, 548
 Tibia, acute periostitis of, 676
 Tinned horse-flesh, 493
 Tones, Mr. C. S., administration of ether in America, 237
 Tomkins, Dr. A. W., hæmorrhage into peritoneal cavity, 33
 Tongue, pigmentation of, 47; cancer of, 77, 171, 212
 Tongue-holder, Dr. Dobell's, 228
 Tonsillitis, connection of with rheumatism, 236
 Tonsils, Mr. J. W. Haward on enlargement of as a cause of nightmare, 645
 Torticollis, spasmodic, 472; fatal, 475
 Trachea, ulceration of after tracheotomy, 517; plugging of in operations, 590
 Tracheotomy for dyspnoea from disease of neck, Mr. Campbell De Morgan on, 554
 Train sanitaire, 673
 Transfusion, programme of Committee of Obstetrical Society, 150; Dr. Lauder Brunton on, 555; case of, 593; in post partum hæmorrhage, Dr. T. Savage on, 640
 Transposition of viscera, 633
 Traps and trapping, Mr. Eassie on, 21
 Trephining, successful, 288
 Trichinosis, 316, 467
 Tubal gestation, 519
 Tubercles milary, in cats, 231; anatomical relations of to phthisis, 266, 325, 363, 385, 438; of skin, 614
 Tuberculosis, acute pulmonary, with almost complete absence of pyrexia, 370; acute milary with meningitis, 632
 Tuckwell, Dr. H. M., vomiting of habit, 310
 Tumours, fibro-cystic of uterus, gastrotomy in, 18; congenital nœvoid, 43; recurrent fibroid, 47; malignant, of thigh, 78; malignant abdominal in a child, 78; of head of fibula, 89; of orbit, 102; mediastinal, 102; ovarian, see ovary; cystic, of labium, 213; malignant, in parotid region, 270; medullary, of wrist, 285; in auditory meatus, 473; of rectum, 629; of uterus, recurrent fibrous, 630; syphilitic gummatous of brain, Mr. S. M. Bradley on, 643; sarcomatous, of dura mater, 656; of jaw, 657; intrathoracic, 657
 Turner, Mr. J. S., administration of ether in America, 330
 Twins' position of, 686, 748

Tympanic membrane, traumatic rupture of, 658
 Tyndal, Mr., his tour in America, 380

U.
 Ulcer, chronic, of stomach, 257
 Ulcers, lead as an application to, 65; of leg, Dr. J. G. Black on treatment of, 608
 Universities in relation to professional education, Dr. L. Playfair on, 165; Dr. Humphry on, 24; of Germany, statistics of, 759
 University of Aberdeen, report of Committee of Aberdeen, Bauff, and Kincardine Branch, 182; the preliminary examination, 208; examiner in, 320; practical teaching, &c.; meeting of general council, 435; assistant professor of chemistry, 469; the medical curriculum of, &c.
 — Anderson's, ophthalmic lectureship, 351
 — of Berlin, statistics of, 72; 709
 — of Cambridge, notices, 76, 419; scholarships and exhibitions in natural science, 157; natural science trips, 206; natural science at, 262; medical study at, 478
 — of Dublin, case of Dr. McDowel, 181; bill for regulation of, 265; pass list, 272
 — Edinburgh, examiners in medicine, 181; lady medical students, 181; assistant professor of chemistry, 435; resolution regarding degrees in medicine, 469; Professor Carus, 543
 — Glasgow, Clark bursaries in, 295
 — of London, letters on M.B. examinations, 40, 160; resolution regarding Greek, 202; examiners at, 494
 — of Michigan, lady-students at, 593
 — of Prague, appointment in, 651
 — St. Andrew's, the lord-rector of, 97, 207; examiners in medical degrees, 208; assessors, 250; proposed school of medicine in Dundee, 382
 — of Vienna, chair of hygiene, 39; appointments in, 151, 292; chair of pathological chemistry, 412
 — of Zurich, ladies attending, 202, 604, 787
 Uræmia, Dr. G. Johnson on, 193
 Ureters, dilatation of, 477
 Urethra, stricture of, 116, 156, 771; laceration of, 184; vermicular action of, 240; operative treatment of stricture of, 547
 Urine, Dr. G. Johnson on albumen in, 3; in hæmophilia, Dr. Wickham Legg on, 111; on Bright's disease, 161; lithates in, 218; epithelium in, 478; deposits in, 518; Dr. G. Johnson on disease of kidney from retention of, 605; purulent, from renal calculus, 648
 Uterus, Dr. P. Boulton on dilatation of cervix of, 4; Dr. Greenhalgh on division of os of, 4; gastrotomy in fibro-cystic tumour of, 18; Dr. R. Barnes on application of remedies to inner surface of, 30; Dr. S. T. Smyth on hydatids of, 61; Dr. J. M. Duncan on dilatation of os of, 89; Dr. J. Whitehead on injection into, 115; inflammation of mucous membrane of, 157; Dr. Heywood Smith on dilatation of cervix uteri, 166; fibroid tumour of, 184, 212; effect of quinine on, 191; cancer of, 191; Dr. J. H. Bennet on orifices of, 196, 583; Dr. J. M. Duncan on orifices of, 261; decidual inflammation of mucous membrane of in cholera, 287; subperitoneal emphysema of in pregnancy, 287; hypertrophy of cervix of in pregnancy, 287; gravid, prolapse of, 329; Dr. W. Cumming on supposed stricture of cervix, 461; Dr. Graily Hewitt on clinical importance of acquired deformities of, 553; inflammation of cervix of, 630; fibroid tumour of, 729, 745

V.
 Vaccination Act, cases under, 94
 — syphilis after, 119, 127; circular of board of supervision in Scotland, 124, 125; in Leeds, 170; successful, Dr. Bell on marks of, 559
 Vagina, Dr. A. Pearce on foreign body in, 728
 Vapour-baths, cheap and ready, 332
 Varicocele, instrument for treatment of, 48
 Varix of arm, 47
 Vein, subclavian, compression of by fragment of fractured clavicle, 637
 Veins, portal and splenic, plugging of, 100; Mr. Prescott Hewett on plugging of, 180
 Veratrum viride in acute rheumatism, 500

Vienna, the exhibition in, 149, 348, 651, 654; small-pox in, 178, 206, 292, 681; hospital for women in, 231; international medical congress in, 350; educational exhibition in, 412; otiatric clinic in, 631
 Virchow, Dr., the "Two-headed Nightingale", 294
 Vision, impairment of in Bright's disease, 192, 303
 Visitation of examinations, proceedings of Medical Council regarding, 408
 Vitelligoldea with stricture of hepatic ducts, 210
 Vocal cords, Dr. Hughlings Jackson on paralysis of from intracranial syphilis, 86
 Volunteer medical regulations, 50, 121, 126, 178, 420; medical examinations, 294, 417
 Vomice, pulmonary, gangrenous diphtheria of, 677
 Vomiting, of habit, Dr. Tuckwell on, 310; in pregnancy Dr. Barnes on, 423

W.
 Walford, Mr. T. L., poor-law dispensaries, 715
 Walker, Dr. A. D., the leprosy of the Bible, 313
 — Dr. J. K., obituary notice of, 522
 Walpole, Mr. A. H., obituary notice of, 25
 Walsh, Dr. James, obituary notice of, 331
 Wauklyn, Mr. J. A., testing of flour and bread, 312
 Warming and ventilation of houses, Mr. Eassie on, 208
 Water, London drinking, 151; supply to ships and crews, 179; gold, disinfection of, 296; analysis of, 592, 632; action of on spleen, 703
 Water-beds, 26
 Water-closets, Mr. Eassie on, 570
 Water-fittings, costly, 350
 Waters, Dr. A. T. H., on pneumonia, 698
 Watson, Sir Thomas, contemporary medical biographies, 78
 Watt, Mr. J. R., spina bifida cured by injection, 462
 Weather and disease, 204, 469
 Wells, Mr. Spencer, Diseases of the Ovaries, rev., 12
 Welsh apothecary, old, 263
 Werechagin, M., his collection of paintings, 468
 West, Mr. J. F., on French hospitals, 567
 Wet-nursing in France, 565
 Whisky, virtues of, 673
 Whitehaven, sanitary state of, 18
 Whitehead, Dr. J., intrauterine infections, 115
 Whitmore, Dr. J., detection of adulteration of milk, 594
 Whooping-cough, quinine in, 563
 Wilde, Sir W., presentation to, 320
 Wilkinson, Mr. J. S., obituary notice of, 522
 Wilks, Dr. S., therapeutic uses of electricity, 28
 Williams, Dr. C. J. B., phthisis and tubercle, 438
 Wills, Dr. J., obituary notice of, 746
 Windfalls for doctors, 245
 Wine, caution regarding, 620
 Winslow, Dr. F., alleged scandalous allegations concerning, 692
 Winterbotham, Mr. W. L., volunteer medical regulations, 50
 Women, Dr. R. Barnes on convulsive diseases of, 391, 421, 453, 489; medical qualification of, proceedings of Medical Council regarding, 404; medical education of, 616, 654, 683, 690
 Woodhall Spa, Mr. Cuffs on cases treated at, 534
 Wooler, Mr. W. M., obituary notice of, 480
 Woors, artificial respiration in poisoning by, 557
 Workhouses, consumption of liquor in, 504
 Workhouse hospitals, post mortem examinations in, 233
 Worms, intestinal, 431
 Wounds, cleansing of, 101; granulating, Mr. G. Birt on paper as a dressing for, 587
 Wrist, medullary tumour of, 285

Y.
 Yeats, Dr. W., hæmatoma anus, 702
 Yeo, Dr. I. B., phthisis and tubercle, 441; complication of paracæstesis abdominalis, 586
 Young, Dr. J., sponge-tents in epistaxis, 552

Z.
 Zoology, marine, 620
 Zymotic and preventable diseases, Dr. Grimshaw on, 351

istence of annually brief but brilliant duration. Our Association is differently placed, and has different objects. We have only a limited number of gentlemen whom we can or would include in it. The total nominal roll of the profession is about eighteen thousand, of whom little more than two-thirds can be considered actively engaged in it on their individual responsibility. Of the whole available number, therefore, we constitute one-half. We aim at combining steadily and uniformly throughout the year in constant intercourse and in joint work for common aims. Not more than one-tenth of our members are ever able to attend annual meetings. We attract and desire to attract no floating population to enrich us by gate-money, but to maintain an union which grows and persists, and becomes daily more close, earnest, and fertile. We neither collect nor exhaust our income at the annual meetings; and, large as is the part which these play in the usefulness and prosperity of the Association—which without them would be maimed indeed—we rely for the permanence of our constitution, and for the continuous growth of our body, on the Branch meetings, the council meetings, the meetings of permanent committees, and the weekly JOURNAL. The experience of the last few years has told clearly enough how well the Association has prospered in that reliance; it has grown as it never grew before in numbers, in prosperity, and in influence. It has become a great power in the state, a great bond in the profession. Represented by a Council who perform onerous public duties at a great sacrifice, and by Committees which include the elements of representation from every hamlet and every town in this country, and from an increasing number of those in the sister kingdoms, its representations on all matters connected with the public policy, with institutional proceedings, or with the acts of government, are enlightened by constant communication from men living in all parts of the kingdom, and are received with attention wherever they are addressed. That influence is growing. There is, we think, every reason to hope that it may grow; for it can hardly fail to be healthy. It is based upon universal representation of all classes of the profession. It is subject to the checks of discussion in every form—weekly discussion in these pages by all who are interested, discussion in knots at District and at Branch meetings, and united debate at the annual meetings. Nearly all the elements of the governing body, with the sole exception of the triennial President of Council and the past Presidents of the Association, are subject to annual revision. There are thus all the possible guarantees that the real opinion of the Association shall make itself felt on all occasions, and that opinion has gathered a progressively greater weight and influence.

We shall venture for the first time, at the close of nearly a decade, to say a few words for ourselves. Called first by the unanimous voice of the Committee of Council in 1866 to preside over the JOURNAL of the Association, and to assist in developing its importance and its usefulness, we have regarded that work as one of the most useful and important professional enterprises to which a professional man could devote his energies. We have laboured without stint to make this publication worthy of the Association. Unless it became a complete and adequate representation of the progress of contemporary medical science, unless it extended its inquiries and

its influence throughout the three kingdoms, unless it honestly and fearlessly represented the spirit of progress and of reform, unless it became a widely embracing representative periodical, in which all the best phases of scientific, social, and professional thought were adequately represented, it was clear, from the experience of the past, that the Association must progress, if at all, haltingly and fitfully. It has been our aim to maintain every year the progress made in the last; to afford to those who were unable to attend successive meetings such a weekly review of the scientific, social, and political activity of the profession, in and out of the Association, as should afford to those who had joined our body an inducement to remain attached to it, and to those who had not joined it a reason for entering its ranks. Fact and figures speak of the success with which this object has been pursued. Even in provinces in which no meeting has been held for years, the Association retains its attached members; and every year has added its contingent of two or three hundred new subscribers who have learnt from these pages the advantages of the Association, and who gladly allow themselves to be converted into members, and so remain. The Association, which numbered two thousand and three hundred when the JOURNAL passed into our hands as editor, now numbers more than five thousand; and, in addition, there is a regular weekly circulation of the JOURNAL among several hundred professional readers who are not members of the Association. The publication which is circulated in return for the same annual subscription as heretofore, is in size and mere money value at least three times as valuable as it then was; and its scientific and literary value has increased, in the same ratio, thanks to the exertions of our literary staff, and to the popularity and weight which the JOURNAL has acquired amongst the most eminent scientific and practical workers in the profession. Facts and figures will speak of the success which has been achieved; but they cannot tell of the toil, the anxiety, and the pains which are its price, or of the personal sacrifices which it has involved. Standing in the light of day before many thousands of critical readers, who have each an independent opinion, it is no light task to apportion to each subject and to each writer his own share of prominence—to give an exposition of passing events and opinions which shall be at once just, fearless, and passably instructive and inoffensive. The interests of individuals, of institutions, of parties, are not always those of the profession at large. He who stands forth to describe them and to lay them open for discussion, must expect to meet with occasional opposition, both public and private. He must meet with occasional misrepresentation, and even sometimes with personal insult. He must sacrifice private friendships and cherished connections, and listen only to the voice of public duty. He must needs offend powerful parties; he must needs be open to covert insinuation. All this must happen where no errors are committed; and it is not possible, in the fulfilment of large and complex duties, that no errors should occur. We have had the happiness of meeting with fewer such difficulties and pains than often beset the editorial path; we have enjoyed the view of a constantly increasing success rewarding our efforts, and of the private and public expression of the confidence and thanks of a continually increasing circle of associates and friends. But our path has not been free from such thorns, and some of them have left a smart which cannot easily be forgotten. But in the consciousness that the work to

which we have set ourselves with singleness of purpose, as no unworthy object of a life, is prospering greatly, and that our small share in it is not unappreciated, we find rich consolation in the past, and a firm hope in the future. It is a good work; it grows; and we fervently hope and believe it will prosper and bear good fruit.

THE LONDON COLLEGE OF PHYSICIANS.

SINCE the appearance of what was published last week under this head, a totally unexpected, and, indeed, surprising aspect of the facts has arisen.

It results from communications which have been made to the Chairman and Secretaries of the Reception Committee, that a singularly unfortunate miscarriage has occurred, resulting in a misunderstanding which has endured for some months, and which formed the occasion, and in part the subject, of the comments which we published. It had been repeatedly announced at the meetings of secretaries and of the Executive Committee during the last two months, that, whereas a communication had been addressed on the 26th of October to the College of Physicians, stating, for their official information, that a general meeting of the British Medical Association would be holden in London on August 5th, 6th, 7th, and 8th, next ensuing,* at the same time that a similar intimation had been conveyed to the College of Surgeons of England, and to the Lord Mayor; and that, whereas both the latter authorities had forthwith tendered hospitable receptions to the body of medical men who would assemble, the intimation conveyed to the authorities of the College of Physicians had no result whatever, and had been received and met with silence. This intimation, officially communicated last week in a report presented to the General Committee, coincided with other incidents which led to unfavourable reflexions.

As the result of what was written, communications have taken place between the officers of the College of Physicians and the Reception Committees, which were laid before the Reception Subcommittee on Wednesday evening, and of which copies have been communicated to us by desire of the Committee.

Royal College of Physicians, July 9th, 1873.

Dear Dr. Stewart.—The President of our College has forwarded to me your letter of yesterday, and I lose no time in giving you the information you require.

Towards the latter part of last year, the President delivered to me the letter dated October 16th,* signed by Sir William Fergusson, yourself, and Dr. Henry. It contained, as you know, an announcement to the President that it was "proposed to invite the British Medical Association to hold its annual meeting in 1873 in London", adding that "any co-operation on your part, in such way as may be most convenient and agreeable to the College, will be gratefully appreciated by the members in the district."

As the statement amounted only to an intention, or proposal, to invite, I did not, at the time, consider that any answer would be expected. Towards the latter part of January, to the best of my belief, the President told me that he had read in the Association JOURNAL a statement to the effect that the College of Physicians had not deigned to reply to the communication addressed to its President.† The letter was then re-read, and the President expressed a wish that an answer should be sent without further delay. The purport of the reply was settled by him at the time, and on the following day was written by me and sent.

Although I did not think the matter of so much importance as to induce me to keep a copy of the letter, the whole circumstances are so fresh in my recollection, that I have no doubt of the enclosed expressing the purport, and, I believe, the exact words, of my reply. I have seen the President to-day and discussed the whole matter with him,

and he confirms all that I have now stated, believing what I unhesitatingly affirm, that such an answer was written and sent.

Believe me to be, dear Dr. Stewart, yours faithfully,
A. P. STEWART, M.D. HENRY A. PITMAN, Registrar.

Royal College of Physicians, January 29th, 1873.

My dear Sir,—I am requested by the President of the College to acknowledge the receipt of your letter of the 26th October last, and to express his regret that, owing to its having been misplaced, it has remained so long unanswered.

I am also to inform you that the President and College will have much pleasure in promoting the object of the forthcoming meeting of the Association in any way that may be considered desirable.

I am, my dear sir, yours faithfully,
HENRY A. PITMAN, Registrar.

To Sir William Fergusson, Bart.

75, Grosvenor Street, W., July 10th, 1873.

Dear Dr. Pitman,—I have to thank you very cordially for your explanatory letter and enclosure, which I laid before my colleagues last evening, and to repeat, what I have already stated both orally and in writing, that no such document as that addressed by you to Sir William Fergusson has ever reached him, Dr. Henry, or myself. I am requested by my colleagues to assure you that no one can regret more deeply than they of the misunderstanding which has arisen through the miscarriage of the important communication which they have at length received.

I am also requested by my colleagues to add, that the members of the Association will very much appreciate any steps that the College may think fit to take towards furthering the objects of the forthcoming meeting.

Believe me to be, dear Dr. Pitman, yours very faithfully,
Dr. Pitman. A. P. STEWART.

Whatever comments, therefore, were based upon the misunderstanding which has thus arisen are of right withdrawn, together with the disappearance of their *raison d'être*. It is, indeed, a singular fatality that, seeing the close relations of two of the immediate executive of the local Committee with the College and its chief officers, no verbal communications should have passed which could throw light upon the subject, and that no communication to the College itself or its Council should have informed them of the unsatisfactory position of affairs, which, we have reason to know, was a source of regret to many of them. It is satisfactory that so serious a misunderstanding should not have been permitted to last until the end, and that explanations can be exchanged which will set the College of Physicians right in a matter in which the College has suffered from a remarkable *contretemps*.

An accident so complicated, affecting important bodies, gave rise to consequences which are to be regretted; but it may be hoped that they will be ephemeral, and will die away with the substructure of misunderstanding and miscarriage which underlay them. We are not insensible to the desirability of complete harmony on the eve of public gatherings; but, to be substantial, it must be real; and, in giving rise to explanations which will remove a singularly widely felt cause of complaint, we trust it will be found that we have effectually served the good cause. A grievance laid bare is open to remedy, and the more easily healed; and we trust that this one may be considered in a fair way to rapid healing. For several years we have in this JOURNAL, so far as our influence could extend, earnestly applauded and supported the efforts to bring the College of Physicians into its rightful place in relation to the profession of medicine, which is, we conceive, parallel to that of the College of Surgeons. But it must be remembered that a large part of the hold of the College of Surgeons on the profession is due to the fact that it accords the most substantial privileges in its possession to all who hold its licence; that, if they all contribute to the maintenance of the Hunterian Museum, of the Lectures, and of the Library, all are free alike to enjoy these; and that no receptions are given at the College of Surgeons to which its diplomates of different degrees are not invited. It was, therefore, we repeat, in the spirit of entire friendship to the highest and widest interests of the College and of the profession, that we advocated an equally liberal policy in the College of Physicians, and that we claimed for the whole body of its diplomates an honourable participation in some of its privileges, and that we stated our opinion of the advisability of an open, spontaneous,

* Evidently a clerical error for 26th.

† The only statement on the subject which we can find in the JOURNAL is the following in the issue of April 12th. After referring to the letter sent to the College of Surgeons, it is stated: "A similar letter was at the same time addressed to the President of the Royal College of Physicians, but no answer has as yet been received."

and prompt welcome, such as other bodies had immediately proffered to the great body of the profession who will meet in London in August. When all is said and done, we trust that good will be found to have come out of the present misadventure. Meantime, we claim for the College the ample allowance which is due to the intervention of the chapter of accidents, and the withdrawal of all disagreeable comment which arose out of it. Had the handsomely worded communication now received reached its destination, or had any verbal explanations passed relating to it, no difficulty would ever have arisen. With the large and various facilities continually offered in many quarters for agreeably filling up the spare hours of the Association meeting, it was of course only a sentiment that was hurt; and this is now in a fair way to remedy. We are persuaded that the College and its President have the same cordial feeling which they evinced in 1862; and that, on the basis of these mutual explanations, a cordially good understanding will be re-established.

THE Holmesdale Infirmary, Sevenoaks, has just been finished at a cost of £922, leaving £110 in hand towards the expense of furniture, surgical appliances, boundary fences, etc. It is estimated that another £250 will be required.

MR. CURLING was on Thursday last elected President of the Royal College of Surgeons. Mr. Le Gros Clark and Sir James Paget are the Vice-Presidents. Professor Humphry and Mr. Holmes were re-elected Hunterian professors.

THE CHOLERA IN AMERICA.

THERE can be doubt no longer, says the *Ohio Clinic*, that cholera is present in a number of our western cities. It is only a question now between the sporadic and Asiatic disease. If the present epidemic, for it has now assumed such proportions, be indigenous, it is certainly none the less violent in Nashville and Memphis. There is little or no comfort, moreover, in the fact, if it be such, that the present epidemic is not the Asiatic cholera. It would indicate a naturalisation of the disease in our midst, when we should no longer enjoy the privilege of being spectators to its onward march from the jungles of the east.

THE RECENT ALUM-CASES.

NUMEROUS convictions have already been obtained against bakers and flour-dealers for alleged adulteration of flour and bread with alum. We say "alleged" advisedly, inasmuch as it is highly improbable that the detection of the alum was genuine in the majority of these instances. Every well-informed chemist is aware of the difficulties in detecting alum in flour and bread; and a very general opinion prevails in chemical circles that most of the official analyses are faulty in the extreme. A recent case—that of Mrs. Tapscott—is exciting attention in Marylebone. This woman was fined for using alum, and she denies having done so. Very probably she has been unjustly fined; and the *Marylebone Mercury* deserves great credit for insisting upon a proper inquiry into the circumstances of the case. From Australia we have a very instructive piece of intelligence. An Australian judge, before whom come such cases as that of Mrs. Tapscott had been brought, fell upon the device of experimenting on the chemical analyst. He caused a number of samples to be adulterated with known quantities of alum and then submitted to several analysts, whose reports on them turned out to be ludicrously at variance. We wish that some English judge would perform a similar experiment here.

THE METROPOLITAN COUNTIES BRANCH.

THE twenty-first annual meeting of this Branch will be held on Tuesday next, at 3 P.M., in the Banqueting Hall, Alexandra Park. The present President, Sir William Fergusson, will retire from office, and the chair will be taken by his successor, Dr. Quain, who will deliver an address. We hope that there will be a large attendance of members at the meeting. The Branch has received an accession of

more than seventy members during this year, and now numbers nearly five hundred; and we trust that a large proportion of the two hundred members of the profession in the metropolitan district who are awaiting election into the Association, will also become members of the Branch.

THE NESSLER TEST FOR WATER ANALYSIS.

MR. WANKLYN writes to us to call attention to the fact, that the employment of badly prepared Nessler-test has hindered the reception of the ammonia process in some quarters, and has prevented the full recognition of the advantages of the method of water-analysis. Nessler-test acts almost instantaneously when properly made, but takes a long time when improperly prepared. Messrs. Townson and Mercer are in a position to supply *quick* Nessler-test at twenty shillings a *litre*.

PORTRAIT OF SIR WILLIAM FERGUSSON, BART.

WE learn that it has been proposed by numerous friends and admirers of Sir William Fergusson to open a subscription-list with the view of having his portrait painted by an artist of eminence. The portrait will, with Sir William's sanction, be offered to the Council of the Royal College of Surgeons, in the hope that it may be retained in that institution as a permanent record of one whose valuable contributions to surgical science and whose social character render him peculiarly worthy of so distinguished an honour. The Honorary Secretaries are Surgeon-Major Logie, Royal Horse Guards, Regent's Park Barracks, Albany Street, N.W.; and Charles Moss, Esq., Surgeon, 6, New Cavendish Street, Portland Place. It has fallen to the lot of few men who have risen early to high eminence, to make so many friends and so few enemies. Sir William Fergusson has always been distinguished for his unaffected readiness to lend his influence and exertions to all good professional objects, and has never grudged time, labour, or sacrifices, to the public cause.

THE TOWN OF FLIMBY.

FLIMBY, near Cockermouth, deserves to be immortalised as the dirtiest town (or townlet) in England. Situated in one of the most charming spots in this country, it is ruined by art, which appears to have busied itself in frustrating nature. It is almost devoid not only of water-closets, but even of privies, and the excreta of the inhabitants are heaped up before the doors of their houses. A streamlet, which by ill luck runs through it, is converted into an open sewer, which dries up before it reaches the sea. The rectory appears to be in a manner moated by this stream. These particulars we gather from the report of Mr. Fox, the medical officer for Cockermouth, who is one of the most energetic men appointed under the new Act.

CHOLERA AT NASHVILLE.

THE following letter, sent on the 10th June, by a physician at Nashville, Tennessee, to a brother practitioner at Louisville, is published in the *New York Times*.

"We have a malignant form of cholera-morbus in our city, a species of cholera equally as violent and uncontrollable as if transported from Asia. The disease made its appearance without any previous warning, in the old locality known as the Wilson Spring neighbourhood, a hotbed for all epidemics that reach Nashville. As yet it is not epidemic. Our city is in a good condition to diffuse the malaria, but it is mainly confined to the southern portion. Violent vomiting is generally its commencement, soon followed by copious liquid evacuations. In the first cases that appeared, the matter first expelled contained bile, but it soon changes to a colourless rice-watery discharge, and after two or three evacuations the patient collapses and is urged rapidly to dissolution. In what we call the collapsed state it might be termed a congestive state. There is not shrunken skin, the general blueness, nor the extremely emaciated form of the cholera subject of 1866. I have not witnessed in the present malignant form of cholera that cadaverous, that pinched-up appearance of an Asiatic cholera corpse. In almost all of the fatal cases to the 7th instant, the exciting cause was traceable to a hearty meal of this year's new vegetables. In a meeting we compared notes, and almost every fatal case was traced back to imprudence with our new vegetables. Hence I still hold that we have a severe

malignant form of cholera-morbus in our midst. I will here state that, when the patient is reached in time, the disease yields to medical treatment; at least, most of the cases terminate favourably when taken in time, and the sequel of the present form of cholera promises quicker reaction and fewer relapses. I am confident that vegetable provisions this year are the cause of the early breaking out of the cholera. I certainly looked for it this year after the dispersion of the masses from the Vienna Exposition, but we have a very severe prelude here now. Our city to the day of the onset of this terrible scourge was extremely healthy, but excessively filthy. From late developments, we may look for epidemic dysentery to follow the track of the present cholera."

THE CHOLERA IN EUROPE.

A REPORT from Vienna, dated July 3rd, states that a formal denial is given to the news of an outbreak of cholera in this city. A few cases have occurred among foreigners who have arrived from places where the epidemic prevails, or passed through the infected districts on their way hither. The disease has no epidemic character, and the general health of the city is satisfactory. In the Dresden district, from June 24th to July 7th, there had been 55 cases with 29 deaths. In Breslau, up to Monday night, 18 persons had been attacked, of whom 14 had died. A cholera committee has been appointed for the German empire, consisting of General Surgeon Dr. Böger and Dr. Hirsch of Berlin, Dr. Max von Pettenkofer of Munich, Dr. Günther of Zwickau, and Dr. Volz of Carlsruhe. Eight cases, with four deaths, are reported to have occurred at Lautenburg near Strasburg. Cholera has broken out in the Italian provinces of Treviso and Venice. In the former, up to July 8th, there has been 41 cases, with 25 deaths and 28 recoveries; in the latter, 55 cases, with 26 deaths and 2 recoveries.

A NEW COTTAGE HOSPITAL.

THE Ulverston Cottage Hospital was opened on July 4th, with much public ceremony. It is a substantial stone building, and we gather from the published reports that it provides accommodation for twelve patients, or more if required, exclusive of a nurse and other attendants, with every modern appliance calculated to assist recovery and promote the well-being of the inmates. The suffering and convalescent wards, operating-room, special ward, laboratory, baths, closets, patent flooring, electric bells, etc.,—the most important offices being contrived on the ground floor—are all conveniently and well arranged, so that this valuable institution must eventually prove a great boon to a town and district where the house accommodation, particularly of the working classes and poor, is unsuitable for the proper treatment of the serious accidents occurring at the mines and elsewhere. In cases of sudden death in public, fatal accidents, and suicides, it is expected the mortuary will relieve innkeepers and proprietors of lodging-houses of much inconvenience which they are now forced to submit to. It is stated that it was first projected by Dr. Barber.

THE PROSECUTION OF OBSCENE QUACKS.

THE Society for the Suppression of Vice, whose age numbers three-score and ten years, held its annual meeting this week in the Freemasons' Tavern, Great Queen Street; Lord Ebury in the chair. The report stated that as to pretended medical works, the Committee had hitherto refrained from interfering, as they conceived it rather the duty of the College of Surgeons or the Treasury to test the question whether the law would afford a remedy in such cases. As neither took up the point, the Society had tried the question whether such works were protected by law, and had obtained a favourable judgment, which would operate as a precedent ever after in similar cases. The cost of trying this question had been £354, payment of which had been guaranteed by two friends of the Society, but only £87 had as yet been subscribed by the public to relieve these two gentlemen. The Society, therefore, earnestly appealed for contributions to discharge this amount. A prosecution had also been undertaken against a so-called anatomical museum, the result of which had been an intimation that it would be closed. With regard to the financial condition of the Society, the Committee reported an increase in the annual subscriptions for the

year ending the 30th of April last of £201, against £136; but the donations had fallen off from £663 to £494. The Committee had been enabled to pay off £200 of debt to the solicitors and the late secretary, but there was still a debt of £250 undischarged.

HANWELL ASYLUM.

THEIR Excellencies Nasrullah Khan and Meerza Kahraman, two of the Persian officers of state, accompanied by Captain Grey, paid a visit last week to the County Lunatic Asylum at Hanwell. They were received, it is stated by the *Times*, by Mr. P. Northall Laurie, the Chairman, and several members of the Committee of Visitors, with their secretary. On their arrival, the medical superintendents, Mr. Richards and Dr. Rayner, and Mrs. Hicks, the matron, were presented to them, and they at once proceeded to an inspection of the asylum. They were much impressed at the liberty the patients enjoyed, and their generally contented expression, as well as the size of the dormitories, the cleanliness and decoration of the various wards and corridors, and the pictures, books, etc., provided for the patients. The padded rooms were critically examined by them. The electrical tell-tale clock, by which it is accurately ascertained at what hours the attendants visit the respective wards and the duration of their visits, was explained by Mr. Partridge; and they spent much time and evinced much interest in its examination. After having gone through nearly the whole of the wards, and seen upwards of 1,500 patients, the visitors observed that they could hardly believe that those they had seen were lunatics, and that they should have thought the "real lunatics" were being kept out of sight. The following entries were made by them in the visitors' book in Persian, and translated by Captain Grey.

During our visit to London, we have visited the Lunatic Asylum at Hanwell. We were astonished at the perfect arrangements, by which the lunatics are treated more as guests than patients.

NASRULLAH KHAN, Nassr-el-Mulk, or Victory of the State.

I concur in all the above. The service and care shown towards the lunatics struck me as beyond praise.

MEERZA KAHRAMAN, Ameen-i-Lahker, or Administrator of the Army.

I accompanied the above, and was no less pleased and surprised than the Persians.

Capt. H. GREY, Political Agent Bhawalpur State.

A BRITISH HOSPITAL AND A PERSIAN PATRON.

IT is announced in the papers that "the Shah has graciously consented to become patron of the British Hospital for Skin Diseases". This is the rather ambitious title of a dispensary founded a few years since for the treatment of skin-diseases, and which has, we believe, a rather "large out-patient department". The institution may be congratulated on a cheap and excellent advertisement in the daily papers; but is not this going rather a-field for patronage, even for a special hospital? Better judges of the merits of the institution might be found nearer home. Perhaps Sir Charles Trevelyan might be persuaded. It would be well to try.

THE RATING OF HOSPITALS.

THE question of exemption of hospitals from rating has been fairly argued out in the House of Commons for the second time, and again the result of the debate has been hostile to the hospitals. The case of St. Thomas's Hospital, where the annual amount levied for rates is £3,000, equal to the annual cost of twenty-five beds, was put strongly by Sir R. Baggallay, who has an hereditary interest in the hospital; and Mr. Scarsfield and Mr. Muntz pointed out that the exemption was of old standing and thoroughly popular. The answers which convinced the House came from the Solicitor-General and Mr. Gladstone. As to the saving of rates effected by the operation of hospitals, it was argued that, even if the saving to those particular ratepayers in respect to cost of sickness were equivalent to the addition to their taxes arising from the exemption of the hospital, they gained nothing, while what they lost in that taxation in this way was involuntary, concealed, and took theunds raised out of their control. To a large extent, however, the

ratepayers taxed by the operation of exemption were not those benefited by the hospital service. A large hospital, set down on valuable land, which became exempt from taxes, deducted for itself a large sum from the parish revenue. There was no security that the money so deducted was spent with the best economy; and exemption amounted to taxation without representation. Exemption was, in fact, rating parishes against their will for the support of institutions over the expenditure of which they had no control. These arguments prevailed; and, on the whole, public opinion seems to go with them.

DISTRIBUTION OF PRIZES AT ST. MARY'S MEDICAL SCHOOL.

THE prizes were presented to the successful students of St. Mary's Hospital Medical School, on Wednesday, July 2nd, by Sir Dominic Corrigan, M.P. The report on the progress of the School during the past year, read by Dr. Cheadle, the Dean, showed that St. Mary's students had been very successful in passing the primary examinations, one having been rejected; and that the increase in the entry of students had been maintained. The prizes were then distributed, after which Sir Dominic Corrigan delivered an address, full of practical advice, well garnished and seasoned with anecdote and touches of humour. He urged upon his hearers the folly of trusting to any artifice, or mean device, as a means of obtaining practice, and maintained that all experience showed, that in spite of the statement of Dr. Johnson, that physicians were "the playthings of fortune," success was the fair and usual reward of hard work, by which alone it could be ensured. The public learned to distinguish the men who knew and could do their work well, and employed them. This point he illustrated by reference to the history of eminent medical men who had gained fame and fortune without the aid of connexion, or influence of any kind, but by dint of their own hard labour. As examples of this, he related the story of Cullen and William Hunter, who entered into partnership, and each worked in turn while the other studied, both eventually reaching the very highest rank in the profession by their own unassisted exertions. Sir Dominic then pointed out that the medical profession was not the power in the state which it ought to be, and that the amount of knowledge of the highest importance to the commonwealth which it possesses beyond any other, entitled it to far greater influence in public affairs than it had yet obtained, and that this was due partly to the imperfect appreciation of scientific knowledge by our legislature, partly to the supineness of the members of the profession themselves, in asserting their just position, and he strongly insisted upon the necessity for the profession being more fully represented in the House of Commons than by the small band of medical men who had hitherto obtained seats in Parliament. He concluded by urging the younger men to remember that they were citizens of a great state, and must earnestly labour for the public good, and not merely their own personal professional advancement and reward. The address was listened to with great interest, and warmly applauded by an unusually large audience, amongst whom were many ladies and numerous old students, and others interested in the welfare of the school.

The following were the successful candidates:—*Scholarship*, 1872. Open Scholarship in Natural Science, Mr. Alfred Tilly; Exhibition in Natural Science, Mr. W. H. Weddell; Scholarship in Pathology, Mr. B. Schlesinger. 1872-3, Assistant Demonstrator of Anatomy, Mr. J. Jackson Gawith; Prosectors, Mr. Musgrove and Mr. Walsh. *Summer Session*, 1872. Botany and Materia Medica, prize, Mr. G. M. J. Giles; certificate, Mr. Hitchens (Materia Medica, Practical Chemistry, prize), Mr. Alfred Tilly; Mr. Heubeck, extra prize; certificates, Mr. Giles (first in examination, but disqualified for prize as Natural Science Exhibitioner); Mr. T. I. Hitchens. Midwifery, prize, Mr. Knowles; certificate, Mr. Beresford. Medical Jurisprudence, certificates, Mr. Knowles, Mr. Perkins. *Winter Session*, 1872-73. Anatomy and Histology, prize, Mr. T. W. Watkiss; certificates, Mr. Wise (Anatomy and Histology); Mr. Manders (Anatomy and Histology); Mr. Brown (Anatomy); Mr. Clements (Anatomy). Chemistry, prize, Mr. Garrbutt; certificate, Mr. W. H. Weddell (first in examination, but disqualified for prize as Exhibitioner in Natural Science). Anatomy and Physiology, prize, Mr. E. J. Edwardes; certificates, Mr. Giles, Mr. Thompson, and Mr. Sworder (Anatomy and Physiology); Mr. Sampson, Mr. Heubeck, and Mr. Newland (Anatomy). Medicine, prize, Mr.

W. V. Lindsay; certificate, Mr. F. Tyrrell. Surgery, prize, Mr. F. Tyrrell; certificates, Mr. W. V. Lindsay, Mr. Robinson. Clinical Medicine, prize, Mr. B. Schlesinger.

SCOTLAND.

THE LADY MEDICAL STUDENTS.

ON Friday, July 4th, in the Court of Session, Edinburgh, the judges in the second division delivered their opinions in the case of Miss Jex Blake and other lady medical students, against the *senatus academicus* of the University of Edinburgh. The opinions of the other judges had been given previously; and the result is, that the Court has decided, by seven to five, in favour of the defenders—the majority of the Court being of opinion that, according to the constitution of the University, the education to be provided was for males only, and that ladies were not entitled to attend the classes and to graduate. The judges in favour of the pursuers were the Lord Justice Clerk, Lords Deas, Ardmillan, Jerviswoode, and Gifford; for the defenders, Lords Cowan, Benholm, Mure, Ormisdale, Mackenzie, and Shand.

IRELAND.

FEVER AND SMALL-POX IN BELFAST.

THERE is always more or less fever prevalent in Belfast, but of late it seems to have increased to a considerable extent. In the week ending June 21st, here were in one hospital—the Belfast Union—no fewer than eighty-six patients who had been admitted with fever. A large number of these were suffering from fever of the typhoid character. The water-supply in Belfast is of a very bad description; the water supplied to the inhabitants from the waterworks being of a yellowish hue, while animalcules can easily be discovered by the naked eye. That a purer supply is badly wanted there can be little question, and the sooner it is obtained the better will it be for the residents of that populous manufacturing town. Small-pox, we regret to state, has not yet been eradicated, there being seven cases of this disease in the same hospital at present.

THE MEDICAL COMMISSIONERSHIP OF THE LOCAL GOVERNMENT BOARD.

AT a meeting of the Poor-law medical officers of Sligo, the following petition was unanimously adopted, and transmitted to Sir Dominic Corrigan, President of the Poor-law Medical Officers' Association, requesting him to present it to the Treasury, and to use his influence in its behalf.

To the Right Honourable the Lords of Her Majesty's Treasury.

The Humble Petition of the Medical Officers of Dispensaries in the Sligo Union and County of Sligo sheweth,—

That your petitioners have learned with regret that the Commissioners of Inquiry into the Civil Service of Ireland have recommended the abolition of the office of the Medical Commissioner of the Local Government Board, Ireland. Your petitioners, therefore, most respectfully submit for your lordships' consideration that, as the successful administration of the laws for the protection of the public health and the prevention and cure of disease depends upon a competent knowledge of medical and sanitary science, it seems indispensable that the office of medical commissioner and medical inspector, which have been worked with such signal success under the Medical Charities Act since 1851, be continued under the same scientific medical direction and control, otherwise disastrous consequences, especially during epidemics, to which this country is so liable, might be the sad result. Your petitioners further pray that, as the duties of medical officers are becoming more national, having now to consult for the public health and sanitary order of their respective districts (the prevention as well as the cure of disease), that they be appointed and paid by the Crown, like other civil officers of the public service. The sanitary and medical code would thus be more fully observed, and human life more carefully preserved. And your petitioners will ever pray.

THE GROWTH OF THE ASSOCIATION.

WE have the satisfaction of learning that nearly three hundred gentlemen have sent in their papers for election as members of the Association since the commencement of the present half-year. Of these, upwards of two hundred reside in the metropolitan district, and will be submitted for election at the ensuing meeting of the Metropolitan Branch Council. The rest either have been elected by the respective Branches at the annual meetings now proceeding, or will be submitted for election at the meeting of the Committee of Council this day at Birmingham. Since the commencement of the year, nearly six hundred members have joined the Association. The principal increase is in the metropolitan counties, where the number of members is fast approaching one thousand. In other parts of the country, the most notable growth is in Scotland and in the Lancashire and Cheshire Branch. We have in course of preparation a coloured map which will show the site of the Branches of the Association and the seats of the local executive, the diffusion of the members in counties, and the proportion of members of the Association in each county to the total number of resident members of the profession.

THE ARMY MEDICAL WARRANT.

IN reference to the recent statements in our columns concerning the present condition of the Army Medical Department, we have received letters from numerous able and distinguished members of the sister services. The various points under discussion are temperately and exhaustively considered, and we have derived much profit from a careful perusal of the documents which these gentlemen have so kindly laid before us. It is very gratifying to us to see the appreciation in which our efforts for the welfare of the department have been held; and more especially with reference to the War-Office deputation, our correspondents have been most flattering in their expressions of approval. Actuated as we have been throughout by a sincere desire to help that branch of our professional brethren whose peculiar position prevents combination for its own assistance, we can only say that its approbation will stimulate us to relax no effort in endeavouring to obtain those concessions which are now so urgently needed.

Several of our correspondents have been very active in bringing the various grievances which we have from time to time laid before our readers, under the notice of the several medical corporations; and, in consequence of their exertions and those of others, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the University of Aberdeen, have sent remonstrances to Mr. Cardwell and the Director-General. We are also informed that the University of Edinburgh and the Royal College of Surgeons of England now have the matter under consideration, with the view of taking strong and decided action; and this concurrence of testimony in the views expressed by the JOURNAL concerning the injurious terms of the recent warrant, cannot fail to force the subject still more strongly on the notice of the authorities.

It is only right to state that one or two medical officers object, in the interests of discipline, to any increase in the relative rank of the junior portion of the department, thinking it inadvisable to give the rank of captain to surgeons after merely two years' service. This seems, however, a point of very minor importance, but one on which we should be glad to have the opinions of others well qualified, like our correspondents, to consider such questions.

On the subject of the reserve, also, there are some remarks worthy of record, which are thus summed up.

- "The importance of the reserve seems to be lost sight of.
- "1. Militia appointments might be filled from it.
- "2. It would allow of the whole of the active list of medical officers being drafted off to the seat of war.
- "3. It would thus do away with the necessity of crowding in fresh candidates, who afterwards block all promotion."

On the occasion of the deputation to Mr. Cardwell, the importance of every medical officer being encouraged to ride was forcibly brought forward; and the following suggestions are deserving of attentive consideration.

"There is another question to which I am anxious to call your

attention: viz., Will those medical officers who are not entitled to forage for a horse, be supplied by Government with a horse to ride during the approaching autumn manoeuvres? I need hardly point out the necessity which exists that all medical officers should be mounted, so as to enable them to perform their professional duties efficiently and satisfactorily. Surgeon-General Lawson, in his report on autumn manoeuvres, appended to the Army Medical Department Report for 1870, p. 303, says: 'It was strongly recommended that the medical officers who were not allowed forage should have horses allowed them during the late manoeuvres; but the proposition was submitted too late. In future, however, it is very desirable this should be complied with.'

Space has only enabled us to furnish the above extracts from the very interesting letters to which we have referred; and we only hope, in the interest of the service, that army medical officers will not hesitate to keep us informed of their views and opinions on the many important questions which we shall discuss from time to time.

THE GENERAL MEDICAL COUNCIL.

IN the present year, the terms for which a considerable number of members of the Medical Council were elected will expire. The list will include the following Crown nominees: Dr. Parkes, Dr. Quain, Sir R. Christison, Bart., Dr. Stokes, and the following members of Council representing the undermentioned corporate bodies; viz., Dr. Acland, University of Oxford; Dr. Alexander Wood, Royal College of Physicians of Edinburgh; Dr. Apjohn, University of Dublin; Dr. Leet, Apothecaries' Hall of Ireland; Dr. Smith, King and Queen's College of Physicians in Ireland; Sir D. Corrigan, Bart., Queen's University in Ireland; Dr. Andrew Wood, Royal College of Surgeons of Edinburgh; Dr. Macrobin, Universities of Edinburgh and Aberdeen; Dr. Storrar, University of London.

THE SHAH: THE CONVENTION OF GENEVA.

WE are informed that the Grand Vizier of the Shah of Persia has now placed in the hands of M. Dunant the diplomatic document conveying the adhesion of His Majesty to the Treaty of Geneva. We are enabled to present the text of this document, which with happy appropriateness was drawn up and signed on the day of the visit of the Shah to St. Thomas's Hospital. M. Dunant has transmitted this document to M. Streckheisen, the Swiss Minister in London, who has forwarded it to Berne, to the High Federal Council of the Helvetic Confederation. The Federal Council, by an act of the protocol, has the duty of officially informing the governments of Europe (who are all adhering parties to the Convention), including our own government.

Thus far, diplomatic proceeding is complete. It remains now to give form and substance to the adhesion thus formally given. We would suggest to the English Red Cross Society, of which Colonel Loyd Lindsay is the directing president, to bring under the notice of the ministers of the Shah all that relates to carrying out a convention which is entirely novel in Asiatic practice. The necessary material, the directions, badges, mode of organisation, rules and codes, are now established and tried in European practice to an extent which will enable the Shah to profit by European experience.

The following is a copy of the document referred to.

Pénétré de la pensée généreuse qui a inspiré la Convention de Genève, et désireux d'en étendre les effets salutaires dans la limite de son pouvoir, Sa Majesté le Shah a ordonné au soussigné, Grand Vizir de son Empire, d'y adhérer pleinement et entièrement.

En conséquence, dûment autorisé par Mon Auguste Maître, je déclare par les présentes que la Perse accède, sans aucune restriction, au texte de la susdite Convention, tel qu'il a été approuvé par S.A. le Grand Duc de Bade, S.M. le Roi des Belges, S.M. le Roi de Danemark, S.M. la Reine d'Espagne, S.M. l'Empereur des Français, S.M. le Roi d'Italie, S.M. le Roi des Pays Bas, S.M. le Roi de Prusse, S.M. le Roi de Suède et de Norwège, S.M. le Roi des Hellènes, S.M. la Reine d'Angleterre, S.A. le Grand Duc de Mecklembourg, et S.M. le Sultan.

Fait à Londres, le 26 Juin, 1873,

HOUSSEIN.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

The business of the Meeting will be transacted in six Sections.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.†

SATURDAY, August 9th.

EXCURSIONS.—By permission, the following among other Excursions will be arranged:—

Excursions to Cliefden, near Maidenhead, the seat of the Marquis of Westminster; and to Windsor Castle.

Excursion to Brighton, and visit to Brighton Aquarium.

Visit to Woolwich Arsenal and the Factories.

Arrangements will be made, of which further details will be published, for facilitating visits during the week to the Print and MSS. Rooms of the British Museum, the Mint, the General Post Office, the Private Collections at Grosvenor House, Stafford House, etc., and to some leading Factories.

* Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.

Dr. A. HENRY, 16, Brunswick Square, W.C.

Dr. S. WILKS, F.R.S., 77, Grosvenor Street, W.

GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.

ERNEST HART, Esq., 59, Queen Anne Street, W.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

* By invitation of the Metropolitan Members.

† Each member is invited to bring one lady with him to this *soirée*.

Communications, objects intended for exhibition, etc., may for the present be addressed to the private care of any of the members of the Museum Committee, or to Mr. FRANCIS FOWKE, at the office of the BRITISH MEDICAL JOURNAL. During the week preceding the meeting, all articles should be sent direct to the Library, King's College, and addressed to the care of the Curator of the Museum of the British Medical Association.

Papers.—The following papers and contributions have been promised in addition to those published at page 21 of last week's JOURNAL.

C. A. Hemingway, Esq. 1. On a New Method of Arresting Post Partum Hemorrhage. 2. On a New Appliance for the Treatment of Fractured Ribs.

T. D. Griffiths, M.B. The Causes and Pathology of the various Acquired Malpositions of the Uterus.

Victor de Méric, Esq. On Peculiar Modes of Transmission of Syphilis in Married Life.

James Thompson, M.D. 1. The Use and Abuse of Nux Vomica and its Alkaloids. 2. Remarks on a Method of Administering Leamington Spa Water.

D. Maclean, M.D. Diseases of the Chest in Children: their Treatment by Blisters.

John Wallace, M.D. 1. Case of Stricture of the Female Urethra.

2. Case of Acute Metritis occurring in the Seventh Month of Pregnancy during Rheumatic Fever. 3. Exhibition of an improved Cephalotribe after the Edinburgh Model; and of Stethoscopes for Vaginal and Abdominal Uterine Stethoscopy.

A. E. McRae, M.D. The Electro-Magnetic Current in Labour.

D. Lloyd Roberts, M.D. Short notes of a Case of Imperforate Hymen with Retained Menstrual Fluid.

John Murray, M.D. The Communicability of Cholera.

Edward Waters, M.D. The Propagation of Typhus Abdominalis.

J. W. Tripe, M.D. The Sanitary Statistics of the different Metropolitan Districts for the years 1861-70; especially with regard to Density of Population and Relative Wealth of the Residents.

Hugh Miller, M.D. Tedious Labour from Debility, and its Treatment.

Edward J. Syson, L.R.C.P.Ed. The Duties of a Medical Officer of Health.

Dyce Duckworth, M.D. 1. The Causes and Treatment of Certain Forms of Sleeplessness. 2. A New Method of Determining the Presence of, and Recovery from, true Ring-worm.

J. F. Payne, M.B. The Histology of the Omentum.

Charles Stewart, Esq., F.L.S. The Structure of the Hectocotylus of a small Cephalopod.

Robert J. Lee, M.D. General and Microscopical Examination of the Decidua, Chorion, etc., in a recent Specimen of a Gravid Uterus which contained a Perfect Ovum between the fifth and sixth weeks of Development.

John St. S. Wilders, Esq. 1. The Treatment of Gleet by the Insufflation of Astringent Powders. 2. Remarks on two Cases of Syphilitic Aphasia.

C. R. Drysdale, M.D. 1. The Views of Niemeyer and others on Phthisis Pulmonalis. 2. On Syphilitic Iritis.

W. R. E. Smart, C.B., M.D., R.N. Notes towards a History of the Medical Department of the Navy.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, July 24th, at 2 P.M., under the presidency of GEORGE GILLET, Esq. Dinner at 5 o'clock.

Gentlemen are requested to send to the Secretary the titles of communications they wish to make at the meeting.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, June 24th, 1873.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of the above Branch will be held in the Imperial Hotel, Aberdeen, on Saturday, July 26th, 1873, at 1.30 P.M.

It is intended to have an exhibition of books, instruments, drugs, etc., which have appeared within the past year; and members desirous of exhibiting such, are requested to communicate with the Secretary, or with Dr. Findlay, 47, Schoolhill, Aberdeen.

Dinner in the Imperial Hotel at 3 o'clock P.M.

Further particulars will be intimated by circular.

ALEX. OGSTON, M.D., *Honorary Secretary*.

Aberdeen, July 9th, 1872.

NEW MEMBERS OF THE ASSOCIATION.

I.

THE subjoined list contains the names of gentlemen who have been elected members of the British Medical Association from the commencement of the present year, together with the names of three or four members which were accidentally omitted in the list published in the JOURNAL of May 3rd. In addition to the list now published, upwards of two hundred applications for admission to the Association have been received by the General Secretary and the Secretaries of the Metropolitan Counties Branch.

Adam, Charles, M.D., Elgin
 Adams, E. J., Esq., St. Matthew's
 Workhouse, Bethnal Green
 Alderson, F. H., Esq., Hammersmith
 Alford, Henry, Esq., Taunton
 Allbutt, Henry A., Esq., Leeds
 Amsden, George, M.D., Brentwood
 Anderson, Mrs. E. Garrett, M.D., Upper
 Berkeley Street
 Anderson, John, M.D., Ulverston
 Anderson, W. S., M.D., Glasgow
 Andrews, Geo., Esq., Walton, Liverpool
 Armistead, William, M.B., Harpurhey,
 Manchester
 Armstrong, John, Esq., Harpurhey,
 Manchester
 Atchison, Arthur, Esq., Hull
 Atwood, William A., L.K.Q.C.P., Lad-
 broke Grove
 Ayling, Wm. H., Esq., Gt. Portland St.
 Bailey, Isaac, Esq., Stockport
 Bailey, Thomas, Esq., Gt. Stone
 Baldwin, H. S., M.D., Blackburn
 Banham, H. F., Esq., Cambridge
 Barnish, W. C., Esq., Wigan
 Batten, W. S., Esq., Broomsgrove
 Baylis, Robert L., Esq., Sturbridge
 Baylis, Charles O., M.D., Birkenhead
 Bellamy, Edward, Esq., Margaret Street
 Bennett, Chas. H., M.D., Hammersmith
 Biddle, Cornelius, Esq., Merthyr Tydfil
 Bird, George, M.D., Welbeck Street
 Blaker, N. F., Esq., Brighton
 Blok, Moses, Esq., Chiswell Street
 Boddy, Hugh W., Esq., Manchester
 Booth, E. J. H., Esq., Mirfield
 Booth, John G., Esq., Padiham
 Boulton, Bernard J., M.D., Horncastle
 Bouldower, Andrew, Esq., Strangeways,
 Manchester
 Bowman, George, M.B., Stretford Road,
 Manchester
 Boyd, Robert, M.D., Bolton Row
 Bradshaw, W. H. D., M.D., Weston
 super Mare
 Brannwell, Richard, Esq., Brighton
 Brims, James, M.D., Burnley
 Briscoe, W. T., M.B., Chippenham
 Brocklehurst, T. H., Esq., Old Trafford,
 Manchester
 Brooks, J. E., Esq., Silverdale, Staffordsh.
 Brown, Fred G., Esq., Finsbury Circus
 Buckell, Leonard, M.D., Chichester
 Buckley, James, Esq., Manchester
 Buckley, Samuel, Esq., Manchester
 Bulley, Francis A., Esq., Reading
 Burger, A. Esq., King St., Finsbury Sq.
 Burgess, E. A., Esq., Brighton
 Burgess, Robert, Esq., Birmingham
 Burns, John, Esq., Burnley
 Byles, H., M.B., Accrington
 Cameron, J. A., M.B., Nairn
 Cameron, James S., M.D., Huddersfield
 Campbell, A. C., M.B., Dundee
 Campbell, J. H., Esq., Edinburgh
 Campbell, W. W., M.D., Dunse
 Campbell, W., Esq., Hastings
 Cannell, John, M.D., Accrington
 Cappie, James, M.D., Edinburgh
 Carnegie, John, M.D., Chesterfield
 Carr, Charles, Esq., Newcastle on Tyne
 Carson, Stewart, Esq., Alston
 Carson, T., Esq., Liverpool
 Carter, Jabez, Esq., Bedford
 Cartwright, H. G., Esq., Bugbrooke
 Cassell, J. P., M.D., Glasgow
 Cavafy, John, M.D., Arlington Street
 Chattaway, A. G., Esq., Kingsland,
 Herefordshire
 Chesbrough, H. A., M.D., Blackburn
 Chilcote, H. N., Esq., Babbicombe
 Clarke, Francis E., M.B., Drogheda
 Clarke, F. H., Esq., Chillington, Kings-
 bridge
 Clarke, W., Esq., Stockport Road, Man-
 chester
 Clegg, Joseph, Esq., Epping
 Coot, Arthur A., Esq., Blackburn
 Cox, Albert G., Esq., Crewkerne
 Craven, Robert, Esq., Southport
 Creagh, William, Esq., Royal Artillery,
 Birmingham
 Cribb, Henry, Esq., Bishop's Stortford
 Croft, T. H. W., Esq., Snitterfield
 Davenport, W., Esq., Stockport
 Davidson, Charles, Esq., Hackney
 Davidson, J. K., Esq., Blackburn
 Davies, W., Esq., Conwili
 Davis, Maurice, M.D., Brunswick Square
 Davison, James, Esq., Oxford Terrace,
 Upper Holloway
 Dawes, R. St. M., Esq., Portsdown Road
 Dobson, Andrew, Esq., Birmingham
 Donaldson, J., M.D., Hillhead, Glasgow
 Doubleday, James, Esq., Fishponds,
 Bristol
 Douglas, J. G. D., M.B., Dispensary,
 Bournemouth
 Douglas, J. C., M.B., Greenock
 Drake, Charles H., Esq., Brixton Hill
 Drake, F. H., Esq., Hartlepool
 Dreschfeld, J., M.D., Manchester
 Dunbar, R. F., M.D., Blackburn
 Dyster, F. D., M.R.C.P., Tenby
 Easton, J. A., M.D., Petworth
 Eaton, F. J., Esq., Grantham
 Edwards, Joshua P., Esq., Tunstall
 Ellerton, F. C. G., Esq., Lindley, Hud-
 dersfield
 Ellis, H. D'Arcy, Esq., Brierley Hill
 Evans, J., Tasker, jun., M.D., Hereford
 Ewens, John, Esq., Cerne Abbas
 Faussett, H. J. M.B., Poplar
 Findlater, Jas., Esq., Bowling, Bradford
 Flack, James, Esq., Shoreditch
 Folkes, William, Esq., Manchester
 Forrest, John, Esq., Blackburn
 Forthgill, S. A., Esq., Fence Houses
 Fox, Michael J., Esq., Church, Accrington
 Galloway, John B. M., M.B., Martin
 Colby, Sunderland
 Gambier, Thomas, Esq., Northumber-
 land Terrace
 Gervis, Henry, M.D., St. Thomas's St.
 Gibbins, A. T., Esq., Infirmary, Stamford
 Gibson, C. H., Esq., Hatton, Warwick
 Glascock, C. E., M.D., Manchester
 Goddard, Francis, Esq., Fulham Road
 Godson, Clement, M.B., Up. Brook St.
 Gosling, S. F., Esq., Biddulph, Congleton
 Goulet, Arthur P., Esq., Marlboro' Road
 Gray, Clement F., Esq., Newmarket
 Gray, Robert, Esq., Armagh
 Greaves, John, Esq., Hammersmith
 Gregg, Rev. T. H., B.D., M.D., Har-
 borne, Birmingham
 Grieve, John, M.D., Glasgow
 Griffith, John T., M.D., Camberwell
 Griffith, Robert, L.K.Q.C.P., Pwllheli
 Grime, H. A., Esq., Blackburn
 Grime, John, M.D., Blackburn
 Hackney, Alfred H., Esq., Hawkhurst
 Hackney, John, Esq., Hythe
 Hadden, John, M.D., Horncastle
 Hague, Samuel, Esq., Camberwell
 Hartley, E., L.K.Q.C.P., Warwick
 Square
 Hawthorn, F. J., Esq., Oaken, Wolver-
 hampton
 Haynes, S., Esq., Stansted-Montfichet
 Head, Robert T., Esq., East Grinstead
 Healey, T. St. C., Esq., Hull
 Heard, Robert L., L.K.Q.C.P., Ramsey,
 Isle of Man
 Hicks, G. B., Esq., Amherst Road,
 Hackney
 Hind, Henry, Esq., Stockton-on-Tees
 Hindle, G., Esq., Over-Darwen
 Holder, W., Esq., Hull
 Hollingworth, John, Esq., Hull
 Horan, John, L.R.P.Ed., Sunderland
 Horn, William, Esq., Dalton in Furness

Hosegood, Samuel, Esq., Chorlton on
 Medlock
 Hosking, Richard, Esq., Penzance
 Howell, H. S., M.D., Great Dunmow
 Humphreys, John H., M.B., Hospital,
 Guildford
 Hunt, William A., Esq., Yeovil
 Husband, H. A., M.B., Stroud Green Rd.
 Hutchings, H., Esq., Canterbury
 Hutton, George A., Esq., Rifle Brigade
 Jackson, Alfred, M.D., Southsea
 James, Thomas, Esq., Louth
 James, W. R., Esq., Upper Gloucester
 Place
 Jameson, Hugh, Esq., Upper Norwood
 Jeffery, G. A., M.D., Eastbourne
 Johnson, John, M.D., Tunbridge Wells
 Johnson, T. M., M.D., Salford
 Jones, C. S., Esq., Chichester
 Jones, Esq., Weston super Mare
 Jonson, G. C., Esq., South Eaton Place
 Kellett, Robert J., L.K.Q.C.P., Bilston
 Kelly, Bernard, M.D., Plough Road,
 Rotherhithe
 Kelsey, William, Esq., Hull
 Kennedy, David M., M.D., Liverpool
 Kerr, James A. C., Esq., Claughton,
 Birkenhead
 King, E. P., Esq., Chepstow
 King, H. K., M.D., Welwyn
 Kiallmark, H. W., Esq., Prince's Square
 Knott, S. J., Esq., St. Mary's Hospital
 Lamb, Joseph, Esq., Birkenhead
 Lascelles, Robert L., Esq., Slingsby
 Latimer, H. A., Esq., Swansea
 Leeson, Thomas R., Esq., Blackburn
 Lewellyn, John, Esq., Caerphilly
 Lewis, Charles G. M., Esq., Wingham
 Lewis, Charles, Esq., Infirmary, North-
 ampton
 Lightbourne, W. A., M.B., Blackburn
 Liellwell, G. J., Esq., Ty Mawr, Aberdare
 Lloyd, Edward J., M.B., Carmarthen
 Loane, Jos., Esq., Dock St., Whitechapel
 Lock, E. R., Esq., Debenham
 Lock, John G., Esq., Tenby
 Logie, Cosmo G., M.D., Royal Horse
 Guards
 Lovejoy, W. H., M.D., Portman Street
 Lovell, W. F., Esq., Compton Martin,
 Bristol
 Lycett, J. A., Esq., Atherstone
 Lyth, J. B., Esq., Sheffield
 Maberly, F. H., Esq., Birmingham
 McDowell, Francis V., Esq., Ballickmaylor
 Mackay, W. P., M.D., Springbank, Hull
 Macellar, Peter H., M.B., Stockwell
 MacLagan, T. J., M.D., Dundee
 Macnaughten, Thomas, M.D., Bolton-
 le-Moors
 McMunn, J. A., M.B., Chelsea
 Mair, Edward, M.D., Udry
 Mallett, W. J., M.D., Manchester
 Malloch, A. E., M.D., Ontario
 Marshall, F. J., Esq., Lock Hospital
 Marshall, L. W., M.B., Hospital, Not-
 tingham
 Maul, E. H., M.D., Southampton
 Mayer, J. E., M.D., Shifnal
 Mayo, A. C., Esq., Mildenhall
 Mickle, W. J., M.D., Bow
 Middleton, W. H., L.K.Q.C.P., Rus-
 holme, Manchester
 Milsome, John E., M.D., Chertsey
 Moore, Arthur J., Esq., Eastbourne
 Morgan, E. R., Esq., Llanamlet, Swansea
 Morison, J. W., Esq., Pembroke
 Morley, E. S., M.D., Blackburn
 Morris, J. C., Esq., Barrowfield, Burnley
 Morris, John A., Esq., Caerleon
 Morris, E. H., Esq., Aberdare
 Mort, William, M.D., Southport
 Morton, Thomas H., Brightside, Sheffield
 Moxon, Thomas H., Esq., Gt. Yarmouth
 Munden, Charles, Esq., Ilminster
 Murphy, Michael D., Esq., Oldbury
 Nichols, George W., Esq., Rotherhithe
 Nix, E. J., Esq., Upper Marylebone St.
 Noake, S. J., Esq., Halton, Leeds
 Oakes, C. F., Esq., Bakewell
 Odium, D. C. T., M.B., Stockton-on-Tees
 Ogilvie, J. F., M.D., Upper Norwood
 O'Gorman, R. P., L.K.Q.C.P., Pendle-
 ton, Manchester
 Oliver, Samuel, Esq., Burton Street
 O'Sullivan, D. A., Esq., Burnley
 Owen, Edward R., Esq., Oxford
 Owen, Edmund B., Esq., Cleveland Sq.
 Owen, Harvey K., M.D., Clapham Road
 Paget, W. S., M.B., Aigburth, Liverpool
 Parkinson, Charles H. W., Esq., Wim-
 borne Minster
 Parrott, Edward J., Esq., Hayes
 Patchett, Henry, Esq., Blackburn
 Paterson, Thornburn, Esq., Liverpool
 Paterson, William, M.D., Chorley
 Patrick, Wm., M.D., Bridgeton, Glasgow
 Pattinson, Henry B., Esq., Hanwell
 Pedler, George H., Esq., Trevor Terrace
 Peele, Edward, L.K.Q.C.P., Dublin
 Penhall, John T., Esq., St. Leonard's-
 on-Sea
 Pennington, Thomas, Esq., Liverpool
 Picard, P. K., M.D., Abbey Road
 Pickles, H. E., Esq., Blackburn
 Pickop, John, Esq., Blackpool
 Pinder, John B., Esq., Harpurhey, Man-
 chester
 Pitt, Edward G., M.D., Sampson's
 Gardens
 Pocock, Edward W., Esq., Brixton Road
 Pope, Edmund, Esq., Bruxton Road
 Prichard, W., Esq., Bridgend
 Purnell, Richard, M.D., Wells, Somerset
 Rae, James, M.D., Stirling
 Rae, John, Esq., Blackburn
 Rae, Matthew J., M.D., Blackburn
 Raven, Henry, Esq., Litcham
 Rayner, William, M.D., Stockport
 Read, Arthur W., Esq., Coventry
 Reed, James T., Esq., Ryhope
 Rees, H., Esq., Bryn-Amman, Swansea
 Reid, A. M.D., Canonbury Park North
 Reid, John B., Esq., Castle Eden
 Rhys, Watkin, Esq., Brynffedwan, Tre-
 herbert
 Richards, George, Esq., Saundersfoot
 Richardson, Ralph, M.D., Dartmouth
 Ridden, Walter, Esq., University Col-
 lege Hospital
 Riley, Joseph St. P., Esq., Salford
 Rix, Benjamin, Esq., Infirmary, Tun-
 bridge Wells
 Roberts, David W., M.D., Llanfairfechan
 Roberts, Lawton, Esq., Ruabon
 Roberts, Thomas A., Esq., Comingsby
 Robinson, Enoch, Esq., Dukinfield
 Robson, Adam, Esq., South Shields
 Rogers, William R., M.D., Berners St.
 Ross, James, M.D., Elgin
 Ross, James J., M.D., Inverness
 Royle, Peter, M.D., Manchester
 Russell, Hugh, M.B., Ferryhill
 Sandwell, Edward, Esq., Charles Street,
 Soho Square
 Saunders, Henry W., Esq., General
 Hospital, Bristol
 Scott, John, Esq., Harley Street
 Sculthorpe, A. M., Esq., Tamworth
 Scutcliffe, F. E., Esq., Tamworth
 Sedgwick, Charles, Esq., Maidstone
 Seymour, A. W., M.D., Brighton
 Shea, John, M.D., Kingston, Surrey
 Sheehy, William H., Esq., Claremont Sq.
 Sheward, C. E., Esq., Malvern Wells
 Shewen, Alfred, M.B., Gravesend
 Shunkwin, Thomas C., M.B., Cork
 Short, W. H., Esq., Walsham-le-Wil-
 lows, Suffolk
 Sibbald, John, M.D., Edinburgh
 Sinclair, Robert, M.B., Infirmary, Perth
 Skaffe, John, Esq., Blackburn
 Skelton, Henry, Esq., Downend, Bristol
 Smith, Eustace, M.D., George Street,
 Hanover Square
 Smith, W. T., Esq., Up. Phillimore Place
 Smithers, Bartholomew D., Esq., Hay-
 ward's Heath
 Spence, James B., M.D., Burntwood,
 Lichfield
 Spencer, W. H., Esq., Preston
 Stamford, W., Esq., Tunbridge Wells
 Steele, James D., Esq., Knaphill
 Stephens, Edward, Esq., Ilminster
 Stephenson, W. H., M.D., Blackburn
 Stothard, James, Esq., Hull
 Streeter, John S., Esq., Harpur Street
 Sutcliffe, W. H., Esq., Knutsford
 Swan, R. J., Esq., Northleach
 Sweeney, W. F., M.B., Carregans, Lon-
 donderry
 Swinson, G. N., Esq., Turvey
 Taylor, Herbert O., M.B., Nottingham
 Taylor, James R., M.D., Glenarney,
 Wicklow
 Thompson, Henry, Esq., Infirmary, Hull
 Thompson, Joseph, Esq., Hawes, Bedale
 Thompson, William W., Esq., Bognor
 Thomson, Alexander T., Esq., Oldham
 Thomson, David, M.D., Higham Ferrars
 Tibbitts, Herbert, Esq., Guilford Street
 Ticehurst, Augustus R., Esq., St. Leo-
 nard's-on-Sea
 Tinley, Thomas, Esq., Whitby

Todd, John M., M.D., Bognor
 Tonge, Morris, M.D., Harrow
 Tossell, Louis H., M.B., Exeter
 Travers, William, Esq., Lower Phillimore Place
 Turner, Horace, Esq., Norwich
 Turner, John, M.D., Northampton
 Wadd, T. H., Esq., St. Leonard's-on-Sea
 Walker, Archibald D., M.D., Ladbroke Grove Road
 Walker, James F., L.K.Q.C.P., Reading
 Wallace, F., Esq., Hackney Road
 Wallace, James, Esq., Carshalton
 Watkins, Charles, Esq., King William Street, Strand
 Wells, John R., Esq., Fitzroy Street
 Wells, Harry, M.D., Gualaquaycho, South America
 Westcott, W. W., M.B., Martock
 Whitehead, John, Esq., Clarence Terrace, Finsbury Park
 Whittington, Thomas, Esq., Prestwich, Manchester

Williams, J. T., Esq., Rossall, Fleetwood
 Williams, William, Esq., Festiniog
 Williams, William E., Esq., Abertillery
 Wilmot, Alfred E., Esq., Escrick
 Wilson, George A., Esq., Blackburn
 Wilson, Henry O., Esq., Cloughton, Birkenhead
 Wilson, John, Esq., Greatham
 Wilson, Robert, Esq., Blackburn
 Wilson, Samuel, Esq., South Shields
 Woodforde, Alfred, Esq., Plaistow
 Woodhouse, Thomas J., M.D., Fulham
 Woodman, Robert, M.D., Ormesby
 Woodman, William R., M.D., Exeter
 Woods, Oscar T., M.B., Halton, Warwick
 Wordsworth, John C., Esq., Harley St.
 Worship, J. L., Esq., Riverhead, Sevenoaks
 Wotton, Charles, M.D., King's Langley
 Wright, Edward J., Esq., Clapham Road
 Wybrants, J., M.D., Shepton Mallet
 Wyllys, William E., Esq., Great Yarmouth
 Yeo, I. Burney, M.D., St. James's Street

METROPOLITAN COUNTIES BRANCH.

THE twenty-first annual meeting of this Branch will be held at the banqueting-hall, Alexandra Park, on Tuesday, July 15th, at 3 P.M. President for 1872-73, Sir WILLIAM FERGUSSON, Bart., F.R.S.; President-elect for 1873-4, RICHARD QUAIN, M.D., F.R.S.

At half-past 5 P.M. precisely, the members will dine together; RICHARD QUAIN, M.D., F.R.S., in the Chair. Tickets, fifteen shillings each (including ices, tea, coffee, and attendance, and exclusive of wine).

A. P. STEWART, M.D. } *Honorary Secretaries.*
 ALEXANDER HENRY, M.D. }

London, June 18th, 1873.

CORRESPONDENCE.

THE CANCER HOSPITAL.

SIR,—I am quite ready to confess that the fact of my having very recently joined the staff of the Cancer Hospital, and having for the first time to sign a report, does not exonerate me from having done so without examining the statements contained therein too critically. It may excuse a certain degree of remissness, but it does not relieve me from the responsibility. And inasmuch as I desire, before all things, to make no statements of any experience of mine to the profession or to the public not amply warranted by the facts, I beg to say on my own part that I disclaim a knowledge of any cure for cancer other than by operation, so far as that may be called a cure.

I know no method, although we have tried many new agents purporting to be remedies, which has any specific influence on the disease, or which is not known equally by others; and I make no claim to any knowledge except that which the treatment of numerous examples of the disease, and the natural interest in it arising therefrom, confer.

I trust this statement will rectify any mistaken impression which my signature to the document in question may have produced; and I do not hesitate to express my regret that my name was attached to it, since I now see it affirms more than I am able to subscribe to.

I am, etc.,

J. FOSTER.

13, Upper Wimpole Street, W.

THE CANCER HOSPITAL REPORTS.

SIR,—From your observations, and comments made thereon, it appears that our report for the year 1872 is considered to convey an erroneous impression of the work done at the Cancer Hospital. We much regret that such is the case, and can assure you that nothing was further from our intention. In explanation, we will quote the passages referred to, in order to make ourselves more fully understood.

"Of the in-patients, it is most gratifying to find that fifty-four were discharged with disease arrested or relieved; eighty-nine were successfully operated on, and discharged well; thirty-eight were discharged cured without operation. On the other hand, of seventy-two who when admitted were in a hopeless state, forty-two died, and there remained in the hospital, at the end of the year, fifty-three."

In regard to these statements, we can only repeat that they are strictly

correct, taken in conjunction with the rest of the report and statistical statement; but, in reference to those patients discharged cured without operation, we desire to offer an explanation. These cases include all those treated by caustic, or any method other than the knife, écraseur, or cautery; in each of these groups there are most cancerous cases. We considered the statistical statement fully explained this, but short extracts taken from a document intended to be read as a whole, and even these quoted incorrectly, are calculated to mislead. In one instance you have substituted the word "cured," when that used by us is "relieved," and we cannot think that anyone reading the statistical statement, and our report thereon, would be likely to interpret it in the light you have done; however, we are prepared to admit, now that our attention has been drawn to it, that it would be better for the non-cancerous cases to be more distinctly separated, and in future reports this will be done.

We claim no special knowledge regarding the treatment of cancer beyond that which is gained by a large field of observation, and constant familiarity with the disease, and have distinctly stated that we have no faith in any specific for its cure.

We are, etc.,

ALEX. MARSDEN.

JAMES HAYWARD.

Cancer Hospital, Brompton, July 4th, 1873.

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

AMERSHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications to Henry Bedford, Esq.
 AXBRIDGE RURAL SANITARY DISTRICT—Four Medical Officers of Health: £50 per annum, each, for two years.
 BIRMINGHAM BOROUGH PRISON—Surgeon: £100 per annum. Applications to Messrs. Gem and Hebbert.
 BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon: £100 per annum, furnished apartments, etc.
 CARNARVON UNION—Medical Officer and Public Vaccinator for the Llanrug District: £60 per annum, and fees. Applications to John Thomas, Esq.
 CHARING CROSS HOSPITAL—Assistant-Physician.
 CHESTER Urban and Rural and other Sanitary Districts—Medical Officer of Health: £600 per annum. Applications to John Walker, Esq., Town Clerk.
 CORNWALL—Public Analyst.
 DERBY COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, lodgings, etc.
 DUNMOW Rural, and other Sanitary Districts—Medical Officer of Health: £700 per annum. Applications to Wm. Thurgood, Esq., Saffron Walden.
 GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications to W. T. Grant, Esq.
 HALIFAX INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £40 per annum, board, and lodging.
 H.M.'S INDIAN MEDICAL SERVICE—Eleven Surgeons.
 HINCKLEY UNION—Medical Officer for the Burbage District: £60 per annum.
 INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
 LEEDS URBAN SANITARY DISTRICT—Medical Officer of Health: £400 per annum. Applications to Capel A. Curwood, Esq.
 LEICESTERSHIRE INFIRMARY AND FEVER HOUSE—House-Surgeon and Apothecary: £120 first year, rising £10 per annum to fourth year, board, apartments, and washing.
 LONDON PORT SANITARY DISTRICT—Medical Officer of Health: £400 per annum till 25th March next.
 MANORHAMILTON UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Manorhamilton Dispensary District: £100 per annum, and fees. Applications to John Tate, Esq., Deer Park, Manorhamilton.
 NAVAL MEDICAL SERVICE—Assistant-Surgeons.
 NORTH STAFFORDSHIRE INFIRMARY, Hartshill—House-Surgeon: £80 per annum, increasing to £10 per annum, board, etc.
 NORTHUMBERLAND LUNATIC ASYLUM, Morpeth—Assistant Medical Officer: £100 per annum, furnished apartments, board, and washing. Applications to Richard Wilson, Esq.
 PENRITH RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £500 per annum.
 ROYAL BERKS HOSPITAL, Reading—Assistant-Physician.
 ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon and Secretary: £40 per annum, board, etc.
 SAFFRON WALDEN, DUNMOW, etc., SANITARY DISTRICTS—Medical Officer of Health: £700 per annum.
 ST. GEORGE'S URBAN SANITARY DISTRICT: £50 per annum for two years. Applications to J. W. Young, Esq., Royal Insurance Buildings, Bristol.
 ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, Manchester—Medical Officer: £60 per annum, board and residence.
 ST. PETER'S HOSPITAL FOR STONE, etc.—House-Surgeon.
 SEAMEN'S HOSPITAL, Greenwich—Visiting Surgeon.
 SHEFFIELD UNION—Medical Officer for the South East District: £40 p. ann.
 STAMFORD, RUTLAND, and GENERAL INFIRMARY—House-Surgeon, Apothecary, and Secretary: £100 per annum, board, lodging, and washing.
 STRATFORD-ON-AVON Rural, combined with several other Rural and Urban Sanitary Districts—Medical Officer of Health: £600 per annum. Applications to J. C. Warden, Esq.
 THIRSK RURAL SANITARY DISTRICT—Medical Officer of Health: £50 for one year.
 WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon and Assistant-Secretary: £100 per annum, furnished rooms, etc.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Surgeon.
 WEST RIDING ASYLUM, Wakefield—Clinical Assistant.
 WHITTLESEY UNITED PARISHES—Medical Officer for the Workhouse
 (£20 per annum), and the Southern District (£60 per annum).
 WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—
 Physician's Assistant: £100 per annum, board, washing, and furnished apart-
 ments.
 WORCESTER RURAL AND URBAN SANITARY DISTRICTS, combined—
 Medical Officer of Health: £50 per annum.
 WREXHAM INFIRMARY AND DISPENSARY—House-Surgeon: £80 per
 annum, residence and maintenance.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London
 Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthal-
 mic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—
 West London, 3 P.M.—National Orthopaedic, 2 P.M.
 WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex,
 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—Lon-
 don, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern,
 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30
 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.
 —Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Roya
 Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hos-
 pital for Diseases of the Throat, 2 P.M.—Royal Westminster
 Ophthalmic, 1.30 P.M.
 FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London
 Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal
 South London Ophthalmic, 2 P.M.
 SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing
 Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free,
 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for
 Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—
 St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Medical Microscopical Society, 8 P.M. Conversational Meeting for the
 Exhibition of Specimens, etc.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Corre-
 spondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should
 authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor;
 those concerning business matters, non-delivery of the JOURNAL, etc., should be
 addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE are much obliged by Dr. Ogston's (Aberdeen) kindness in forwarding the de-
 sired information.

THE REDRUTH TIMES AND CAMBORNE ADVERTISER.—The paragraph to which
 our attention is called in the *Redruth Times* of July 4th, headed "Dr. Harris
 among Princes," is a very silly one, and we cannot for a moment suppose that Dr.
 Harris was cognisant that it would appear. It reads like the chat of a private letter
 indiscreetly converted into copy.

STUDENT.—Attfield's *Chemistry* will, we think, suit our correspondent best.

MR. DAVIES (Swansea).—Safely received.

A COUNTRY SURGEON should consult a solicitor. Looking to the facts which he
 states, we believe he would have no difficulty in recovering the fee to which he is
 entitled.

DR. HARRIS (Redruth).—Communications as to changes of address and all matters
 of business, should be addressed to F. Fowke, Esq., General Secretary and Man-
 ager, office of the JOURNAL, 37, Great Queen Street, London, W.C.

DR. CAMPBELL BLACK.—The matter shall have attention.

M. J. R. PERKINS (Downton).—We have no information on the subject.

S. PRALL (West Malling).—The mode of procedure is always indicated in the ad-
 vertisement, and the best certificates are obviously those bearing on acquirements
 and performances relating to public hygiene.

A RATIONAL MEMBER is not called upon to take part in any proceedings in which
 he does not concur. The attendance at St. Paul's is wholly voluntary. He will
 allow others who differ from him "in an unsectarian age" to join in prayer, just
 as they freely accord to him the undoubted privilege of abstaining from it.

MR. J. JAMES (Birmingham).—Ladies are not invited to the *soirée* at the College of
 Surgeons, nor could they be properly, since it is chiefly held in the museum. No
 intimation on the subject has yet been received from the Lord Mayor. They are
 specially invited at the University College.

IRON ALUM.

SIR,—Will any of your subscribers tell me the internal dose of iron alum, the quan-
 tity for an injection, and in what cases it is most efficacious?

I am, etc.,

A SUBSCRIBER,

CORRESPONDENTS are particularly requested by the Editor to observe
 that communications relating to Advertisements, changes of address,
 and other business matters, should be addressed to Mr. Francis
 Fowke, General Secretary and Manager, at the Journal Office, 37,
 Great Queen Street, W.C., and not to the Editor.

INCOME TAX: ITS INJUSTICE TO THE MEDICAL PROFESSION.

SIR,—As a member of a hardworking and ill-paid profession, I desire to call the at-
 tention of my medical brethren, through the medium of your JOURNAL, to the
 great hardship we all, more or less, suffer in being obliged to pay the income tax.
 A medical man has a large sum of money to spend before he can be fully qualified
 to practise his profession; he has then to work hard for several years before he
 can save a penny. He must live well, or he is in danger of falling a victim to
 disease. He must dress well, keep a servant, and live in a decent house, or people
 will not consider him a gentleman. Then he must give long credit, and trust
 everyone, or he will soon lose his patients. All this he is expected to do; and yet
 during the first few years of his practice he may make less than a skilled mechanic.
 However, if his clear income is over one hundred pounds per annum, he must pay
 a tax of varying amount, which I consider is a sum of money wrongly extorted
 from him. It may be only a guinea or two, or even less that he has to pay; but if
 he has house-duty, poor-rate, etc., to pay, he can ill-afford to part with the money,
 which goes he knows not where. Surely things are dear enough already! what
 with the price of coal, provisions, etc., one finds it hard to live as an educated
 gentleman, and keep up a respectable position, without having to pay a certain sum
 out of that which has been hard worked for.

I consider this subject is one worthy of the consideration of the members of the
 British Medical Association. If they (along with all the members of the pro-
 fession) would combine and petition against the tax being imposed upon medical
 men, it would be a great boon to many if carried. I should be happy to hear of
 the subject being brought under discussion at the meeting of the Association in
 London next month. I, on my part, as a member, would certainly support any
 movement for the repeal of the tax.

July 3rd, 1873.

I am, etc.,

ANTI-INJUSTICE.

WE cut the following rhymes from the *Ohio Clinic*, May 3rd, 1873. We have seen
 better—and worse.

THE ANATOMIST TO HIS LOVE.

I list as thy heart and ascending aorta
 Their volumes of valvular harmony pour,
 And my soul from that muscular music has caught a
 New life 'mid its anatomical lore.

O, rare is the sound when thy ventricles throb
 In a systolic symphony measured and slow,
 While the auricles answer with rhythmical sob,
 As they murmur a melody wondrously low.

O, thy cornea, love, has the radiant light
 Of the sparkle that laughs in the icicle's sheen;
 And the crystalline lens, like a diamond bright,
 Through the quivering frame of thine iris is seen.

And thy retina, spreading its lustre of pearl,
 Like the far-away nebula, distantly gleams
 From a vault of black cellular mirrors that hurl
 From their hexagon angles the silvery beams.

Ah, the flash of those orbs is enslaving me still,
 As they roll 'neath the palpebrae, dimly translucent,
 Obeying in silence the magical will
 Of the oculo-motor—pathetic—abducent.

O, sweet is thy voice, as it sighingly swells
 From thy daintily quivering chordæ vocales,
 Or rings in clear tones through the echoing cells
 Of the antrum, the ethmoid, and sinus frontalis.

WE are indebted to correspondents for the following periodicals, containing news,
 reports, and other matters of medical interest:—The Liverpool Weekly Albion,
 July 5th; The Manchester Guardian, July 6th; The Aberdeen Daily Free
 Press, July 5th; The Bath Express, July 5th; The Birmingham Daily Post,
 July 9th; The Herts and Essex Observer; The Roscommon Journal; The Hull
 Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The
 Sussex Daily News; The City Press; The Birmingham Daily Mail; The Kendal
 Mercury; The Daily Review; The Western Mail; The Wrexham Guardian; The
 Lincolnshire Chronicle; The Inquirer; The Lincoln Gazette; The Redruth
 Times, July 4th; The Liverpool Albion; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. G. Rolleston, Oxford; Dr. G. M. Humphry, Cambridge; Dr. Drysdale,
 London; Mr. C. F. Hodgson, Brighton; Dr. Dyke, Merthyr Tydfil; Dr. J. Batty
 Tuke, Edinburgh; Dr. Hearder, Carmarthen; Dr. Ogston, Aberdeen; Mr. J.
 R. Perkins, Downton; Dr. Campbell Black, Glasgow; Mr. H. A. Allbutt, Leeds;
 Mr. C. S. Jeaffreson, Newcastle-upon-Tyne; Dr. D. Noble, Manchester; Our
 Liverpool Correspondent; Dr. Maclean, Glasgow; Mr. S. Carson, Alston; Our
 Paris Correspondent; A Rational Member; Mr. Dyte, London; Mr. W. Adams,
 London; Dr. Day, London; Dr. Boggs, Paris; Mr. A. Kisch, London; Our
 Dublin Correspondent; Mr. A. Davies, Swansea; Dr. J. Hughlings Jackson,
 London; Dr. Maclean, Applecross; Mr. S. Prall, West Malling; Dr. Sawyer,
 Birmingham; Mr. Brown, Caillington; Mr. Grove, London; Mr. J. Foster,
 London; Mr. T. T. Blease, Altrincham; Dr. Eustace Smith, London; Mr. Wm.
 Mac Cormac, London; Mr. Wilson, Wallsend; Mr. G. Lawson, London; Our
 Glasgow Correspondent; Dr. Cheadle, London; Mr. A. C. Newman, Manchester;
 Mr. S. James, Manchester; Dr. Fussell, Brighton; Mr. Redwood, Rhymney; A
 Correspondent; Dr. A. Ogston, Aberdeen; Dr. Farquharson, London; Dr. Smart,
 Haslar; Mr. J. T. Reade, Belfast; Dr. J. W. Ogle, London; etc.

LECTURES ON THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,

Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; &c.

LECTURE II.—Wednesday, June 4th.—Concluded. THE MUSCLES OF THE UPPER LIMB.

ON THE MUSCLES OF THE FOREARM AND HAND.

IN considering the irregularities in the muscles of the forearm and hand, I will first dispose of the palmaris longus, which is, perhaps, more subject to non-development as well as to irregularities, and to a greater variety of irregularities, than any other muscle in the body. Indeed, it varies in almost every conceivable manner. It is often absent altogether. It is sometimes double, or three muscles are present. The usual disposition of muscle and tendon may be reversed, the latter being nearest the elbow. It may arise from the coronoid process of the ulna, or from the radius in the neighbourhood of the origin of the flexor sublimis digitorum, or displacing a part of that muscle; or it may be joined by slips from either the radius or the ulna. It may arise from, or derive slips from, either of the adjacent muscles—the flexor carpi ulnaris, the flexor carpi radialis, the pronator teres, or the flexor sublimis digitorum. It may be lost in the fascia of the forearm, or be attached to the pisiform bone. It may take a deep course, running to the ulna or to the carpal bones. It may blend with the flexor sublimis or the flexor profundus digitorum, with the flexor carpi ulnaris, or the exterior ossis metacarpi pollicis; or it may run into the muscles of the little finger. In one instance, it arose from the radius and gave off the short flexor of the little finger. Often it varies on the two sides, being present in one arm and absent in the other, or having different connections in the two arms.

This variability is in accordance with the unimportant nature of the functions of the muscle, which can be spared without much detriment. It is in accordance, also, with the instability of the muscle in the lower animals, in the greater number of which it is absent.

The several muscles on the flexor aspect of the forearm and hand are the produce of the segmentation and concentration into groups of the elements of a pronator-flexor mass, the fibres of which are directed downwards with some obliquity towards the radial side, and which is seen in a comparatively simple form in Urodelans.* The several muscles lie nearly parallel, harmonise in their action, and are very variable in lower animals. We are not surprised, therefore, that they present many examples of imperfect segmentation, and of want of due concentration within their respective bounds.

One of the number, however, the flexor carpi ulnaris, is an exception to this remark, and presents a striking contrast to the palmaris longus in the importance and definition of its action, in the regularity of its presence, and the uniformity of its disposition in the lower animals, as well as in its immunity from varieties in Man. Indeed, an occasional extension to the fourth metacarpal bone, noted by Wood, and a prolongation to the metacarpo-phalangeal joint of the little finger, noted by Curnow, are the only anomalies that I have seen recorded.

The pronator teres presents in its varieties many instances of imperfect limitation and segmentation from surrounding muscles. Thus, its origin sometimes extends up the humerus, reaching to the supracondylar process in some of the instances in which that process has been present. Indeed, Gruber associates these two anomalies—the supracondylar process, and the high, and not unfrequently separate, or third, origin of the pronator teres—with one another. They are, however, sometimes dissociated, the one occurring without the other. Occasionally the extended origin of the pronator teres is blended with the brachialis anticus; or it derives a band from the biceps, or the bicipital fascia, or the intermuscular septum. The high origin has, in some instances, been separated from the remainder of the muscle by an irregular branch or branches of the brachial artery, and even by the main trunk with the median nerve, passing between them. The pronator teres is likewise sometimes blended with the muscles below by slips to

the palmaris longus,* the flexor carpi radialis, the flexor sublimis, and the flexor longus pollicis; or by fusion of its coronoid origin with the coronoid origins of the last two muscles. This origin is sometimes absent, or, as it would seem, relegated to one of those muscles. On the other hand, it is sometimes double. It has, moreover, in several instances, been found separate from the rest of the muscle; and, in some of these cases, it is noted that it was inserted into the radius at a higher point than the remainder of the muscle.†

The flexor carpi radialis is found occasionally to range, at both ends, beyond its normal attachments. Above, it may acquire origins from the coronoid process of the ulna, from the ulna below the coronoid process, from the oblique ridge on the radius, from the tendon of the biceps, or from the deep surface of the semilunar fascia. It may also be blended with the pronator teres, or with the flexor sublimis digitorum; and it may receive the coronoid slip instead of the pronator teres. Below, it may be inserted into the trapezium, the scaphoid bone, and the annular ligament, as well as into the second metacarpal bone. It has been found not to extend beyond the two carpal bones just mentioned. On the other hand, offsets from its tendon have been traced to the third, and even to the fourth, metacarpal bone. These offsets to the carpus and the metacarpus, like the similar extension of the flexor carpi ulnaris to the fourth metacarpal, are remnants of the primitive connection of the pronator-flexor mass with all the carpal and metacarpal bones, as well as with the bones of the forearm.

Examples of the persistence of this connection are afforded by the instances of the flexor carpi radialis brevis, described by Fans, Gruber,‡ Wood,§ and others. This anomalous muscle, when present, arises from the palmar surface of the radius, above the pronator quadratus, external to the flexor longus pollicis and beneath the flexor sublimis digitorum, and is inserted into the scaphoid bone, the trapezium, or the os magnum, or into the base of the third or of the second metacarpal bone, or the annular ligament, or the deep process of the annular ligament, or to the deep process of the annular ligament and the os magnum. Zaaier traced it from the lower end of the radius to the carpal ligament, the trapezium, and the second, third, and fourth metacarpals. Macalister|| found the same muscle deriving a second origin from the internal condyle, so exemplifying the retention of superficial as well as of deep relations.

In each of these forms the muscle is evidently a remnant of the primitive deep stratum of the pronator-flexor mass, which in Urodelans covers the bones of the forearm, the carpus, and the metacarpus, and is attached to most or all of them. In Man, the components of this mass are normally segmented into the flexor profundus digitorum, the flexor longus pollicis, and the pronator quadratus, avoiding the carpus and the metacarpus altogether. We are not surprised to find this disposition now and then departed from, and to meet occasionally with some elements of the stratum which present a resemblance to the primitive form, and which stray upon, and attach themselves to, the carpus and the metacarpus. We should, however, scarcely have expected to find so much definiteness in this variation as the muscle in question presents. It is a little remarkable to meet with so much order in this comparative disorder. We should rather have anticipated, in accordance with what we usually find in anomalous muscles, that bundles would have been found more irregularly passing between the several bones with a direction from above downwards and towards the radial side, than that they should be commonly arranged in the form of a definite muscle arising at a given point in the radius, and inserted into one or other of the carpal or metacarpal bones near the radial side of the hand, as was the case in each of the several instances in which this flexor carpi radialis brevis has been observed.

This regularity in the anomalous muscle is the more remarkable, because the direction of the fibres of the muscle does not quite accord with that of the deep layer of the primitive pronator flexor mass, which is from above downwards and to the radial side¶—that is, less in the axis of the limb than the flexor carpi radialis brevis; and further, there is no distinct corresponding muscle among the lower animals, the nearest resemblance to it being the deep head of the flexor carpi radialis described by Wood** as arising in Monotremes from the radius in the

* In some cases, the palmaris longus derived its origin entirely from the pronator teres. (Macalister, *Journal of Anatomy*, xi, 9.)

† Macalister, *loc. cit.*; and Bradley, *BRITISH MEDICAL JOURNAL*, 1868, p. 478.

‡ Under the name "cubito-carpeus" and "radio-cubito-carpeus" (*Mélanges Biologiques de l'Acad. Imp. de St. Pétersbourg*, 1859, iii, p. 184; vi, 493; and 1871, viii, p. 147). A similar muscle had been previously described by Fans (*Bull. de la Soc. Anat. de Paris*, 1851).

§ *Journal of Anatomy and Physiology*, i, 58; and *Proceedings of the Royal Society*, 1866.

|| *Journal of Anatomy and Physiology*, v, 33.

¶ This, it may be observed, is the direction of the fibres of the cubito-carpeus of Gruber.

** *Journal of Anatomy*, i, 58.

situation occupied by the flexor longus pollicis in ourselves. The cause, therefore, of the occurrence of this muscle, with a certain regularity and similarity of form and disposition in the several instances in which it has been observed, is not apparent. Its muscular portion occupies the place of a part of the flexor longus pollicis; and it must have the effect of diverting to the flexion of the wrist some of the force which is usually employed in acting upon the last phalanx of the pollex.

A similar instance of derivation from the digital flexors is furnished by a muscle described in *Guy's Hospital Reports*, vol. xvi, as arising from the oblique line of the radius, just below the flexor sublimis, and inserted into the annular ligament.

The flexors of the digits rival the palmaris longus in the frequency, though not in the extent, of their irregularities. Neither of them is ever, so far as I know, absent; but their component fibres are variously disposed in different persons. Indeed irregularity appears to be rather the rule than the exception. This accords with the great variety of their disposition in lower animals. In Man, they are, in the normal state, more removed from the simple form than in any other animal, and are more distinctly divided into the three parts—the flexor sublimis, flexor profundus, and flexor longus pollicis. Even in Man the division and specialisation is scarcely attained; for the coronoid origin of the flexor pollicis adds somewhat of a pronator function to the special flexor office of that muscle, and remains as a connecting link with the other muscles, which is frequently observed to be extended. That is to say, we often find that the flexor longus pollicis has failed to acquire the human feature of nearly complete isolation, and remains more or less blended, by means of its coronoid origin or by other slips, with the pronator teres, or the flexor profundus, or the flexor sublimis. Sometimes it is connected by slips with both of these flexors; and sometimes it is united to one or other of them, or to the pronator teres by an origin derived from the inner condyle of the humerus. Sometimes it is united with the indicial part of the flexor profundus, which in such cases is commonly more separate than usual from the rest of that muscle; and sometimes a slip of the flexor longus pollicis runs on into the indicial lumbricalis. Or there may be a separate additional muscle derived from the other flexors or one of them—"an accessorius ad flexorem pollicis longum"—which may pass to the flexor of the thumb, or may be divided between it and the flexor tendon of the index finger. Macalister found the coronoid origin in one instance large and supplanting the coronoid origin of the pronator teres.

The coronoid part of the ulna, indeed, like the internal condyle of the humerus, is a common starting point for the several muscles of this region; and any of the muscles descending from the elbow may retain their connection with either or both of these bony points. The pronator teres and the flexor digitorum sublimis usually arise from both. The flexor carpi ulnaris may be said to do the same. We have found that the flexor carpi radialis and the palmaris longus occasionally retain the coronoid in addition to the condyloid origin; and the flexor longus pollicis and the flexor profundus digitorum occasionally retain the condyloid in addition to the coronoid origin. It may be said, indeed, that the coronoid is a more common starting point than the condyle; for the deeper layer of muscles—the flexor pollicis and the flexor profundus—are usually so segmented as to be excluded from the condyle, and only occasionally remain in connection with it; whereas three of the members of the superficial or condyloid layer of muscles commonly retain their connection with the coronoid process, and the other two do so as a variety. This clinging of the muscles to the common starting points—to the coronoid process more particularly, requiring, as it were, a forcible segmenting effort in development to separate them from it and from one another, and often withstanding that effort—affords the key to the explanation of most of the muscular irregularities in this region.

The flexor sublimis and the flexor profundus digitorum present, as we might anticipate, numerous and various examples of imperfect segmentation. Comparative anatomy indicates the profundus to be the basal or fundamental muscle, and the sublimis to be segmented from it; and the connection between the two in Man is often maintained by larger or smaller portions or slips passing from the one to the other. The most frequent form of union is by means of slips passing from the coronoid origin of the sublimis to the profundus, so illustrating the remark just made respecting the coronoid process as the meeting point of the several muscles of this region. Sometimes the cleavage of the parent mass takes place in such a way as to leave an intermediate or accessory coronoid portion, or muscle, which connects itself with both the sublimis and the profundus digitorum, and, perhaps, in addition, with the flexor pollicis. Thus it resembles, as remarked by Wood, the chief bulk of the combined flexor muscles in the carnivora and some other Mammalia.

I have already mentioned the blendings of the flexor profundus with

the flexor longus pollicis, whereby the former muscle derives fibres from the radius; and it now and then has a direct slip from the radius. Thus the tendency of the irregularities is to increase the range of attachment of this muscle. I have not observed any instance in which it was deficient or contracted within its proper area; whereas in the case of its segmented or supplemental coadjutor—the flexor sublimis—the area of attachment and of distribution is not unfrequently curtailed. For instance, either the radial or the coronoid origin of the flexor sublimis may be wanting. It is interesting, also, to note that the tendon to the little finger is often wanting, or it may be present on the radial side only, which is owing to a failure in the segmentation of the superficial muscle from the flexor profundus with regard to this finger. An interesting illustration of this view is furnished by an example given by Macalister,* in which a small muscle detached from the flexor sublimis and constituting the division to the little finger was inserted into—in other words, was not fully segmented from—the tendon of the flexor profundus to that finger. It should be observed, however, that the place of this absent division of the flexor sublimis is sometimes supplied by a muscle arising from the annular ligament, or from the palmar fascia, or by the lumbricalis.

On the other hand, the relations of the flexor sublimis may extend beyond—that is, may not be limited to—its normal area. Mr. Beswick-Perrin† found a double coronoid origin on each side, the ulnar artery passing between them. It may have a partial origin from the pronator teres; and it may send a slip to the palmar fascia, or, as observed by Turner,‡ it may send a slip, beneath the palmaris longus, to the supinator longus. The excesses in this muscle are, however, rare in comparison with the deficiencies.

In estimating the nature of the varieties of the lumbricales, it is necessary to bear in mind that they are segments from the sides of the divisions of the flexor digitorum; that there is, therefore, where they are in their full complement, as in the Scine, one on each side of each division—that is, one on each side of the several digits. One of the forms of irregularity in Man consists in the retention, on the ulnar side of the digit or digits, of some of the bundles which, for some not very obvious reason, are obsolete, or are concentrated upon the radial side in most Mammals. This irregularity happens most frequently in the third interspace, the third lumbricalis being divided, and one portion passing to the ulnar side of the third finger, while the remainder is directed, as usual, to the radial side of the fourth finger. A similar variety may occur in the interspaces between the other fingers. Occasionally, also, the muscular fibres in the interspace are concentrated upon the ulnar side, the muscle of the radial side being abortive. This variety also is found most frequently in the third interspace; but not exclusively, for the fourth lumbricalis sometimes passes to the ulnar side of the fourth finger.

I have said that the lumbricales are segments from the sides of the divisions of the flexor digitorum. They are usually found only upon the flexor profundus, their office being apparently to regulate and give steadiness to the terminal phalanges at the same time that these distal bones are being acted upon by the tendons of the flexor profundus. Still, bearing in mind the relations of the flexor sublimis and the flexor profundus to one another, and remembering that the flexor sublimis and the flexor longus pollicis are parts of, or detachments from, the flexor profundus, we are prepared to find that the lumbricales occasionally present relations to one or other of these detachments. Thus, in the right hand of an idiot, Carver|| found that the lumbricales consisted of a large fleshy mass arising from the front and sides of the tendons of the flexor profundus digitorum, completely concealing them. This mass ended in five tendons, four of which had the ordinary distribution; whereas the fifth joined the radial side of the flexor sublimis of the ring-finger. Sometimes the relation of the lumbricales to the flexor sublimis and the flexor pollicis is presented in the forearm; and this is more frequent in the case of the first lumbricalis than of the others. Thus, the first lumbricalis is sometimes derived from, or receives slips from, the flexor sublimis or the flexor longus pollicis, and more particularly from the coronoid origins of these muscles¶—that is, from the common centre of origin of the flexor muscles. In one instance, men-

* *Journal of Anatomy*, i, 318.

† *Medical Times and Gazette*, December 14th, 1872.

‡ *Transactions of the Royal Society, Edinburgh*, xxiv, 150.

§ I use the expression "concentrated", upon the one or the other side, because the fibres often may be seen to arise from the two approximated sides of contiguous tendons, and evidently represent segments from the two sides, which are combined or concentrated in the one muscle. This is sometimes rendered more apparent from the fact that the fibres derived from the ulnar sides of the adjacent tendons occasionally arise from them as separate bundles, forming "additional heads".

|| *Journal of Anatomy*, iii, 260.

¶ In one of these cases, mentioned by Wood, the first lumbricalis, arising from the coronoid origin of the flexor sublimis, sent a slip to the indicial tendon of the flexor sublimis. (*Proceedings of the Royal Society*, 1866, p. 235.)

tioned by Henle, the first lumbricalis extended to the radius near the origin of the flexor pollicis.

The primitive connection of the flexor muscle with the interossei is in like manner shown by the instance recorded by Wood of a connecting slip between the first lumbricalis and the first palmar interosseus.

The especial liability in the fifth finger to failure in the development of the segmented appendages of the flexor muscle, to which I have before alluded, is shown by the occasional absence of the fourth lumbricalis, as well as by the occasional absence, before mentioned, of the flexor sublimis of this digit. Several instances of this have been recorded. It is probable that the other lumbricales also are sometimes wanting.

The pronator quadratus is now and then absent, and is occasionally in two strata; and it sometimes illustrates the primitive relations of the pronator-flexor mass by sending a prolongation upon the carpus and metacarpus, which may blend with the muscles of the thumb.*

In the ball of the thumb, the most frequent irregularities are in the abductor pollicis, which sometimes extends upon the styloid process of the radius, and comes into connection with the extensores carpi radiales and the extensors of the thumb, deriving origin from them. It is sometimes united by slips with the opponens pollicis; and it is not infrequently double.

The flexor brevis pollicis is often united with the adductor, and the lower portion of the latter is liable to variation. It is sometimes separated from the upper part, forming a "transversus manus," the similarity of which to the transversus pedis is rendered more marked in the instances, now and then occurring, in which it takes origin from the fourth and fifth metacarpals, as well as from the third. This lower part is sometimes absent; sometimes it is divided into two or more parts.

On the ulnar side of the hand, the abductor minimi digiti, like the abductor pollicis, is sometimes found spreading upon the forearm, but it usually does so on the flexor rather than on the extensor aspect. It extends to variable distance upon the fascia of the forearm, and has relations, more or less intimate, with the flexor carpi ulnaris, the palmaris longus, and the annular ligament. Sometimes it is joined by a slip from one of these sources. Occasionally it is directed more dorsally, and is connected with the posterior annular ligament or with the extensor carpi ulnaris. The flexor brevis minimi digiti also sometimes takes a partial origin from the palmaris longus, or from the fascia of the forearm, or the flexor carpi ulnaris, or the ulna; and there is sometimes an accessory portion passing from the unciform bone to the first phalanx of the little finger. This was the case in the Bushwoman dissected by Flower and Murie; and in that instance the opponens minimi digiti was largely developed, and was in two portions.†

The account of the irregularities of the interosseal muscles I will leave till I come to speak of those in the foot.

On the dorsum of the forearm, the blending of the superficial with the deep muscles is not so frequent a source of irregularity as it is on the palmar aspect, because the components of the two layers are more separate from one another, and are more distinct in their action, as well in the direction of their fibres. This, at least, is the case with the muscles on the radial side; and we obtain more decided evidence from these muscles than we did from the flexors that the liability to imperfection of segmentation is proportionate to the harmony of action of the several muscles—in other words, that it is greatest where it will least interfere with the function of the parts.

For instance, the extensores carpi radiales effect one movement and act together. No great advantage is gained by their separateness. In many of the lower animals they are not separate; and we accordingly find that in Man they are very often blended. The modes of their blending correspond in some respects with those of the superficial and deep flexors of the fingers. Sometimes slips pass from one to the other, or they are interchanged between the two muscles. Sometimes their two tendons are not separate; or the two muscles are united, and their tendons are separate.‡ Sometimes the cleavage has taken place in such a manner as to leave an intermediate portion more or less connected with both of them, and inserted into the second or third metacarpal. Moreover, the longus, in some cases, sends a slip to the third metacarpal; or the brevis sends a slip to the second metacarpal; or the two tendons cross on their way to their termination at the metacarpals, with which they are respectively not connected in the normal disposition; or a slip from the longus crosses beneath the brevis on its way to the ulnar side of the third metacarpal. Now and then there is an "accessorius" portion inserted into the base of the first metacarpal.

Other varieties also occur. There may be too much cleavage. The longus may have two tendons both inserted into the second metacarpal; or the brevis may have two tendons both inserted into the third metacarpal. The cleavage may extend up either muscle, forming an accessory muscle connected with either; and this accessory muscle or the cleft tendons may extend beyond the usual range. Thus the brevis may be inserted by a slip, or by means of an accessory muscle, into the fourth metacarpal, as well as into the third; and the longus may be inserted into the metacarpal of the pollex, as well as into that of the index finger,* or it may send a slip into the abductor pollicis; and either longus or brevis, or both, may send slips to the posterior annular ligament; and slips have been traced on into the interossei.

The supinator longus has now and then a muscular connection with the extensor carpi radialis longior, but less frequently than with the biceps, which indicates that in its action it is associated with the latter rather than with the former. I have mentioned its occasional continuity with the deltoid. It has been absent in both arms; but its irregularities are more often in the direction of excess. Thus it is sometimes double in its muscular or in its tendinous part, or in its whole length, or it receives an accessory slip from the humerus; and its insertion sometimes extends to the scaphoid bone or the trapezium.

The extensor digitorum often receives from the extensor carpi ulnaris a slip which passes to the tendon of the little finger, and which is the counterpart of a slip still more frequently received from the peronei by the extensor digitorum pedis. The extensor digitorum also now and then, though much more rarely, shows evidence of imperfect segmentation from the radial extensors and from the members of the subjacent stratum by deriving slips from them, or sending slips to them. Such connections with the extensor secundi internodii and the extensor indicis, as well as with the extensores carpi radiales, have been described by Wood. Its more frequent irregularities are, however, in the direction of over-segmentation. Thus each of its tendons is sometimes continued upwards into a separate belly. Or there may be a separate muscle to certain of the fingers, as to the index or the third. Or there may be a supernumerary muscle or a supernumerary tendon to certain of the fingers. It is most common in the case of third and fourth fingers. The tendons derived from these supernumerary muscles always, or usually, pass into the ulnar side of the normal extensor tendons; and in the instances in which they cross either of the normal tendons on the way to their destination, they pass on the deeper aspect of those tendons. Such supernumerary muscles are regularly present in some of the lower animals, and constitute a series to which I have given the name of extensor secundus or intermedius,† the latter term indicating that they are intermediate between the extensors of the superficial and those of the deep stratum. They resemble the supplementary slips from the peronei in the lower limb.

The extensor minimi digiti may be regarded as a standing, or regular example, of such a supplementary muscle. It may be said to correspond accordingly with the aberrant, though frequently present, slip from the peroneus tertius; and it corresponds still more closely with the representative of that muscle in the lower animals which has no connection with the metatarsus, but runs straight from the fibula to the fifth toe, or to the extensor tendon of that toe. Its character as a supplementary muscle is evinced by its instability and its many varieties. Thus, sometimes it is wanting, and sometimes it splits into two tendons, which reunite into one; or (and this occurs in ten per cent.), the two may remain separate and pass to the fourth and the fifth fingers. In this case the tendon to the fourth finger follows the course I have mentioned as that taken by the tendons of the other supplementary extensors, viz., it passes beneath the division of the extensor longus to the little finger, and joins the ulnar side of the extensor longus to the ring finger. Sometimes there are two tendons, or even three, passing to the little finger.‡ Sometimes the tendon traverses the same channel as that of the extensor digitorum. Sometimes it occupies a separate channel, and sometimes it takes different courses in the two hands of the same subject. The extensor carpi ulnaris is often, as just mentioned, imperfectly segmented from the extensor digitorum; and it is sometimes double, both portions passing to the fifth metacarpal.

In my *Observations in Myology*, and in my lectures last year, I have given the name "supinator manus," to the extensor ossis metacarpi pollicis, because this muscle is often in man attached to the trapezium as well as to the metacarpal bone; and in other mammals it is usually, and often exclusively, inserted into the carpal bones. It is sometimes

* J. Beswick-Perrin found a prolongation of part of such a slip to the outer head of the flexor brevis pollicis.

† *Observations in Myology*, p. 132; *Journal of Anatomy*, ii, 307.

‡ Mr. J. Beswick Perrin remarks (*Medical Times and Gazette*, December 7th, 1872), "that the single tendon of the extensor minimi digiti is less frequent by far than the double tendon, and the latter is more frequent than the treble or further differentiated tendon."

* Hallett, *Edinburgh Medical and Surgical Journal*, 1848, p. 15.

† *Journal of Anatomy*, i, 202.

‡ In one case (*Journal of Anatomy*, iii, 261), there was a single muscle with three tendons—one to the radial border of the second metacarpal, and the others to the contiguous borders of the second and third metacarpals. In short, there may be every variety of coalescence from union by slight slips to complete fusion.

extended in man to the abductor pollicis, and the opponens pollicis, which thus derive origin from it, and are continuous with it. It may thus terminate in three portions, passing respectively to the scaphoid bone, to the metacarpal bone and to the abductor, or opponens, pollicis. Sometimes its fibres, or some of them, run over the radial edge of the forearm into the anterior annular ligament. Henle and Wood have found the outer fibres of the muscle separated from the remainder, and arising from the fascia which lies over the supinator radii longus and the extensores carpi radiales. This interesting variety brings the muscle into relation with the superficial strata of the radial sector, and reminds us that, whereas, in the upper limb those strata form the supinator and the radial extensors, yet, in the lower limb, they pass into the tibialis anticus, the tendon of which, at any rate, is the serial homologue of the tendon of the extensor ossis metacarpi. The tendon derived from their superficial fibres in Wood's case, passed to the front of the outer border of the base of the first metacarpal; and extraction upon it showed that it had a flexor and abductor, rather than an extensor action.*

In the human forearm, as ordinarily constructed, the extensors of the thumb are definitely segmented in such a manner as to divide between them the work of moving the several bones of the thumb, the insertion of each being restricted to the base of the particular bone assigned to it; and this arrangement is specially human. We have already seen that it is often deviated from by the extensor ossis metacarpi failing to be restricted to the base of its bone, and indicating a tendency to the animal type by retaining a connection with the carpus. The same muscle shows also, in some instances, the lack of concentration, by spreading in the opposite direction, viz., downwards, upon the metacarpal bone, and being attached, by one or two tendons, to the middle of the shaft of that bone. In some of these cases the want of proper concentration may be associated with, or regarded as, a want of proper subdivision, forasmuch as this disposition is liable to be accompanied by an absence of the special extensor primi internodii pollicis.

Indeed, the developmental processes often fail to evolve the last-named muscle, which is found in no other animal besides man, and for the evolution of which the stimulus of utility cannot be a very cogent influence, judging from the little movement of the first phalanx of the thumb, which we are able to effect. It is absent in about five per cent., and in about the same proportion its muscular part is united with that of the extensor ossis metacarpi. When thus united, it commonly consists of a delicate slip only, detached to the first phalanx from the extensor ossis metacarpi. In some instances it has been found inserted, wholly or partially, into the metacarpal bone; in more it has sent a slip to the terminal phalanx. Now and then it sends a slip to the extensor secundi internodii, and occasionally one to the extensor indicis. In two instances† it was a mere tendinous slip, connecting the styloid process of the radius with the first phalanx; and in one* it was blended with the extensor ossis metacarpi, its tendon being divided at the wrist into three, one to the scaphoid bone, and one to each of the phalanges of the pollex.

The extensor secundi internodii is not free from the like irregularities. Though rarely absent, it often wants its proper isolation, or concentration upon its phalanx. It frequently sends a slip to the first phalanx, or it may send a slip to, or receive one from, either the extensor ossis metacarpi, or the extensor indicis, or the extensor communis digitorum. Sometimes it is a double muscle.

The extensor indicis is occasionally absent, and, like some of its neighbours, especially the extensor minimi digiti, it is liable to irregularities from excess. Thus its tendon is sometimes double, both portions passing to the index finger; or one portion passing to the middle finger; and there may even be a slip to the fourth finger. Two tendons have been given to the middle finger, and one to the index; or there may have been two muscles as well as two tendons. Sometimes the division to the middle finger is separate in its whole length, and terminates at the first phalanx. There may also be a separate muscle to the fourth finger, arising from the ulna below the extensor indicis; and each of these short extensors to the third and fourth fingers has been seen to give two tendons to its finger. Curnow* found an extensor annularis arising from the ulna, near the extensor indicis, and passing to the ulnar side of the extensor tendon of the fourth finger.

Another variety of these multiplications is furnished by a muscle occasionally found between the extensor secundi internodii pollicis and the extensor indicis, and dividing to each of the adjacent digits, so constituting an "extensor pollicis et indicis." Its exact destination varies, being sometimes to the tendons of these digits, and sometimes to one or

other of their phalanges. In one instance, described by Wood,* its origin was more superficial than usual, being, not from the ulna, but from the intermuscular septum between the extensor communis and the extensor ossis metacarpi pollicis, so that it formed an intermediate muscle, segmented from between the superficial and deep strata of muscles, and resembling the other intermediate muscles, which I have before described. Its insertion into the pollex was through the tendon of the extensor secundi internodii; and its indicial tendon joined the outermost of the tendons of a double indicator, to be inserted into the base of the first phalanx.

The numerous irregularities just mentioned are, perhaps, to be in part explained by regarding this deep stratum of muscles as a broken, or much modified series, having its representative in the lower limb in the more simply and regularly disposed extensor brevis, better called extensor profundus digitorum; and that, being more divergent than that muscle from the simple primitive form, its components are more liable to irregularities in their development. Their greater divergence from the simple type is apparently for the purpose of concentrating a greater variety of motor power upon the pollex and the index digits than is necessary in the corresponding parts of the lower limb, and the exact manner in which this is done is scarcely stamped with precision upon the formative mould, probably because such precision, though on the whole advantageous, and therefore evinced in the best-formed limbs, would not here conduce to utility, in a sufficiently definite and positive manner, to render it fast binding upon the developmental processes.

The view that the members of this deep stratum of the forearm, or some of them, are to be regarded as representatives of the extensor profundus in the foot, is confirmed by certain other irregularities, which constitute a closer link of resemblance to that muscle, forasmuch as they are remnants of muscular elements arising lower still in the limb than any of those yet mentioned. Thus the extensor indicis was found by Moser to be replaced by a muscle arising from the carpal ligaments, and inserted into the dorsum and radial side of the second phalanx. Various specimens have been described by Wood and others, of short muscles, arising from the back of the carpus, and sometimes of the metacarpus, in which latter situation they have been commonly blended with the interossei, and have appeared like extensions of these muscles, which, by the way, is the case with the extensor brevis, naturally found here in some animals. The short supernumerary extensors arising from the carpus have been variously disposed. Most frequently they joined the ulnar sides of the extensor tendons of the third or fourth, or third and fourth fingers. Sometimes they joined the extensor tendon of the index finger, and in one of Wood's cases they were inserted on each side of the fifth digit with the interossei and the abductor respectively.

* *Proceedings of the Royal Society*, 1863, p. 512.

THE MONKWEARMOUTH AND SOUTHWICK DISPENSARY has just been opened. The following have been appointed the medical officers: Luke Blumer, M.D.; James Smith, L.R.C.P.Ed.; William H. Dixon, M.D.; Robert Ayre Smith, M.D.; and George Bolton, L.R.C.P.Ed.

MEDICAL TREATMENT AT SEA.—*Fraser's Magazine* points out that the mortality return owes its origin not so much to any desire to ascertain the cause of death, as to the circumstance that the Government administer to the unpaid wages and effects of the deceased. The function of executor is found to be rather profitable, as the State realises some £8,144 a year, after discharging all claims. Instead of applying this sum to the remission of taxation, it might, with equal justice and humanity, be applied to the reduction of mortality at sea. This might be done by appointing medical officers to attend the shipping offices when crews are being discharged, to ascertain and certify the causes of death of any of their number, and to advise the captain and mates on the medicinal and other treatment which should have been adopted. The value of such advice was recently illustrated, when a high official of the Board of Trade was examining a very careful statement in the 'official log', signed by the captain and mate, of the sickness, treatment, and death of a seaman. The unusual care exhibited in the statement had first attracted attention, which was sustained by the apparent humanity exercised. A medical friend, however, dropping in at the moment, pointed out that the captain had both mistaken the malady and had administered doses such as would have killed at least three healthy men, so that there was no wonder the patient had died. This counsel came, however, too late, for the captain and mate had already gone to sea again, under the impression that they had treated the case wisely, and prepared to poison in the same way any other seaman who exhibited somewhat similar symptoms. Such cases of ignorance are believed to be not uncommon.

* *Proceedings of the Royal Society*, 1856, p. 236.

† Wood, *Proceedings of the Royal Society*, 1868, p. 518.

‡ Cuvier, *Journal of Anatomy*, i. 1, 265.

§ *Journal of Anatomy*, vii, 307.

AN ADDRESS

ON

THE MEANS OF CHECKING THE GROWTH OF
INSANITY IN THE POPULATION.*Read before the South Wales and Monmouthshire Branch.*

By GEORGE J. HEARDER, M.D.,

Medical Superintendent of the Lunatic Asylum, Carmarthen; President of the Branch.

ONE of our unsolved social problems is "how to check the growth of insanity amongst our population." There are at present in England and Wales about 60,000 persons of unsound mind; and it is my purpose to bring under your consideration the causation of probably the greater number of these cases, and some of the means whereby we may hope to diminish the multitude of those so afflicted.

It is often advanced that insanity is a product of civilisation, and the alleged comparative freedom from mental disease of savage tribes is adduced as a proof thereof. In support of this theory, however, there is not a shadow of evidence; statistics, of course, are not procurable. The mere fact that but few insane persons are found amongst uncivilised nations affords no indication of the numbers attacked by brain-disorder. As well might we argue, from the paucity of individuals *minus* a limb, the non-existence of accidents and diseases necessitating amputation. Amongst barbarous tribes the feeble and diseased insane would be allowed to die; those with suicidal tendencies would be soon initiated into the mystery of the "happy despatch;" the violent and troublesome would become victims of the stripes they had themselves engendered; and only a few harmless monomaniacs could survive. Even the civilised nations of antiquity allowed such as were of defective physical constitution to be put to death. But under the Christian dispensation we get a correct view of the sacredness of human life; and our highest earthly aims are to prevent disease and suffering, and to prolong life. It results therefrom, that we have our existing accumulation of chronic incurable lunatics. While, however, much has been done for the proper care and protection of those diseased in mind, it cannot be asserted that a corresponding amount of effort has been expended on the prevention of insanity, by combating the causes which produce it. This is a most grave error, tending to perpetuate in our midst a vast calamity, which brings greater and most lasting woe than does any other disease, into every family it enters.

A certain amount of insanity we must always have. We cannot hope to prevent atheromatous deposit in the cerebral vessels, and over the other structural changes which accompany old age, we have equally little power; and to these unpreventable causes we must add injuries to the head, and the occasional results of fevers and other physical diseases. The anxieties and trials of daily life also claim their victims; but they are comparatively few, and rarely include persons who are otherwise healthy.

Intemperance is the most prolific cause of insanity; especially amongst the labouring classes. Besides the action of the stimulant on the brain influencing its nutrition, we have weakened powers of digestion and assimilation, and also, owing to wasted means, absence of the solid food by which the body should be nourished—conditions aiding and preparing for the advent of madness. And it is much to be feared that this evil habit is gaining year by year increased numbers of devotees. A most careful and reliable observer, Dr. Thurnam, of Devizes, states that, of those insane who came under his treatment during the year 1872, 34 per cent. were manifestly attributable to habits of drunkenness. The observations of many independent authorities support the probability that a like percentage obtains throughout the country. Yet even this is not the whole truth; we must add to this 34 per cent. the cases of those who owe their insanity to the intemperate habits of their parents. It must not be considered necessary for the causation of insanity, in themselves or their offspring, that persons should be notorious drunkards; it is sufficient that there should be habitual abuse of intoxicating drinks, such an amount as reaches the earlier stages of excess. That this lamentable evil is stealthily gaining ground cannot for a moment be doubted, and the increase appears to be solely amongst the poorer classes, who drink chiefly gin and beer, as is evidenced forcibly by the addition of two and a-half millions during the past year, to the excise from these liquors. Such national inebriety is measureless in mischief, and, as it strikes its roots deeper and deeper among the population, so it gradually undermines domestic life and morality, and tends to destroy both physical and mental health.

Amongst the causes that have tended to build up the habit of excess

we may place:—1, prolonged periods of labour and consequent exhaustion from excessive toil; 2, deficiency, or entire absence, of education; 3, dwellings uncomfortable, ill-ventilated, and crowded; 4, absence of all opportunities for rational amusement, recreation, or mental improvement, in fact, a life from which every amenity is thoroughly excluded; 5, the evil example of neighbours or parents; 6, the ever present conveniences for intemperate indulgence.

The hours of labour have of late years been considerably abridged, chiefly owing to the efforts of the labourers themselves, assisted as these have been by legislative interference. Prolonged toil is no longer a cause of intemperance, save with a few workers in our great cities, yet it has had its share in producing our existing drunkards.

The education of the young is now being attended to, and with the rising generation ignorance will be no plea for over-indulgence. The precepts inculcated at school, however, will, in too many instances, be overbalanced by the example of ill-conducted parents, and these parents we must endeavour to reach and to influence.

The state of the dwellings of the working classes is still a crying evil, and can only be thoroughly remedied by rousing the people to appreciate the necessity, physical and moral, of a proper attention to the decencies of life. This is a work of education. We read of our most highly paid labourers herding together like pigs.

Mr. Justice Quain speaks of a crime perpetrated "as the woman lay in bed by the side of her husband, three other men sleeping in the same room;" and of a second case where "a young woman slept in a room with other people—another young woman and a brother. Three men appeared to be in bed in another part of the same room."

A Durham miner tells us he "knew of a boy lying in bed with a broken leg, and an umbrella had to be put up to keep the rain off him, and men had to rise during the night to bail water out of their houses. These were the kind of houses they had in Durham, and the system was killing thousands of miners, their wives, and children." From such a mockery of home what wonder that our workmen fly to drink and other sensual indulgences? But, even where no necessity exists for such overcrowding, so strong is the habit with a large number of the labouring classes that to carry out the needed reform will be no easy matter. A large landed proprietor, who takes great interest in the welfare of his labourers, lately told me he had built some "model cottages," and in the best had placed one of his most worthy men. After allowing a reasonable time for the family to accommodate themselves to their new abode, a visit was made, and it was found that the sleeping-rooms were not made use of, one apartment sufficing for both day and dormitory requirements. To amend these evils, teaching the young is not sufficient; we must reach and educate their parents. Not only must properly constructed houses be provided, but the people must be impressed with the advantages derivable from these and other home comforts.

The absence of all opportunities for rational amusement and mental improvement is probably the most fertile cause of dissipation and intemperance. A tithe of the amount extracted from the ratepayers for the care of criminals and others, who have become burdens on the public from the effects of drink, would be more than sufficient to provide places of healthful resort for the multitude as would prove powerful counteracting agents to the seduction of the taproom, and such a sum devoted thus to the prevention of drunkenness could not prove other than a most profitable investment. Much can be done, however, without the aid of rates. National schoolrooms may now be said to exist in every parish. Why should not these be utilised during the evening, and converted into reading-rooms for the labouring classes of the district? Every schoolmaster should give instruction in elementary physiology and chemistry to his pupils. And this instruction, repeated during occasional evenings in the form of lectures, illustrated by a few simple experiments, would be sufficient to convey such an amount of knowledge to even the most illiterate as would enable them to understand the value of pure air as a health giving agent, and the pernicious results of hygienic neglect and dissipation. In the larger towns, working men's clubs are found to be powerful agencies for good. The Grosvenor Club in London, which has been open for about a year, numbers one thousand members, and "the books of the manager show already a remarkable decline in the demand for liquors, and an increasing taste for the beverage dear to good morals and Sir Wilfred Lawson." In country districts such places cannot be supported, but in the village schoolroom our labourers should be able to find all, save food and drink, that is required for rational enjoyment of an evening—conversation, books, newspapers, draughts, chess, and the like.

With diminished hours of labour and increase of wages, our labourers have the means of profiting by such opportunities for education as may be provided. Hitherto, however, the pecuniary improvement has made them more ready to yield to the temptations offered by the public houses, which abound on every hand. In a town of about 8,000 in-

habitants we find a "number of hotels, inns, and other licensed public-houses, amounting to 107", or one to about every 78 persons, including children. Such a number is out of all proportion to the requirements of the community. I am no Good Templar; I do not believe that a people can be made virtuous by Act of Parliament, or that sobriety can be invented; but I think it is urgently demanded that the number of these places should be restricted, and judicious rules enforced for regulating the sale of all intoxicating drinks. We have in Sweden an example of the good that may be thus effected.

Hereditary taint—insanity inherited from parents—is a more difficult matter to deal with than even intemperance; yet it is certain that much may be accomplished in decreasing the numbers who suffer from it. Lord Bacon tells us that "man commands nature by obeying nature". Let us, then, examine the lines laid down by nature for checking the growth of hereditary insanity, as shown in the three following histories.

1. A man, A. B., of congenital weak mind, has six children; three die during childhood; the other three, one male and two females, are imbecile, and at the ages respectively of 40, 42, and 44, are sent to an asylum. The male previously married, but had no children; the females have had no issue. This family, therefore, becomes extinct with the present generation.

2. A man, C. D., labouring under dementia, whose first wife died insane, had by her a large family, four of whom, two sons and two daughters, inherited mental unsoundness. The two daughters have had no children; one of the sons is unmarried; the other is married and has had four children, all of whom died in childhood. But C. D., by his second wife, who also is insane, has had six children. Of these, five died young, and the survivor is mentally defective.

3. E. F., while insane, committed suicide. His history, on the maternal side, is as follows. His mother was insane, and her sister died in an asylum; his grandmother was insane, and his grandfather was drunken. On the other side, his father is "eccentric", a morose recluse; his uncle is extremely morbid, and has had a drunken son, who committed suicide. The other members of this family are, as far as I have ascertained, without offspring, and unmarried.

These cases are examples of what is at present taking place around us. The insane are allowed to propagate their kind with scarce an effort made to check so deplorable an event, though the thorough working of the lunacy acts would certainly impose the needed limit. Our duty is as clearly to endeavour to prevent insanity as to endeavour to cure it when it exists. Though the laws of Nature doom to extinction families thus saturated with madness, it is only after they have endured misery and suffering for generations, and have exercised a proportionately deteriorating influence on the surrounding community. There is a feeling, shared by many, which has its advocates even amongst our leading specialists, that chronic lunatics should not be detained in an asylum unless they are dangerous to themselves or others; and this feeling operates strongly in keeping the so-called harmless insane at their homes. Hard it is, doubtless, that a wife, though insane, should be separated from her husband, who is able and willing to take care of her; but it is harder still that they should procreate, with the almost certainty that their offspring will inherit the mother's disease, and be the possible agents of extending the fell malady to other and untainted families. There are rights of society as well as individual rights, and to allow an insane person to beget children is not liberty but license.

Some of the accumulation must also be attributed, at least in this district, to the manner in which the insane and the idiotic are disposed of. The majority receive no treatment whatever, but are "boarded out" with neighbours and others, who receive for their care and maintenance a sum of 2s. 6d. or 3s. 6d. weekly. We cannot suppose that such people receive into their homes one or more lunatics from benevolent motives; their pecuniary wants would not allow it: we must, therefore, believe that a certain margin of profit is derived even from that miserable amount. The result is—must be—that the unsound in mind so disposed of are ill cared for, ill fed, ill clothed; that they are dirty and neglected in every way. But they do not suffer alone—they inflict a penalty on society which neglects them, that is none the less real for being seldom directly felt. Let me mention in illustration some cases that have recently come under my observation.

T. F., aged 26, one of three idiotic brothers, living together with their father, was sent to this asylum after having made a most persevering attempt at rape. He cannot see a woman without behaving in a grossly indecent manner.

C. P., aged 23, lived with his mother, shared her bed, and had frequent marital intercourse with her. He was in the habit of chasing and indecently assaulting the girls of the neighbourhood.

D. D., aged 21, wore no clothing, lived with his mother, two sisters, and a brother, who all slept together. He occasionally wandered about the village in a state of complete nudity.

T. T. and M. G., females, not unattractive in personal appearance, each aged 29, were in the habit of wandering about soliciting and indecently exposing themselves to their neighbours.

We have no reason for supposing that these cases are at all worse than others that still remain at home, or are "boarded out". If the number of female idiots who have borne children could be ascertained, I think it would astonish our philanthropists. But, apart together from this consideration, the effect on the morals of a community from having persons of such habits wandering about in their midst must be deplorable in the extreme, and cannot be correctly estimated. The mere fact that such indecency is tolerated indicates a deadening of that natural modesty which is virtue's great safeguard.

Since writing the above, I have received a copy of "Asylum Notes", by Dr. Yellowlees. One of these notes, bearing on the question we are considering, I will quote *in extenso*. "Every county has special circumstances which may affect both the character and the amount of the insanity which it produces. The wealth and prosperity of Glamorganshire are largely derived from coal and iron, and any arrest in their production and export is immediately and widely felt. During the last six months of 1871, and the first three months of 1873, the mines, and consequently the docks, were deserted by reason of 'strikes', and the effect of these strikes on the insanity and crime of the county was most marked and instructive.

"In the first six months of 1871, 47 men and 30 women were received as patients into this asylum, but only 24 men and 26 women in the second six months of the year. In the last three months of 1872, 21 men and 12 women were admitted, but only 10 men and 12 women in the first three months of 1873. It is thus shown, by a double proof, that during a strike the male admissions fell to *half their former number*, the female admissions being almost unaffected.

"This decrease is doubtless mainly due to the fact that there is no money to spend in drink and debauchery. On inquiry at the county prisons, I find that there was a marked diminution in their male admissions during the same periods, so that the production of crime as well as of insanity is greatly lessened while the strikes continue.

"What the effect of a very prolonged strike would be I trust we may never know, but to these results of the last two strikes I would earnestly direct public attention. They are among the most sad and significant facts of our social life, and seem to prove that high wages, without wisdom to use them, are a curse rather than a blessing."

EXTRACTS FROM THE PRESIDENT'S ADDRESS.

Delivered at the Annual Meeting of the Lancashire and Cheshire Branch.

By CHARLES WHITE, Esq.,

Surgeon to the Dispensary, Warrington.

IN offering a welcome to the Lancashire and Cheshire Branch, on its first meeting in Warrington, a short description of the chief features of the town may be expected, or at least excused. Situated on the Mersey, here the boundary between the two counties, by far the larger portion stands on the Lancashire side. It occupies a remarkably low site, at the highest being little more than fifty feet above the datum level of high water at Liverpool, and at the lowest not more than twenty-three feet. At thirty-four feet a well-marked terrace, the bank of the ancient estuary, runs through the town, which is built chiefly on estuarine sands, deposited in various thicknesses on the boulder clay. The wells, which are bored through the clay into and through the mottled sandstone, are usually free from organic impurities, but contain large quantities of saline matter in solution, and in some instances are absolutely brackish. The general water supply of the town used to be principally surface water, collected on the high ground to the south-west of the town. Happily, another source has now been obtained by the Water Works Company, in a deep boring, three miles to the north, right through the bunter and lower mottled sandstone, to a depth of three hundred and fifty feet, to the representatives of the Permian system. This is an excellent water, but rather hard for domestic purposes, but filtered through so many series of sand-rocks, its purity may be safely assumed. In passing, I may mention the river Mersey as a curiosity in its way. For the length of its course, and its volume of water, it possibly receives more sewage matter than any river in the world. South Lancashire, North Cheshire, with Yorkshire and Derbyshire, combine to form the unpleasant mixture which flows past our doors. It is a pure chemical compound. No trace of animal or vegetable life is found in its waters; hence, perhaps, it is, that according to experience, it is innocuous in its passage through Warrington. I never detected in the houses built on its banks any form of disease peculiar to them, or in excess of what might be found in other parts of the town. Perhaps the

reason may be found in the action of the metallic oxides poured in from the numerous dyeworks, or the mills on the river or its tributaries. Whilst they produce the dark and unwholesome appearance, yet they check the festering fermentation of the organic substances so liberally contributed by the large towns. To readers of medical journals for the last few years, it was evident that in many minds there was a strong counter-current to specialism, which was supposed to be carried to an extent which was beneficial neither to the patients nor to the profession; but it was reserved for the medical orator at the General Meeting of the Association at Birmingham, boldly and openly to depreciate specialism of all degrees, and to avow his belief that the best practitioners of all were the general practitioners. With all due deference to so distinguished a physician, I cannot accept such a compliment paid even to my own order. Believing in the principles of the evolution of society, as laid down by Herbert Spencer, it seems to me, that if you have real life in the profession, you "must have a change from the homogeneous to the heterogeneous. Development, no matter of what kind, exhibits not only a multiplication of unlike parts, but an increase in the distinctness with which these parts are marked off from one another." Take it that the general practitioner is the present phase of the majority of the medical profession. This condition has its use, or it would not exist; but it would be as absurd to predict its permanence as to insist on its antiquity. The medical Minerva did not spring armed from the brain of Jove. In the progress from a state of barbarism to that of modern civilisation, the art of healing must have always had its representatives; but, doubtless, in primitive eras, our predecessors, like the ancestors of the *nouveaux riches*, were not personages of great distinction. I never see the humble herbalist culling his simples without considering him the aboriginal precursor of the physician; whilst the term "barber-surgeon" sufficiently indicates the personal attendant, who wielded, alternately, the razor and the lancet; and who, in the gradual expansion of his sphere of duty, left unpractised the parental tonsorial office. And to this day, just as in the scale of animal creation, we find in the higher members rudimentary evidences of the transitional development from the lower, so in the two divisions of the profession, attentive observation may note certain peculiarities, or abnormalities, which disclose alike the humble origin and the process of evolution by which this change has been effected. Nor can I conceive any cause for regret at the numerous species of either physician or surgeon, whose origin we see before us. The dentist, the aurist, the oculist, etc., devote themselves to the exploration of the minute details of their respective departments with as much advantage to the general practitioner as to themselves. We might as reasonably ask for a law to confine all microscopic study to the use of the one-inch objective, as attempt to put down the specialists, who are the higher powers by which we obtain a deeper insight into the mysteries and arcana of disease. Their labours meet with a grateful recognition from the outer world, and a similar success awaits the physician who intensifies by concentration his study of the maladies of any organ. The doctors for consumption, or gout, or the kidneys, have no reason to complain of the unprofitable nature of their particular adaptation, whilst it is matter of common report that they who attend zealously to the uterus and its appendages are clothed in purple and fine linen, and fare sumptuously every day.

But the differentiation must not be carried too far. In the language of Spencer, again, "Science has become highly integrated, not only in the sense that each division is made up of mutually dependent propositions, but in the sense that the several divisions are mutually dependent—cannot carry on their respective investigations without aid from one another." There must always be a common bond between the different specialties, and in the desire of the dentists to possess the surgical diploma I see the natural expression of the feeling, that even in that apparently extraneous department, vitality can only be maintained by union with the parent stock.

At the present time, another specialist is being detached, or is about to be so, from the general body of the profession, in the medical office of health. Instead of a professor of hygiene in a few medical schools, we shall have one in every town or rural district, whose duty it will be to instruct the public in the tenets of preventive medicine. Not one moment too soon. The way in which the subject of zymotic diseases is treated by the general public at the present day, will form a very curious chapter in the history of our races. It will seem hardly credible to the reader of the future, say Macaulay's New Zealander, that the spread of diseases which are fraught with most important consequences to the present and succeeding generations, should not only not be met by all possible means of repression, but even treated as a matter of indifference. Every one before me is acquainted with almost innumerable instances of the unprohibited transmission of infection in cabs or railway carriages, or in schools or laundries, etc., and any other mode of human communication. Contrast the alarm, and the discussions, and the

vigorous action, that followed the invasion of the cattle plague, with the languid interest with which are perused the reports of the Registrar-General on the ravages of what for thirty years have been termed "preventable diseases," and the logical inference would be, that the lives of cattle are of far more value than those of human beings. What severe sarcasm is there in that word "preventable," when we reflect on what has been done in the way of prevention. Are we, as a profession, blameless in this matter? How many generations of practitioners have gone to their graves whose attendance on these very diseases has been lifelong. And is there now extant a complete and perfect account of their natural history, an accurate description of the phenomena exhibited in their course? Granted that there may be considerable divergence of opinion on so speculative a question as their causation, yet is there not even an unanimity as to their periods of incubation, whilst only last year was it proposed to this society to obtain from its members an authoritative exposition of the duration of infection? If we cannot furnish incontrovertible dogmas to the laity, how shall we expect from them a lively faith, or corresponding good work?

If the principles of English liberty forbid our acting up to the dicta of the plainest common sense, let us transfer the venue to Utopia, and ask what our plan of action would be there. Suppose us living in some fair town in that happy country, where yet, alas! these wandering plagues are allowed to appear. Our ideal government would be a board of health of well-educated men, competently advised by their medical officer. The board would provide itself with an ordnance map of the large size, where every house is marked. On this would be dotted, in different colours, the instances of occurrence of different diseases, so that, in a few years, we could mark off the districts which were dangerous, and ascertain why they were dangerous. As soon as any case of fever appeared in the town, the doctor in attendance would immediately inform the board. Then, if the house were not large enough to allow a complete isolation of nurse and patient, the latter would be removed to the hospital for infectious diseases, and retained there until the period of infection, accurately defined by Dr. Ransome's committee, had passed away. Our principle of action would be, that a person once infected should have no chance of communicating it to any other. Of course the house would be thoroughly examined as to its sanitary deficiencies, and completely disinfected. The other members of the family would be kept in quarantine until the time for the longest period of incubation, also accurately determined, had passed away.

Whether or not we admit the claim of Mr. Hutchinson, that syphilis shall be included among the exanthemata, we may study the latter by the light of the former, and in its prolonged periods of secondary and tertiary phenomena, find the key to many of the affections of special organs, which follow in the wake of the zymotic action of the popularly supposed evanescent poisons. It has been wisely said, that every child recovering from one of these attacks is in a state of struma. Such a term aptly describes the utter prostration and depression of the vital force, when hardly any function is rightly performed, and when the reparative or healing process is reduced to its lowest ebb. But the state of struma after each particular poison has not been accurately defined. Too often we have got no further than the old woman's observation, "It is a weakness left after the measles, etc." The invasion and actual struggle with poison being in each case different, it is surely logical to affirm, that the pathological changes which subsequently occur, before recovery is effected, are equally distinct. But whoever speaks of the tertiary symptom of measles, or hooping cough, or enteric fever, further than to class them under the vague term sequelæ, about which as little reason can be given for their supervention as for their disappearance? It seems to me, that unless you can thus accurately define these secondary phenomena, unless you possess an entire and complete history of these diseases, from beginning to end, it will be impossible to determine, with the confidence of truth, your period of infection. In all probability, the facts that are being accumulated to throw light on the one, will illustrate equally the obscurity of the other, and I most sincerely trust that success will attend the efforts of this Branch, as it already enjoys the distinguished honour of being first in the field to prosecute an inquiry of such enormous practical value.

Another of the lines on which the profession is moving is the increasing precision in the pharmaceutical treatment of disease. This is a subject on which I enter with the greatest diffidence; but, in going over the general ground of the evolution and development of the profession, it cannot be overlooked or passed by. That medicine should at the onset be merely an empirical art was necessary, but after many hundred years of experiment it is surely time that we had arrived at accuracy, if not certainty, in the adaptation of our means to desired ends. That the art of prescribing is still a tentative art, everyone knows. The mental condition of the greater part of the public is no further advanced than to regard disease as a distinct entity which may

be added to or removed from the body;—a state of things analogous to the old demoniac possession. Every disease is supposed to have its remedy—every bullet has its billet, and if the practitioner called do not supply the required cure, it is because he will not or knows it not, not that it does not exist. The poet may write—

“What drug can make
A withered palsy cease to shake?”

But hope is eternal, and a friend is always ready to say—“Try Dr. So-and-So.” He is tried, and the patient, if not the disease, is attacked with a zeal and vigour that merit the highest success if it had only been attempted to compass the possible. Of course failure is inevitable, but what then? Blot out that word impossible from the dictionary, said Napoleon, and in a similar spirit. Another confidential friend whispers—“In these cases there is none equal to Dr. Thus-and-Thus.” But a more effective reason for the present condition of our art is that, by the regular administration of several or many remedies at the same time, we have made the problem of recognition of the separate action of each insoluble. The human body is the most highly organised and perfect machine in creation, and being so, it is the most complex. Now, when a physician is called in to correct some deviation from the normal condition of function or organ, what does he do? He orders a change in the action of the mind, change in the position and motion of the body, change in the diet, change in the habits, and then a combination of more or less active remedial agents, from two to twenty in number. If after that he can apportion to each its proper share and merit in contributing to the cure, he is a wonder of judicial discernment, imitation of whom with me would be perfectly hopeless. The effects are disastrous to the profession. The attempt to get precise knowledge is never made. It is said—“What does it matter if the patient be cured? Articles of diet are given mixed, why not those of pharmacy?” The fallacy is palpable, but from age to age the ignorance is perpetuated. The very fault against which the tyro is also warned on his entrance into the profession, that he must not believe that *post hoc* is *propter hoc*, is inculcated by the practice of the oldest practitioner. That the system is artificial and not natural, is proved by the fluctuations in the favour with which different remedies are regarded.

“Multa renascentur quæ jam cecidere, cadentque
Quæ nunc sunt in honore.”

To judge of the value of treatment by the more broad result of the case, is to put ourselves in the same category with the charlatan or heretic. Here I again join issue with the medical orator at Birmingham, who said that the best doctor was he who was most successful. Best, certainly, as far as his own interests are concerned; but we all have duties to our profession. I should say that he is the best doctor who most accurately connects cause and effect, and who applies no more remedies than he is certain of obtaining distinct results. Unfortunately, the regular as well as the irregular practitioner, is ever ready to credit his appliances with the body's return to health, really due to other causes, or to its own inherent powers. . . . In truth, the natural tendency of the body to revert to the state of health after exposure to poisonous agents, or morbid conditions of life, has never since history began been studied without remedial interference. Among tribes of savages, so rude as to have no knowledge of the Deity, there is yet found the medicine man, to whom the treatment of disease is entrusted. And it seems one of the most distinctly inherent instincts of humanity that that office shall be perpetual. What, it matters not; but some system there shall be, and nature shall never have the *modus* of working out her own salvation.

What might not be the effect of commissions of competent persons to report on the evidence of disputed questions, and what happy results might not ensue, if instead of being the stepping-stones of professional success, scientific investigation were made the sole lifelong occupation of those philosophical temperaments fitted for such pursuits. But our inquiries are left to haphazard or to energies of such associations as our own; and the only wonder is that so much is achieved when the opposite difficulties are so great and the temptations to desert so seductive. The history of the introduction of a new remedy puts the weak points before us of fortuitous individual effort. Started with a few dexterous puffs in the medical journals, the little stranger flies with progressively increasing speed over the whole medical world. The stately hospital gives its letters of recommendation to the humble dispensary, the consulting-room to the rural surgery. . . . The inevitable reaction sets in. The too confident expectancy is doomed to disappointment in case after case, until at last it is well if the real properties of the remedy are not denied because it has not proved the panacea it was once supposed.

“Oh, happy he who still can hope
Out of this sea of error to arise.
We long to use what lies beyond our scope,
Yet cannot use even what within it lies.”

As says the learned Dr. Faust.

The last feature in the process of evolution to which I shall allude is the elevation of certain members of the profession above the gross atmosphere of an empirical art to the pure empyrean of the savant or professor of science. Practitioners of medicine may be said to occupy the position of middlemen between the cultivators of abstract and natural science and the general mass of the public. Herein they exercise the useful function of being translators of a language unintelligible to the multitude, or, to speak technically, they are the media of dilution of scientific ideas. But at no time has the profession wanted members to hold the front rank amongst the pioneers of truth—the original thinkers and the workers among the hidden things of the heavens above, and the earth beneath, and the waters that are under the earth. What distinguished names at once rise to the lips when we dwell on this fact of those who have gone from amongst us not to return, but whose wholesome influence is felt through every rank of the profession at large.

Every year, every week indeed, furnishes evidence of the incessant intellectual activity which is being exerted towards some solution of the manifold problems of life; and though at present we may only have to admire the ingenuity and the beauty of the hypothetic speculation, we may rest assured that every discovery of truth will have its phase of practical utility. . . . It may be that the laborious investigations which are being carried on to elucidate the subject of spontaneous generation may also incidentally illustrate the abnormal condition of the blood, and that ready tests may be supplied by which we may be able to detect and exhibit the presence of foreign agents or poisons which now we can only recognise in their effects. It may be that our pathological theories may pass from the region of speculation through the discoveries perhaps already trembling to their birth, of the influence of the different portions of the nervous system over the blood-supply, and the share in the complicated phenomena of mal-nutrition and inflammation. It may be that the study of the causation of diseases may receive large aid from meteorology. For though in spite of the large accumulations of facts, the laws by which the phenomena of atmospheric change are regulated are not yet discovered, yet does it seem quite feasible to associate the simultaneous appearance of instances of disease with certain conditions of the atmosphere altogether independently of the more palpable changes produced by alteration in temperature. . . . The influence of the *savant* is, moreover, not only felt through the profession as a guide through unexplored regions, but there is an absolute gain in his companionship. We learn from his example and from his careful and precise habits of observation, to avoid hasty generalisation and that precipitate jumping to conclusions which has ever been the bane and disgrace of the art of medicine. Another lesson we may too learn, that with us as with him, there is no stage of completeness or perfection to be reached where we can stand still—no rest and be thankful—until waning powers and failing senses warn us that the time has arrived when we must hand over our task to our successors. It is better to avoid the complacent survey of the past and to look with humility on the vastness of the future, though the pride might be pardonable with which we pass in view the changes which the process of evolution has wrought in us, and the large spheres of activity, general or special, which we claim as our own in the right to diminish human suffering, and in counteracting the evils of modern civilisation to prolong human life. Lowly though our origin, we have almost reached in stature to the skies, nor need we fear comparison with any other profession in the purity of our intentions or the nobility of our aim. Most excellent of all is it that our success, our very existence is identified with progress, and that we can adopt as our motto the laureate's lines,

‘Not in vain the distance beacons, forward, forward let us range,
Though the great world spin for ever down the ringing grooves of change.’

UNRECORDED CASES OF DEATH BY CHLOROFORM:

AND THE NEED OF A SUITABLE ROOM FOR INJURED
PERSONS IN CONNEXION WITH MINES AND OTHER
SIMILARLY DANGEROUS PLACES OF LABOUR.*

By WILLIAM BROWN, M.R.C.S.Eng., Callington.

MUCH has been said lately on the important subject of anesthetics—on the comparative danger of the inhalation of chloroform as compared with that of ether. I shall not enter into this controversy. But, as is usual in all disputed questions, the disputants all follow one another in dwelling on the one aspect of the question first presented to public

* Read before the South-Western Branch at the Annual Meeting, July 3rd, 1873.

observation. No one has remarked, in the matter under consideration, on the *unrecorded* cases of death by chloroform, and, it may be, by other anæsthetics. I am disposed to think they are frequent. At any rate, I venture to produce the following case; and especially as it inculcates, in my view, another lesson—the necessity of a suitable chamber or room, with bed or beds, in the immediate vicinity of, or as part of the buildings on, all mines or other works where the employed are unusually exposed to physical danger.

At a mine in a neighbouring parish, where accidents had been sadly frequent and equally severe, on December 29th, 1869, "ground" fell away, and more or less injured five out of six persons working at the particular part, underground, of the mine. Of these five persons, two were killed on the spot; and my patient, whose home was in the parish of Stoke Clemsland, was fearfully injured. His son, also, was working with him, and was one of the five persons injured, but not fatally or very seriously. The weather had been for some time exceedingly cold and bad (frost and snow), which had given way to cold wet—sleet. The accident took place at about ten o'clock in the forenoon. After the necessary delay in extricating the injured persons from underneath the fallen "ground", and getting them to surface, the nearest surgeon was sent for, and a messenger was sent on to me. This messenger, I am told, was a boy, and the weather caused excessive delay in his reaching my house. The qualified assistant of the surgeon referred to came to the mine. Temporary appliances, by means of boards and "bal shag", were applied to the part most injured—the right lower extremity. This was done, in their usual way, by the miners, who brought the injured man to surface. What time the patient and his bearers left the mine, I do not know, but they did not reach his home until 4 P.M. All the time the poor man was in his wet underground clothes, was carried on boards in the cold sleet, over the most dreadful roads, losing blood continuously and very considerably all the way; and this "dead march" was over a distance of from four to five miles. At two villages through which they passed, they had to stop to give him spirits. What time the messenger came to my house, I do not exactly know, as I had gone out of town, but my man was sent after me. I hurried back, and got to the patient's home as soon as I could, but I believe it was quite six o'clock in the evening before I reached the house; and, of course, I did not know it was necessary to carry my full set of amputating instruments. I found the patient on the boards on which he had been brought to his home; but he had been lifted, framework of boards and all, on to the table. He was smoking, and spoke firmly, but was wet, pale, and cold—in a state of semi-collapse; still in his underground clothes, blood still oozing away, the same temporary wrappings on, boots on—in fact, in the same state in which he left the mine. The assistant referred to was in the house, and had been there all the time, awaiting my arrival. I presume he did not like to take any active steps until my appearance. After making a general inquiry and inspection, and ordering suitable nourishment to be prepared, etc., I had him undressed, and put in the most comfortable state possible under the circumstances. On making a proper examination, I found compound comminuted fracture, with terrible contusion and laceration, below the knee of the right leg. This injury was so extensive and hopeless as to render immediate amputation necessary; and it was so near to the knee-joint, and so far involved the joint, as to make it absolutely necessary to go above the knee for the amputation; had there not been any other reason, sound flaps could not have been had below the knee. But I further found that, unfortunately, there was compound fracture in the upper third of the thigh also, near the trochanter major. But in this fracture there was not any laceration, except that of the end of the femur having been simply thrust through the soft parts. I could pass my finger into the fracture, but there was not any comminution of the femur. What was to be done under these circumstances? I had but one course—to make the patient as comfortable as possible, so as to get him into as fit a state as possible for operation, and send for efficient help and a more complete supply of instruments. I sent a note to my neighbour, Mr. John Kempthorne, who, with all possible promptness, came with his amputating case, and my assistant. I had made up my own mind that it would not be safe to ignore the fracture in the upper part of the thigh, to the extent of treating it as a curable fracture, considering that it was compound, and that I must, irrespective of it, amputate in the thigh. I thought, under these complications, that the only true course was to amputate in the upper part of the thigh, instead of at the lower third, or near the knee. But, to go clear above the upper fracture, I must have gone into the hip-joint; but as perfectly good unbruised flaps could be had at the place of fracture, I decided to transfix there. Mr. Kempthorne assented to this.

The patient having previously had suitable nourishment, and having been placed in proper position, was put under the influence of chloroform by the assistant who came with him. The artery having been duly

compressed, I made my anterior flap; and then, passing the knife between the fractured ends of the femur, I made my posterior flap. But now our difficulty came on: the fracture through the femur was oblique. Hence I had to remove the projecting portion or point of the bone. The incisions were so far up into the thick part of the thigh, that we found we could not keep the flaps upwards sufficiently out of the way so as to be able to use the ordinary amputation-saw; and we had not with us a Hay's saw. I had a clasp finger-saw, but this also proved inefficient, as the teeth were not fine enough for such a slender, hard point of bone. And, in fact, the bone was so enormously hard that we could not cut off the projecting portion with the bone-forceps. While we were trying to overcome our difficulty, the effect of the chloroform began to pass off, the man to struggle and to call out. Unfortunately, to prevent these efforts on the part of the patient, the gentleman having charge of the chloroform began to reapply the vapour. I and Mr. Kempthorne were too intent in our united endeavours to make a proper stump to the remaining portion of the femur, to watch the administration of the chloroform also; when all at once the pulse gave way, the patient gasped, and was dying from the immediate effects of the chloroform. We made every effort, by admission of cold air, drawing forward the tongue with forceps, attempting to produce artificial respiration by Silvester's method, to restore animation to the patient, but too late. Life was extinct. Now, how did *not* the immediate cause of death get publicity here? The man had suffered terrible injuries and a terrible shock; had suffered delay, wet, cold, loss of blood; had gone through a grave capital operation; and he and his friends had been warned beforehand by me of his great danger. These were tacitly accepted by the friends, and most of those around, as sufficient causes of the death. A statement that chloroform was the cause would have produced painful excitement, and perhaps brought blame on the assistant, whether rightly or not, who had charge of the administration of the anæsthetic; and there was great probability of the patient dying at a future stage else; hence I did not dissipate the general impression that became current. How many cases, probably, are allowed to pass away in the same manner. Of course, for this to be possible, you must have a very grave dangerous operation, or the patient must have sustained great injuries to necessitate the operation, whether in itself great or not, or must have been in a precarious state of health previously, so that death might almost be expected to happen at any moment.

Now for the lesson which grows out of this case, as to the need of a proper room and bed or beds at all large works of a dangerous kind; and for the more forcibly inculcating which lesson, I have been thus particular in giving the history of the case. How indescribably sad must have been the feelings of my patient to have to wait about, to be carried about, hour after hour, in December sleet—wet, hungry, cold, stiff, mangled, and bleeding, suffering excruciatingly at every jerk of his bearers. Whereas, if he could have been put into a proper room at once, undressed, placed in a suitable bed in a regulated temperature, means taken to arrest the continual oozing of blood, proper nourishment given, instead of the frequent repetition of raw spirits—the strength thus every way succoured—how much better would have been his chance to go through the necessary operation, and to recover from it. While, had such conveniences existed, and a suitable messenger been sent away, I could have rendered my services to him hours sooner also. And I am sorry to say that this is not at all a solitary or unfrequent case, although it is an extreme one I admit. I have seen dozens of miners who have had to be carried on stretchers or in carts, mile after mile, often in the dead of night, bleeding all the way, burnt, fractured, or contused and lacerated—some hopelessly, some less so—to their homes, before they can have that surgical help which they so urgently and so promptly require; and not only so, but with adjuncts or surroundings of the most favourable and helpful, instead of the most depressing, kind, as is too often the case with these so-called homes—small, dark, damp, crowded huts, without ventilation, with perhaps only one bedroom, and no fireplace in that—ill-kept and comfortless dens in every respect.

CLINICAL MEMORANDA.

HÆMATOMA AURIS.

THE remarks recently made on hæmatoma auris in the JOURNAL may usefully revive an old discussion as to the nature and cause of the curious pathological condition known under that name. More especially is the question an interesting one, whether this form of swelling about the ear is only met with in persons of unsound mind, and if so, whether violence is always concerned in its production? Now several cases are

on record in which prize-fighters presented typical examples of this affection, Mr. Hulke having published one, and another having occurred during my student days, in the practice of the late Professor Syme.

But a more singular origin is furnished by the game of foot-ball, as played at Rugby, in which, during the well-known "tight scrummage," the ball is placed on the ground, and the players, clustering round it like a swarm of bees, endeavour to shove each side backwards towards its respective goal. During this process, a good deal of the requisite force is obtained by a species of butting with the head; and, as one layer of boys gradually closes in upon another, it is easy to understand that the ears are subjected to some rough treatment. As a result of this, I have seen several cases very closely resembling the hematoma auris of alienists, and consisting in the more or less sudden appearance of a tense, tender, and somewhat oval-shaped swelling, on the upper part of the helix and its fossa. At first the heat and redness of inflammation caused much discomfort, but on subsidence of this there was also some diminution in the original size, which usually equalled a small walnut; a distinct sense of fluctuation could then be obtained, and puncture gave exit to about a teaspoonful of bloody serum.

Treatment, in two cases where it was perseveringly tried, was quite unsuccessful; and in one, which I was enabled to keep under observation for several months, the shrivelled and puckered appearance eventually resulted, which we are generally taught to look upon as an indication of past or present insanity.

I would therefore venture to suggest, that some of the definitions of authors may be too sweeping, that hematoma auris may occur quite apart from any mental derangement, and that, as a rule, it owes its existence to the application of violence in some form.

ROBERT FARQUHARSON, M.D.

MEDIASTINAL ABSCESS OPENING INTO A BRONCHUS.

I THINK the accompanying case may be worthy of publication in the JOURNAL, as a not very common one, and as showing a remarkable peculiarity in the entire freedom from any special symptoms (*e.g.*, shivering or fever) during the formation of the abscess.

A short time ago, I received an urgent message to attend J. F., who had suddenly dropped down whilst in his garden, and was supposed to be dying. On arriving, I found that the patient had been conveyed into the house, and was being supported in an upright position on a sofa. He appeared in imminent danger of death from suffocation. There were violent, rapid, and ineffectual efforts at respiration; loud moist crepitation over the whole of the chest; the action of the heart was rapid, laboured, and tumultuous; the countenance was deadly white and anxious; the lips were perfectly livid; the extremities were quite cold. He managed to convey to me his impression that sickness would relieve him. After a few minutes, he succeeded in expectorating a small quantity of pus. The discharge rapidly increased in quantity; and in the space of two hours he brought up, at the smallest computation, three pints. After this, the urgent symptoms passed off, the crepitation entirely ceased, and I left him out of all immediate danger. His improvement at the present time (four days from the occurrence), has been most rapid. There is no cough, shortness or oppression of breath, or any symptom of cavity in either lung; and he complains of nothing but weakness. The following is his history. He is a coach-painter, aged 58. About eighteen months ago, he first complained of feelings of languor and slight oppression of breathing on moving fast, but no cough. Latterly, a hearty meal would produce oppression of breathing. He had never given up work, nor consulted a doctor. He had never had pain in the chest, shivering, or febrile symptoms. His general health has always been good, with the exception of one or two attacks of lead-colic some years ago.

I diagnose the case as abscess in the anterior or posterior mediastinum, bursting into the bronchus. Is it not very rare for an abscess of this size to give rise to such slight premonitory symptoms? Again, is it possible that his trade could have induced the disease? He is constantly occupied in a very hot dry room, mixing paint, and exposed to the fumes from arsenic, turpentine, and verdigris.

CHARLES TERRY, Newport Pagnell.

CASE OF EPISTAXIS IN A NON-PLETHORIC SUBJECT.

THE following case has considerable interest, not only on account of the obscurity of its nature, but also as shewing the importance of a symptom which may indicate organic mischief, or may be of comparative insignificance.

H. D., a gentleman aged 65, a solicitor by profession, of small and spare habit of body, very hasty and irritable disposition, of remarkably

regular and temperate habits, and in whose family no symptom of hereditary disease had ever shewn itself, had been under my care for several years, suffering from frequent attacks of catarrh, to which he was particularly subject; from internal hæmorrhoids, which, however, troubled him but rarely; and from occasional attacks of epistaxis, which had of late become very frequent. In the month of October, 1872, he was seized with a severe bronchial catarrh, for which, contrary to the earnest advice of myself and his friends, he refused to nurse himself, but persisted in attending at his chambers every day, and in all kinds of weather. He recovered from the catarrh in about six weeks, but the attacks of epistaxis recurred more frequently, and with augmented severity. This, with increased sense of debility, difficulty of breathing after slight exertion, and a severe pain in the head on coughing, comprised all that he complained of, until the morning on which he died. His appetite continued good, and he enjoyed his meals very much. He did not lose flesh, he was entirely free from pain, and, though irritable, his memory and all his faculties were perfectly sound; but his face assumed a sallow, and ultimately a cachectic appearance, strongly suggestive of malignant disease. There was no ascites, no œdema of the extremities; the urine was of specific gravity 1016, and showed no trace of albumen or sugar.

Though I, and many of his other friends, frequently urged him to have a further opinion, he obstinately refused, until about two months before his death, when, at my earnest solicitation, a very eminent physician was called in to see him. After a minute examination, this gentleman stated, that beyond an enlarged and feeble heart, he could discover no specially diseased organ, and considered the case one of general degeneration of tissue. The medicines hitherto administered were the perchloride of iron, occasionally with quinine and mineral acids, &c.; a saline aperient every other morning; and ice, or iced water, with occasionally an astringent powder, applied to the nostrils. This treatment was ordered to be persisted in. About a fortnight after this, no improvement having taken place, at the request of the patient, who was irritable, wayward, and obstinate throughout, a second physician, equally eminent, was consulted, who thought the case was one of obscure hepatic disease. On further consultations and examinations, this gentleman was more strongly of that opinion, and that the disease was probably of a malignant nature. No material change was made in the treatment, and the patient became gradually worse, all the previously mentioned symptoms being increased in severity, the epistaxis especially so.

The patient had been constantly recommended, both by the physicians, his private friends, and myself, to try the effect of a short residence at the sea-side; but he still obstinately refused to follow this advice, and continued attending at his chambers every day until the very last.

At one o'clock in the morning of the 28th June, I was called up to him. I found him suffering from somewhat urgent dyspnoea, but he was perfectly conscious, and even expressed a fear that he should not be able to go to his chambers that day. I stayed with him till four, and then left him tolerably comfortable. I saw him again at ten, when he was in a state of coma, in which he remained until his death, which took place at half-past twelve.

The *post mortem* examination, which was conducted by Dr. Archer Farr and myself, disclosed no special disease, but gave abundant evidence of general degeneration of tissue. The heart was very large, fatty, and exceedingly soft. The medullary portion of the brain was also extremely soft, the cerebellum particularly so. The cerebral hemispheres were at many points closely adherent to the membranes. The vessels were highly congested, and there was considerable serous effusion into the ventricles, and into the arachnoid cavity.

The points of interest in this case appear to be—First, what was the cause of the frequent and persistent epistaxis? Did it arise from a lesion in one of the arterioles of the nose, or from a diseased condition of the capillaries, resulting from a thin and impoverished state of the blood? Secondly, was the epistaxis a kindly effort of nature to relieve congestion, and thus avert worse consequences? In which case it was a symptom not to be hastily combated; or did the hæmorrhages tend to debilitate the system, and favour their more frequent recurrence? Again, seeing that the *post mortem* examination showed serous apoplexy as the immediate cause of death, the questions occur, would it have been good practice, during the comatose condition of the patient, to open the jugular vein, or temporal artery, in the hope that the escape of blood might relieve the congested state of the vessels? or would such proceeding have been attended with the probability that the heart, in its then feeble condition, would be unable to perform its functions, and that death would take place from syncope?

Bury Street, Aldgate, E.C., July, 1873.

D. H. DYDE.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 19TH, 1873.

MEDICAL REFORM.

THE Royal College of Surgeons and Royal College of Physicians of Edinburgh have separately and jointly drawn up petitions against the amendment of the Medical Act, and have issued a joint statement of their reasons for desiring things to be left as they are. They state "that in consequence of the recommendations of the Medical Council, the course of professional study exacted by all the licensing boards has been extended and improved; entrance has been barred against the admission of illiterate persons into the medical profession, by the enforcement of an examination in general education previously to the candidate being allowed to commence his medical studies; the professional examinations of all the licensing bodies have been rendered more extensive, more practical, more uniform, more stringent, and consequently more efficient. As a proof that the licensing boards are doing their duty to the public, and are not amenable to the charge of undue leniency in their examinations, it can be shown, by an official table of the results of the examinations for licences, which has been recently issued by the Medical Council, that about *one-third* of the candidates examined failed to satisfy the examiners, and were remitted to their studies."

They strongly object to the formation under the rule of conjoint examining boards, urging that the establishment of three licensing boards, viz., one for England, one for Scotland, and one for Ireland (as contemplated in Mr. Headlam's Bill), which are to supersede the present licensing boards, and henceforth to exercise the sole licensing power, would be extremely difficult of accomplishment, inconvenient, cumbersome, and attended with great expense. They state that this would be especially the case in Scotland, where the teaching and licensing bodies are located in cities considerably apart from one another—viz., Edinburgh, Glasgow, Aberdeen, and St. Andrew's—necessitating either peripatetic boards of examiners—a most inconvenient, troublesome, and expensive arrangement—or that all candidates for licences should be obliged to undergo examination in Edinburgh, which would be to them inconvenient and expensive. Hitherto, the fees paid by candidates to the licensing bodies in Scotland have been moderate in amount, a complete qualification in medicine and surgery being attainable for sixteen guineas. Under the system proposed in Mr. Headlam's Bill, it is calculated that it will be necessary for candidates to pay thirty guineas, or nearly double. This would form a heavy tax on the poorer students, of whom, in Scotland, the number is very considerable.

They conclude by urging that fresh medical legislation of the kind proposed in Mr. Headlam's Bill thus seems to be uncalled for at the present time; but that, under any circumstances, if there is to be a medical bill, it should be preceded by a fair and full inquiry, either by a Select Committee of the House of Commons, or by a Royal Commission, so as by competent and reliable testimony to ascertain the real facts of the case, and thus obtain a sure basis for any legislative enactments which such investigation might show to be desirable.

It is not a little remarkable that when the Government Bill was introduced by Mr. Foster, these objections were all waived, and that the position of the question has thus far retrograded during the last four years. Four years ago, all parties agreed to the unification of examinations which formed the Government scheme; but direct representa-

tion of the profession on the Council was the concession which was then refused, for which our Association has since fought. Now that principle is, as Mr. Headlam stated, admitted to be just, and there is no Parliamentary opposition to it; but in reintroducing the Government Bill with a direct representation clause added to it, we are met with the strongest opposition from the Scottish boards to the Government part of the Bill, in which they had previously acquiesced. Opposition of the kind must necessarily be fatal to the Bill in private hands. In the existing state of affairs, in which the opposition is to their propositions and not to ours, the Government will, we imagine, feel it necessary to appoint a Royal Commission, as the shortest and best way of preparing a termination to what otherwise threatens to be a hopeless imbroglio. The situation at present is anything but promising.

THE ANNUAL BALANCE-SHEET.

THE annual balance-sheet, which appears in another column, appended to the report of the proceedings of the meeting of the Committee of Council held in Birmingham on Friday last, will need no elaborate explanation. It is made up by public accountants, who have based it upon a complete analysis of the books and vouchers of the Association extending over the last two years. The result of this rather tedious and costly operation (which has had the necessary effect of delaying the publication of the balance-sheet) has been to establish not only the financial soundness of the position of the Association, but to show the progressive prosperity which set in from the moment of the reorganisation of its business arrangements, commenced by the Finance Committee in 1871, to which Mr. Hodgson furnished his celebrated memorandum showing the defects of the existing management. The regular and systematic collection of subscriptions and book-debts has reduced the balance of arrears then shown to a satisfactory smallness; and the book-debts for advertisements have been collected with equally satisfactory care; and there are indications that, when the rules adopted by the Committee of Council in June 1871 for the observance of the Local Secretaries and the General Secretary are fully observed (see JOURNAL of June 17th, 1871), which is not yet the case, the arrears unpaid will be very small indeed. Of the £603:15:0 which figure in this balance-sheet as arrears of subscriptions for 1872 unpaid on the 1st of January, 1873, £400 have been collected, and one-half at least of the residue may be considered good. Those who have at hand Mr. Hodgson's memorandum and Mr. Clayton's analysis of arrears for years up to the date of 1871, will see how very great an improvement has been effected since the subject was taken in hand vigorously by the Finance Committee, and since the business arrangements now existing were framed. An equally satisfactory improvement is manifest in the receipts for advertisements and sales; and, looking to the great increase in the circulation of the JOURNAL, this is obviously a source of income which is likely to develop itself more and more largely.

The receipts and payments during the year 1872 have been on a very large scale, old debts and old assets having been alike settled; and a considerable onward step has been realised towards a position which has not before been approached, and which it is extremely creditable to realise in an Association conducting its affairs without capital. Any one, indeed, who will read this balance-sheet and statement of accounts, and compare it with the statements and reports of the Treasurer of the last few years, will see that the view which he has taken of the actual and prospective position of the finances is entirely justified, and that present performance more than fulfils past promises.

An able and thoughtful member writes to us, *à propos* of the retrospect of last week, that he thinks it very satisfactory, and expresses himself otherwise very kindly, but asks whether an Association numbering upwards of five thousand members ought not to be wealthy, and when it will begin to accumulate funds. Whether or not an Association is wealthy, must depend on the amount of contributions of the members, and the return made for them. It is not the object of this Association to be wealthy, but to be numerous, powerful, and useful.

to the profession and the public, without drawing a large contribution from its associates. The condition of its success has proved to be, that it shall make the largest possible return to each contributor for his annual subscription. If the total annual subscription of a member to the Association and the JOURNAL amounted to the usual subscription to a medical journal of the same class, the Association would have a surplus income of £3,000 a year. This difference is retained in the pockets of the profession, instead of going into those of private proprietors. The principle of making the largest possible return for a small subscription has promoted the recent growth of the Association, and added to its influence and power of usefulness in the most remarkable degree; and among those who have lately joined its ranks will be found the names of the men who most hotly assailed its policy in past times. It has now reached a point at which an annual profit is becoming apparent in the balance-sheets. The first application of that profit must, on sound business principles, be applied to place it on a footing which will compensate for the peculiarity in its constitution which has hitherto compelled it to conduct a large publishing business without any capital. At present, therefore, any accruing surplus will be devoted to paying off during the current year the current liabilities of the year, leaving the good assets, which appertain to every running business of the kind, as a credit not as heretofore balanced by the debit of unpaid accounts. It will also probably be considered prudent to accumulate a certain cash capital, with the object of placing the Association in such a position that all its business operations may be conducted upon an exclusively cash basis, which always results in solid economies. Meantime, however, and alongside of this, it will be possible to do more; and it appears probable, from the present satisfactory state of the accounts, and with a continuance of the existing careful business management, that, while advancing towards the desired position of having good current assets without any set-off, and accumulating gradually a cash capital, it will be fairly within reach to set aside a handsome sum—perhaps two hundred a year—if thought advisable, for the purpose of encouraging scientific research. Such grants have already been made to the Committee on the Action of Medicines in former years; and it will be possible out of the funds of 1874 to continue and develop this precedent. For this purpose, a Scientific Committee might be appointed at the ensuing meeting, to recommend to the Committee of Council grants ranging from £10 to £50 for the assistance of researches in progress of a character useful to medicine and the adjuvant sciences.

THE DETENTION OF LUNATICS IN WORKHOUSES.

THE Second Annual Report of the Cheshire County Lunatic Asylum contains some important remarks on this subject. The Committee think it right to call attention to the comparatively few admissions of Cheshire patients during the past year. Since the 1st of October last there have not been more than ten admissions from the Cheshire unions. It is to be feared that, not unfrequently, recent cases of insanity are taken to workhouses and allowed to remain there instead of being at once sent to an asylum. Experience shows that treatment is most likely to be effectual during the earlier stages of the malady; and this can only be properly secured in an asylum provided with every appliance for the purpose. It appears from the lists furnished by the clerks to the various boards of guardians at the commencement of this year that there were at that time in the Macclesfield Workhouse 52 lunatics, idiots, and other persons of unsound mind; 125 in the Stockport Workhouse (all Cheshire cases); 13 in the Congleton Workhouse; and 18 in the Altrincham Workhouse, making a total of 208; whilst the numbers of those who were at the same time being maintained at asylums were as follows:—56 patients belonging to the Macclesfield Union, 88 belonging to the Cheshire portion of the Stockport Union, 60 belonging to the Altrincham Union, and 39 belonging to the Congleton Union, making a total of 243. These figures speak for themselves; so long as there was a deficiency of asylum accommodation for the county, there was some reason for detaining so large a number in the workhouses,

but this reason no longer exists. In an instructional letter of the Poor-law Commissioners, dated 5th February, 1842, accompanying their general workhouse rules, the following passage occurs.

“From the express prohibition of the detention of dangerous persons of unsound mind in a workhouse, contained in the clause just cited, coupled with the prevalent practice of keeping insane persons in workhouses, before the passing of the Poor-law Amendment Act, it may be inferred that persons of unsound mind, not being dangerous, may be legally kept in a workhouse. It must, however, be remembered that with lunatics the first object ought to be their cure, by means of proper medical treatment. This can only be obtained in a well-regulated asylum; and therefore the detention of any curable lunatic in a workhouse is highly objectionable, on the score both of humanity and economy. The Commissioners, indeed, believe that most of the persons of unsound mind detained in workhouses are incurable harmless idiots. But although the detention of persons of this description in a workhouse does not appear to be liable to objection on the ground of illegality or of defective medical treatment, they nevertheless think that the practice is often attended with serious inconvenience, and they are desirous of impressing upon the guardians the necessity of the utmost caution and vigilance in the management of any persons of this class who may be in the workhouse.” [*Extract from Instructional Letter of Poor-law Commissioners, 8th Report, 1842, p. 111.*]

The clause referred to in such extract is the 45th section of the 4th and 5th William the Fourth, chapter 76, which prohibits the detention in a workhouse of any dangerous lunatic, etc., for any longer period than fourteen days. The Committee have also appended to their report the following extract from the report made by the Select Committee of the House of Commons, on the 27th July, 1860.

“The chief evil for which a remedy is required is the detention of a large number of pauper lunatics in workhouses. The number of these lunatics amounted to no less than 6,800 on January 1st, 1857, and on January 1st, 1859, to 7,632. The law relating to this class of lunatics is certainly in an unsatisfactory state. By the Poor-law Amendment Act, the detention in any workhouse of ‘any dangerous lunatic, insane person, or idiot,’ for a longer period than fourteen days, is expressly prohibited; and the word ‘dangerous’ is read as applicable to each of the three classes of mentally disordered persons who are there mentioned. [See Appendix E to Thirteenth Report of Commissioners in Lunacy, pp. 140, 141; 4 and 5 William IV, chapter 76, section 45.] But with regard to those who are not dangerous, the statutory provisions are ambiguous. On the one hand, it seems to have been contemplated by the Legislature [16 and 17 Vict., chapter 97, sections 67-72] that all pauper lunatics should be sent to some asylum, registered hospital, or licensed house, under an order by a justice or justices; on the other hand, there are provisions in the same Act [16 and 17 Vict., chapter 97, sections 64 and 66], and also in another Act of Parliament passed in the same session [16 and 17 Vict., chapter 96, section 28], which seem to recognise to a certain extent the detention in workhouses of paupers deemed by law to be insane. The consequence is that large numbers of pauper lunatics are kept in these houses, without a certificate of their mental condition, and without an order from any magistrate regarding them as lunatics, although a large portion of such persons, especially in the rural districts, may be correctly described as harmless lunatics, who, if kept under a slight degree of supervision, are capable of useful and regular occupation, or whose infirmity of mind is consequent on epilepsy or paralysis, or fatuity from old age. It cannot be denied that with regard to those who are really lunatics, there is a great absence of proper supervision, attendance, and medical treatment. In some workhouses there are not even separate wards; mechanical restraint is frequently applied, because the imperfect state of the accommodation will not admit of a better mode of treatment; in many cases the medical officers of a union cannot have the special knowledge requisite for the management of the insane; and it may generally be concluded that the special appliances of a union workhouse are not by any means equivalent, as to this class of inmates, to those of a lunatic asylum.” [*Extract from Report of Select Committee of the House of Commons, on July 27th, 1860; Sess. Papers, No. 495, p. v.*]

It is submitted that the enactments in which some suggestions of the Select Committee were embodied have only partially remedied the evil. When “The Lunatic Asylums Act, 1853” was passed, the Legislature had to deal with an existing evil, and therefore had no alternative but to recognise to some extent the *detention* in workhouses of chronic cases, but there is nothing to show that the Legislature ever intended to sanction the *reception* of recent cases into workhouses. Nevertheless it

is well known that paupers who have become insane, are not unfrequently taken to workhouses instead of asylums, probably to save the trouble of obtaining a medical certificate and magistrate's order, and the Commissioners in Lunacy themselves complain of the too common practice of treating recent cases in workhouses. (22nd Report, page 48).

The Committee deem it their duty to call attention to this evil, and they think that further changes in the law relating to this subject are required. In the meantime they must rely upon the various boards of guardians to inquire into the matter, and they would venture to ask whether it is not a false economy to retain in the workhouses any cases where there are the slightest hopes of recovery, and thus convert into a permanent burden on the rates patients who, if they had in the earlier stages of the disease been taken to an asylum, might eventually have been cured.

WORK AND HEALTH.

SOME interesting information is contained in the Reports of the Factory Inspectors, just issued, with regard to the sanitary regulation of factories generally, and the health of the people employed therein. The Factory Extension Act of 1864 declares that all factories shall be kept in a cleanly and well ventilated state, and imposes heavy fines for wilful disobedience. The stringency of this Act has undoubtedly worked much good, and nowhere is it more apparent than in the trades brought under the operation of the Act. Fustian-cutters, lucifer-match makers, etc., have removed from dirty houses to well-sized factories; and in various unspecified trades under the provisions of the Act of 1867, great sanitary improvement has been effected in many districts by the erection of commodious new factories. With regard to the sanitary regulation of workshops, however, it is stated that the Workshops Act falls short of its intentions. While in factories cleanliness and ventilation are becoming general, Mr. Redgrave, one of the inspectors, states that "in workshops where the evils of uncleanness, want of ventilation, and disregard of natural decencies can be seen, it is useless to ask a man to do what the law does not permit us to enforce." Mr. Redgrave further states that there is a divided authority in regard to workshops, one to check illegal employment and to cause cleanliness to be observed, not enforced; but the greater evil of total disregard to sanitary arrangements can only be dealt with by local officers, who seem to rely upon the factory inspectors for doing all that is necessary.

Thus an evil is perpetuated through defective registration. In fact, Mr. Redgrave expresses the opinion that the Workshop Act is not perfectly framed, its omissions being many, and its construction loose. With regard to the Factory Acts, it appears that the expense of paying for surgical certificates continues to be a source of irritation, and the question is asked—"If surgical certificates are necessary in factories, why not in workshops, as they are equally necessary in the latter?" Of course, it has been urged why surgeons should be thus required, that the impurities in factories are great, that there is a necessity for seeking out invisible gases, and for examining into the physical condition of female-workers; and these arguments are doubtless worthy of careful consideration. Mr. Redgrave, however, states—and we give the statement for what it is worth—that the provisions of the Factory Acts can be carried out unaided by medical men, and chiefly so when the primary duty which they are called upon to perform, the protection of children under thirteen, cannot be accurately done without the aid of sub-inspectors. In making this statement, it may be pointed out that Mr. Redgrave does not estimate upon a sound basis the true value of the services of medical men in connection with factories; and it is a fact that those services are appreciatively recognised by all large and intelligent employers of factory-labour.

The report with regard to the health of the West End London dress-makers, and the sanitary regulation of their establishments, is of interest. In the small houses of this character, the workpeople who reside in the house have no sitting-room accommodation but that which the apart-

ment used as a work-room or their bed-rooms afford. The latter, for various reasons, are seldom used as sitting-rooms. The two great evils mentioned are, first, the insufficient allowance of time in which to partake of meals; and second, overcrowding and the absence of a proper amount of ventilation. There is no doubt that the health of the workpeople would be greatly promoted if more attention were given to these important matters. The special diseases from which seamstresses suffer are those engendered and aggravated by irregular and hasty meals, and by the breathing of foul and vitiated air in overcrowded work-rooms. With regard to the healthy processes in factories, little need be said as to what these are, as the subject is well known. The processes which may be deemed unhealthy are those in which atoms of the material manufactured or dust are evolved, and those in which the temperature is unnaturally high or moist—although, in whatever degree a factory may be unhealthy from these causes, such unhealthiness would be greatly diminished by proper and sufficient ventilation. As an illustration, it may be mentioned that the dressing of waste-silk is a most nauseous occupation, which might be rendered comparatively inoffensive; but the operatives are greatly opposed to any ventilation which introduces cold air directly upon them, and it is no uncommon thing to find in cotton-spinning rooms that all the windows are kept closed, and that the cracks of the one door are stuffed with old pieces of cotton-bags, in order to keep out the draught.

THE PROVIDENT DISPENSARY MOVEMENT.

THE city of Manchester and Salford, through a meeting called by the Committee of the Medical Charities, on the 10th instant, declared in favour of the provident system of medical relief as a remedy for the abuses of outpatient departments and free dispensaries. The co-operation of the charities has led to this result; and in passing, we cannot commend a better example to London than this combined action of the hospitals and dispensaries, which promises to do much for Manchester. Judging from the resolutions which the Committee of the Charities submitted to the meeting, we may consider them pledged to carry out the provident system in their own institutions; but, in doing so, they will encounter difficulties which were foreshadowed by the opposition of a portion of the meeting. While there seemed to be only one opinion as to the advantages to the poor from the establishment of provident dispensaries, fears were expressed by some medical speakers that private interests in the profession must necessarily be hindered. Now, it is certainly possible that the doctors of clubs for men, and others who practise extensively among the poor for very small fees, may lose some of their patients; but, as we believe that, by avoiding what is bad in existing provident dispensaries, these institutions are for the good of the profession generally, we trust the Manchester Charities will not be deterred from carrying out the work they have so well begun. Let only the greatest good of the greatest number be the principle of action, and the proposed reform will be beneficial to all parties; and, applying this to the question of the number of medical officers, we think as many as possible should be appointed from the qualified practitioners of each district, provided only that the number of members is large enough to supply a fair remuneration to each. One thousand or fifteen hundred members might be made the limit, and one medical man would find this number enough to occupy him, and he would receive as remuneration from the weekly payments of members £100 to £150—sufficient, at all events, to give him an interest in the success of the institution. The outside practitioners have certainly a ground of complaint in some provincial towns, where provident dispensaries with 13,000 members are officered by three doctors, who are thus unfairly pushed by the dispensary to the prejudice of the other practitioners of the town. It is impossible that in these cases the doctors can attend to the wants of the patients, except by employing assistants or partners, and this is the injustice complained of. If this reproach were removed, Dr. Royle, who led

the opposition at the Manchester meeting, could have little left to say against a system which would bring to the profession in his own town a sum of £10,000 at least, which is at present lost.

SIR C. ADDERLEY has withdrawn the Public Health Bill.

THE Secretary of the British Hospital for Diseases of the Skin wishes us to state that the institution in question receives in-patients.

THE cattle-plague has broken out afresh in Russia. The Prussian Government has forbidden the import and export of cattle or meat, as well as all animal substances, except milk, butter, and cheese, across the infected frontier.

TWO milk-sellers were this week summoned at the Westminster police-court for selling adulterated milk. In one case, the milk contained 50 per cent. of water, and in the other case 30 per cent. Mr. Woolrych inflicted, in the first case, a fine of £4 and costs; and, in the other, a fine of £3 and costs.

MEMORIAL PORTRAIT OF MR. ERASMUS WILSON, F.R.S.

THE friends of Mr. Erasmus Wilson propose to place his portrait in the library of Epsom College, on the occasion of opening the new Master's house in September next. This new house is the gift of Mr. Wilson. Dr. Jonson, of South Eaton Place, S.W., and Dr. Carr, of Blackheath, are the joint Treasurers, to whom subscriptions, not to exceed £1:1, may be sent.

NEW MEMBERS OF THE ASSOCIATION.

AT the meeting of the Committee of Council on Friday last 25 new members, and at the meeting of the Council of the Metropolitan Counties Branch Council, on Monday last, 228 new members, were elected into the Association, in addition to the list published last week. Several names of newly elected members have also been received from the Secretaries of Branches.

THE HEALTH OF LONDON.

THERE were 2,217 births and 1,181 deaths registered in London last week, the former being 13, and the latter 320, below the average. The Registrar-General says:—"The fatality from diarrhoea is still increasing; the deaths referred to this disease, which in the two previous weeks had been 22 and 68, further rose to 100 last week, which was, however, 75 below the corrected average number for the corresponding week in the last ten years. Of the 100 deaths from diarrhoea, 78 were of infants under one year of age. To simple cholera, 6 deaths were referred, 3 of infants under one year, and 3 of adults." There were 3 deaths from small-pox, 24 from measles, 6 from scarlet fever, 5 from diphtheria, 36 from whooping-cough, and 20 from different forms of fever. The fatal cases of whooping-cough, measles, and scarlet fever were less numerous than in recent weeks. Seven deaths were caused by street accidents. The mean temperature was 62.6 deg., and slightly exceeded the average.

THE TICHBORNE TRIAL.

A SUMMARY of the medical evidence at this trial in a daily contemporary points out that in all cases of disputed identity marks upon the body and other physical peculiarities are a most important head of evidence; and to those who have the time and patience to follow the great Tichborne case into its details, the testimony of Mr. Barnard Holt, and that of his colleague, Mr. Haden, will be found peculiarly interesting. These gentlemen, in conjunction with Sir William Fergusson and Dr. Sutherland, subjected the claimant to a very careful examination, taking notes of the physical peculiarities which they discovered or failed to discover; and now Messrs. Holt and Haden, who originally acted for the defence at the trial in Common Pleas have been called as witnesses on behalf of the Crown. The substance of their evidence is that the defendant has no tattoo marks, or any signs of tattooing; but that above his left wrist is a large cicatrix, as if a piece of the skin had been cut or burned out; that he has a brown natural mark on his side, close under

the ribs; that he has no scar on his eyelid such as a fishhook would produce if it passed through the lid; that he has a scar on the back of his head such as might be produced by a fall; that he has no marks of bleeding at the elbows or on the arms; that he has no mark on the arm of either an issue or a seton; that, although he has a scar on the ankle, it yet is not such as would be produced by an attempt to bleed from the saphena vein; and that he has no scar of blood-letting over the temporal artery. Taking each of these points singly, a vast mass of conflicting possibilities arises. If Roger Tichborne were really tattooed along the whole length, more or less, of his forearm, and the claimant have never been so tattooed, the case is, as Dr. Kenealy has admitted, at an end; for Sir William Fergusson agrees with Mr. Holt that nothing will remove a tattoo mark short of the knife or cautery. But, then, the defendant has on his left arm a scar exactly such as would be produced by burning or cutting out a small tattoo mark. This fact is, we believe, coupled by the prosecution with the further fact that Arthur Orton is said to have had "A. O." tattooed on his arm; but it yet remains to be seen what construction Dr. Kenealy will put upon it. The brown mark on the side is admitted. It was, indeed, one of the "tokens" mentioned by the claimant in his first letter to his mother; and it is urged by the prosecution that there is no proof that Roger Tichborne had such a mark. Whether Arthur Orton had such a mark or not, no one seems to know. As for the absence of any scar on the eyelids, this is coupled by the prosecution with the fact that while Roger was on board the *Pauline* a hook passed clean through the lid, and had to be pulled through and out; and it is argued that such a wound would certainly have left a permanent scar. The scar on the back of the head is ascribed by the defence to the memorable accident at Pornic; while, for the prosecution, it is contended that Roger Tichborne was stunned by the fall in question, but that the skin was not even abraded, and that no blood flowed. It is also a point for the prosecution that bleeding leaves a scar, which is almost always permanent, and that if the defendant were Roger he would have marks of bleeding on his arms. It is also certain what when a lad Roger had either an issue or a seton on his left arm. According to the prosecution it was an issue, and was kept open by a pea. According to the defence, it was a seton. Be this how it may, Mr. Holt declares that on the defendant's left arm there is no trace of either seton or issue. Then, as to the marks on the temples, or rather which are not on the temples, it is now beyond doubt that Roger had his temporal vein opened at Canterbury. But Mr. Holt carefully examined the defendant's temples in open court, and found no scar. As to the marks on the defendant's ankles, the two surgeons were agreed that they were so situated as to render it impossible that they could be the scars of an old blood-letting. And, lastly, as to the peculiarity in the thumb, both Mr. Holt and Mr. Haden declared their belief that it was not necessarily natural or congenital, but might have been with ease artificially produced—a fact which each gentleman had independently ascertained by actual experiment upon himself.

MEDICAL OFFICERS OF WORKHOUSES AND DISTRICT SCHOOLS.

THE Local Government Board, in December 1871, in consequence of the frequent occurrence of ophthalmia in the schools for pauper children, addressed a circular letter to the guardians, recommending that the medical officers should make frequent and regular inspection of the children in the body of the school, so as to secure, at an early stage of the disease, the removal to the infirmary of children who might be affected. Dr. McDonnell, the Medical Officer of the Marylebone School, it appears, has refused to comply with the directions given by the guardians, in accordance with this suggestion; and the guardians have, therefore, appealed to the Local Government Board to remove him from his office. The Board have now addressed a letter to the medical officer, in which they state: "Irrespective of the Board's circular letter of the 7th of December last, it appears to the Board that the instructions of the Committee with regard to the treatment and inspection of the children were reasonable, and such as you were bound to

obey. The Board consider that the position taken by you in declining to give effect to the directions of the guardians, except under the stipulation that you should receive additional remuneration in respect of the services required of you, is untenable. It is your duty, under Articles 53 and 59 of the order of the 1st of June, 1860, to comply with all the reasonable and lawful orders of the guardians, and with the regulations of this Board which may be issued from time to time. The Board cannot allow the orders of the guardians to be set at defiance, so long as those orders are reasonable and lawful; and, unless you are prepared at once to discharge the duties imposed upon you, it will be imperative upon the Board to call for your resignation of the office of medical officer of the Southall School."

DETENTION OF LUNATICS IN WORKHOUSES.

To this subject, to which we call attention in another column, the report of the Local Government Board refers in the following terms.

"Our attention has been drawn by the Commissioners in Lunacy to the fact that, in their periodical visits to workhouses, they have had occasion to notice that the provisions in Section 20 of the Lunacy Act, 1862, 25 and 26 Vict., c. 11, so far as it imposes a duty on the medical officers, has been imperfectly observed. We therefore addressed a circular letter to the guardians on the 10th of August last, bringing the subject under the notice of the guardians, and pointing out that, in order to justify the detention of any lunatic in a workhouse beyond the period of fourteen days, it is in strictness necessary that the medical officer should certify in writing that such person may properly be kept there. We hope that the due observance of this provision in future will ensure that any lunatics who, either from their violence or other habits, cannot properly be attended to and taken care of in a workhouse, or for whom the better arrangements of a lunatic asylum may afford the prospect of cure, may be at once sent to a lunatic asylum, or, if admitted in the first instance into the workhouse until an order of magistrates can be obtained, will without delay be removed from the workhouse to an asylum."

UNRECORDED DEATHS UNDER CHLOROFORM.

MR. BROWN of Callington, in forwarding to us the very interesting paper which we publish in another column—a paper which suggests considerations important to a large body of practitioners—writes as follows in further illustration of the importance of the subject.

I may further state that, in the remarks which my paper drew forth, two gentlemen (out of a meeting of twenty) admitted that they each had had a similar case of death from chloroform during a capital operation—one an injured miner, where there had been delay and loss of blood, as in my case; and the other in a case of operation for strangulated hernia; and another gentleman barely saved his case—one of amputation of the penis for cancer. Yet in neither of the two cases did the immediate cause of death get into the journals or the newspapers.

OUT-PATIENT DEPARTMENTS.

IT is satisfactory, says the *Manchester Guardian*, to learn that the movement set on foot by the medical charities of Manchester and Salford, for the reform of the existing system of medical relief to "out" and "home" patients, is making good progress. The following circular has just been issued and circulated among the members of the committees and the honorary medical officers of the various medical charities, the Poor-law medical officers of the district, and the committees of the Medical Society, the Provident Society, and various sick clubs, etc.

Manchester Royal Infirmary, July 1, 1873.

Dear Sir,—The committee of the medical charities of Manchester and Salford request the favour of your attendance at a meeting to be held at the Town Hall, on Thursday the 10th inst., at three P.M.; the Worshipful the Mayor in the chair. The following resolutions will be submitted.

"1. That as there is a large class of working people above the condition of pauperism, who, while unable to pay the ordinary medical fees, are yet well able to make small periodical payments for medicine and medical attendants, it is desirable to establish in Manchester and Salford provident associations by which these cases may be provided for.

"2. That the Committee of the Medical Charities be requested to draw up a scheme showing how the provident system may best be established in Manchester and Salford."

Sir Rutherford Alcock and Dr. J. Ford Anderson will attend as a

deputation from the Charity Organisation Society of London. Representatives from provident dispensaries in London, Nottingham, Leicester, Coventry, and other places, will also be present. Those who take an interest in the movement, and who may wish to attend the meeting, will be admitted upon application to the honorary secretary.—I am, dear sir, yours faithfully, GEORGE REED, M.D., Hon. Sec.

ENGLISH BILLS OF HEALTH.

THE urban-mortality continues at the moderate rate of 20 per 1,000 in the principal English towns, 21 per 1,000 in Edinburgh, 25 in Glasgow, and 26 in Dublin. The extreme healthiness of Portsmouth was rivalled last week by Sunderland, both ports showing a death-rate of only 14 per 1,000. Birmingham follows them closely with 16, while the metropolis is one of a group of towns with a common rate of 18. The maximum—Manchester, 26—is the lowest recently recorded. Hull has declined to 26, Liverpool to 23, and Newcastle to 22.

MEDICAL PROMOTION IN THE GUARDS.

THE points concerning promotion in the medical department in the Brigade of Guards, to which we recently directed attention, have now come under discussion in the military papers, and the whole question is summed up by "X" in an exhaustive letter to the *Army and Navy Gazette*. He there very clearly shows that the claim for exemption from the Royal Warrant of 1858, set up by the surgeon-major in question, cannot hold good, as such warrants have always been strictly retrospective in action, and as a former surgeon-major of the Coldstream Guards was compelled to retire on reaching the age of fifty-five years. But, furthermore, it is stated that the officer who now stops the flow of promotion, distinctly gave his approval in writing of the adoption by the brigade of the warrant of 1858; and, if he himself was not then placed absolutely under its provisions, this concession was merely granted in order to allow of his retaining the better pay and retirement of the old system. He could, therefore, have obtained no privilege of any kind under the new warrant; and, as the regulation limiting service by age will be rigidly carried out in the case of his juniors, it seems hard that they should now be deprived of any immediate prospect of reaching the higher ranks. It must be remembered that two of them, at least, have served as assistant-surgeons for nearly twenty years; and that the deferment of their hopes, after so much excellent service both during peace and war, is a grievous disappointment as well as injustice.

THE SANITARY ORGANISATION OF WALES.

AT the last meeting of the North Wales Branch, it was unanimously resolved, on the motion of Mr. T. Eyton Jones (Wrexham), seconded by Dr. Hughes (Denbigh), "That this meeting approves of and endorses the conjoint opinions of the British Medical and Social Science Associations in reference to extended areas and a chief medical officer of health; the union medical officers still retaining their present appointments as health-officers." We fear, however, that Mr. Doyle's plan is not likely to be adopted. He suffers for the sins of his department. The Local Government Board sent out its inspectors with "diplomatic instructions", and without a common scheme. Mr. Doyle's proceedings have been cunningly conceived; but it is a sort of cunning which overreaches itself. He carefully kept his real plan out of sight at first, in order to draw the guardians into his net; and they are strong enough to break through his net. They see that they have not been openly dealt with, and they refuse to be beguiled. An open statement at the first by the Local Government Board throughout all the country, by the mouth of its inspectors, of a definitive plan such as it now proposes, would have been manly, straightforward, and intelligible. The present result is one of complete and, we are bound to say, well merited *fiasco*. Never did the chief of any department have so fair a chance of writing his name deeply in the annals of his country as Mr. Stansfeld, and never has any statesman so signally failed. His measure was a half-hearted, ill-conceived, imperfect measure; and it has been carried out without wisdom, modesty, or foresight. In deli-

berately ignoring the ample stores of knowledge and the tried sagacity of the medical staff at his disposal, Mr. Stansfeld has acted consistently, but not wisely. The whole administration of the Health Act thus far has been a series of miserable blunders, and the legislature will be occupied for some years to come in repairing them. Meantime, a golden opportunity has been lost; the *prestige* of sanitary efforts has been trailed in the dust; and those local authorities who were willing and earnest will have presently become disgusted and discontented. It will, indeed, be the work of many years to come to repair the errors of the past.

ARMY MEDICAL DEPARTMENT.

AN order has recently been issued by Major-General Sir Charles Staveley, K.C.B., Commander-in-chief of the western district, "for the medical examination of the men of the regiments appointed to take part in the forthcoming military manoeuvres on Dartmoor, with the view of exempting all those of delicate constitution from the trying ordeal of a month's encampment in a climate where, if the weather should prove unfavourable, they would be liable to contract disease likely to permanently affect their health." There cannot be two opinions about the propriety of such an order as this; and the results of the inquiry thus undertaken will form a telling commentary on our recent system of recruiting. If any large number of men be found to be unfit for the wear and tear of actual service, and if many of these owe their inefficiency to congenital defects or want of physical development, we shall be in a good position to judge what sort of army we now possess for fighting purposes. We shall look forward with much interest to the opportunity which we hope may be afforded us of seeing how many of our rank and file are fit for their position; for we can hardly see the policy of retaining men on the establishment who are not able to do more than shoulder a musket in a barrack-yard.

THE ARMY MEDICAL SERVICE.

AN announcement has just been made that the next examination for commissions in the Medical Department of Her Majesty's Service will take place on August 11th. We do not think we are exceeding our legitimate duty in recommending candidates to abstain from sending in their names until something definite is known of the War-Office intentions with reference to the recent warrant. We can assure them of the strong sympathy of the profession if they stand aside and wait the progress of events; and, indeed, we hardly see what other attitude is possible after the strong expressions of opinion from all our leading medical corporations. But we have still faith in Mr. Cardwell and his desire to promote the efficiency of the Department, and have little doubt that he will make some concessions to the force of public opinion. The *Army and Navy Gazette* tells us that the War-Office are supposed to be willing to act on some, if not all, of the recommendations which they have received. May we hope that this announcement is really the shadow of coming events.

PROVIDENT DISPENSARIES.

AN important meeting has been held at Manchester on the subject of provident dispensaries, in accordance with the notice which we last week published. It appears probable that some active steps will be taken towards testing the plan on a large scale. The question is one of great importance, and touches complicated interests. It is obvious that it depends upon the mode of government of such institutions, and the vigour with which precautionary regulations to prevent abuse are enforced. The first step, or one which should be at least the necessary corollary of any proceedings of the kind, is the curtailment of the out-patient departments of the various free charities of the town. The subject has been discussed at some length by our Manchester correspondent, whose letter of this week gives further details.—A meeting of the medical profession *alone* of Manchester and the neighbourhood is convened at the Town Hall of that city for Friday, July 18th, at 3 P.M., "for the purpose of obtaining the opinion of the profession upon the above question, and adopting resolutions thereon".

Reporters will not be present. The notice is signed by Peter Royle, M.D., etc., Chairman *pro tem.*; Joseph Westmorland, M.R.C.S., etc., and Charles Holmes, L.R.C.P., Honorary Secretaries. The following resolutions will be submitted.

1. That inasmuch as the medical charities of Manchester and Salford have been founded, endowed and supported, by bequests, public and private subscriptions for the purpose of affording gratuitous medical and surgical relief to the poor—abuses of those charities by improper recipients ought not to be met upon the part of such charities by the foundation of "medical provident dispensaries", but rather by a *real* inquiry into the circumstances of their patients, so as to prevent the admission of, or exclude those who are able to pay, from receiving such relief. Any departure from this principle, except under some special circumstances of emergency, etc., is a diversion of such charities from their original object.

2. That the formation of medical provident dispensaries, either as now in operation or as proposed, would tend to bring the great majority of the working classes of this country, their wives and families, under one vast system of medical and surgical relief; would enter into unfair competition with, and be ruinous to the best interests of, the great majority of the medical men of this country; would create a system which is even more liable to be abused, and that on a larger scale, than the present generally admitted abused hospital charities are; and, in addition to this, it is most likely they would cause a large falling off in the subscriptions to the present medical charities.

3. That as regards the medical profession, the necessity for these "provident dispensaries" does not exist, since by the "Poor-laws" the really poor are provided with skilled medical and surgical relief—free. The establishment of these dispensaries will bring them into competition with the existing friendly and other societies (originated and managed by the working classes) for relief in sickness and distress; and, considering that it has been the invariable rule of the medical profession to charge the working classes according to their means, and to accept from them payment of their accounts by instalments when necessary, and as every medical man (the same as in any other calling) has a right to please himself as to whom he trusts, by such acts as these and by many other daily acts of kindness the members of that profession have obtained for themselves and retain the good feeling of the working classes. This meeting is, therefore, opposed to the establishment of these dispensaries.

4. That — gentlemen be elected from this meeting to form a committee of the general profession to watch any scheme which may be proposed, and, if necessary, report to any future meeting of the profession to be called for that purpose; and that this committee consist of Messrs. —.

THE CHOLERA IN AMERICA.

DR. JANES, Sanitary Superintendent of New York, has made a report to the Board of Health of that city, calling attention to the probability that, as there is no quarantine protection against arrivals by land, cholera may soon reach the city by some of the routes of land travel from infected places. He observes that, as it is now generally admitted that the germs of cholera-poison are thrown off by persons having premonitory diarrhoea, it is of the utmost importance to secure their immediate disinfection and the isolation of the patient. With a view to the destruction of such germs as soon as they are cast out, he has caused an inspection to be made of the arrangements and accommodation at the railway depôts, ferry houses, and cheap lodgings. He says: "The disinfectant which I have directed for present use is the old mixture which has proved so reliable on previous occasions—viz., ten pounds of sulphate of iron, five gallons of water, and one half-pint of common carbolic acid. In order to give full publicity to what are now regarded as the most improved precautionary measures against cholera, it is desirable that a set of instructions be prepared, not only for the public press, but that printed copies be furnished to the agents of steamships from both foreign and domestic ports, to railroad officials, to the proprietors of hotels, to emigrant and sailor boarding-houses, to cheap and vagrant lodging-houses, and all similar places where strangers congregate. The same method of disinfection applied to the sinks and water-closets of private houses, if made general, would not only cleanse the house-drains, but through these the public sewers would be deprived of a great proportion of their poisonous gases. I would, therefore, respectfully recommend that some action be taken by which the

desired information and instructions may be circulated as above proposed without delay." The *New York Tribune* says: "The reports from the infected localities, though alarming, have been exaggerated. An examination into the statements made by local physicians shows that the disease is a malignant form of cholera morbus. In almost every instance the worst type of the epidemic, as it may be called, has been observed in cases where persons have eaten too freely of summer fruits and vegetables. This cannot be Asiatic cholera; nor is it necessary to create any special excitement about its prevalence. A due regard to personal cleanliness and healthful diet will be sufficient preventive against this kind of 'cholera'. Nevertheless, there should be redoubled vigilance in the purification of the city, always in an unpleasant condition."

THE CHOLERA IN EUROPE.

A report from Berlin, dated July 11th, states that the entire number of cases in the Dresden district during the previous week was 85, of which 25 were fatal. In the city itself only one person had died since July 7th. In Vienna, from July 4th to 9th, there were 66 cases of cholera.

DELEGATES FROM THE AMERICAN MEDICAL ASSOCIATION.

At the twenty-fourth annual meeting of the American Medical Association, held at St. Louis, the following gentlemen were appointed delegates to the British Medical Association: Drs. F. G. Smith, C. Wistar, J. S. Cohen, of Philadelphia; Dr. E. Warren, of Baltimore; Dr. C. L. Ives, of New Haven; Dr. Edward Montgomery, of St. Louis; and Drs. F. Barker, E. Seguin, and J. C. Hutchinson, of New York.

SCOTLAND.

THE CHAIR OF PHYSIOLOGY AT EDINBURGH.

It is stated that the Chair of Physiology in the University of Edinburgh is likely to become vacant by the resignation of Dr. Hughes Bennett, whose health is, unfortunately, far from robust. The names of four distinguished graduates of the University—two resident in Edinburgh, and two in London—are mentioned as those from among whom his successor may be selected. But we believe that, although it is probable that Dr. Bennett will think it proper to resign his chair at no distant date, it is by no means certain that he may not make another effort to perform some of its duties next session.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

At a late meeting of the President and Council of this body, the following resolution was unanimously adopted:—"That the Honorary Fellowship of the College be conferred on the Reverend Samuel Haughton, Fellow of Trinity College, Dublin, in acknowledgment of his contributions to various branches of scientific knowledge, more especially to that of scientific anatomy."

PRECAUTIONS AGAINST CHOLERA.

THE Queenstown Town Commissioners, with Dr. King, Inspector under the Local Government Board, had a meeting lately with reference to precautions to be taken should the disease visit that seaport. The Board decided upon making off Whitegate as a locality for quarantine; but as regarded a hospital site for cholera patients, it was ultimately decided that, in consequence of objections having been made by the residents, a hospital ship should be provided in lieu thereof. At a special meeting of the Governors of the Meath Hospital, Dublin, held on the 14th instant, it was resolved that, in view of the probable approach of cholera, the new epidemic wards in that hospital should be kept vacant and ready for receiving patients without reference to the source the cost may eventually be derived from. These wards contain sixteen beds, detached from the rest of the building, and completely equipped with baths and dispensary.

THE ANNUAL MUSEUM.

THE Committee in charge of the Annual Museum have decided to collect special series of preparations illustrating the following subjects.

Addison's Disease; and Morbid conditions of the Suprarenal Capsules.

Morphœa; or Scleriasis Cutis (Addison's Keloid).

Syphilis affecting the Viscera.

Hodgkin's Disease; or Lymphadenoma.

Vitiligo or Xanthelasma.

True Leucocythæmia.

In respect to these subjects, the Committee will relax the general rule, that objects which have been shown in previous museums will not be admissible, and will be glad to receive all casts, drawings, and specimens that can be obtained. It is hoped that in each instance the original drawings will be obtained, and that very valuable materials from different sources will be placed in juxtaposition.

THE GENERAL MEETING OF THE ASSOCIATION IN LONDON:

PROPOSED CONCURRENT CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

WE have already mentioned that it is proposed by Dr. Joseph Rogers, the Chairman of Council of the Association of Poor-law Medical Officers, to summon a meeting of the Association to be held at the same time as that of the British Medical Association in London, in the first week of August; and that facilities will be afforded by the Reception Committee for holding the meeting in the same building.

The occasion would be an excellent one for promoting a meeting of the newly elected health-officers of urban and rural districts, with a view to conference on their modes of proceeding, their duties, difficulties, etc. Such a conference could but be of public, professional, and individual interest; and it may conveniently annually recur at the annual meetings of our Association, in connexion with the Public Health Section. The meetings of the Association bring together a very large number of the public health officers; and thus it will be possible for them to utilise their presence for the purposes of special conference.

We may throw out the same hint to the factory surgeons and to the militia surgeons. These special conferences, like the meetings of the Psychological Association and of the Poor-law Medical Officers' Association, may of course remain separate and autonomous, as before; but they may find it in many ways convenient to avail themselves of the occasion of the annual meeting of the British Medical Association, and of the facilities which it will offer for the organisation of their own meetings and the record of their proceedings.

SPECIAL CORRESPONDENCE.

MANCHESTER.

FROM OUR OWN CORRESPONDENT.]

Provident Dispensaries.

MANCHESTER has formally pledged itself to establish provident dispensaries throughout its boundaries, and, it may be presumed, on a sufficient scale to afford medical relief to all the sick poor of the city above the condition of mendicancy and pauperism. This very important decision was come to at a meeting held in the Mayor's parlour on Thursday, July 10th, when it was resolved by a majority of those present that, "as there is a large class of working people above the condition of pauperism who, while unable to pay the ordinary medical fees, are yet well able to make small periodical payments for medicine and medical attendance, it is desirable to establish in Manchester and Salford provident associations by which these cases may be provided for." It is probable that this scheme will be prosecuted with zeal and success, especially as the principal medical charities, headed by the Infirmary, have thrown their weight into the scale, and are quite enthusiastic in support of the general system of provident dispensaries.

Mr. Oliver Heywood, a Manchester banker, and a thoroughly able and excellent man, who presided at the meeting, while frankly saying that at present it was impossible to tell exactly how the scheme would work, affirmed that the general consensus of opinion, lay and medical, was in favour of such institutions, and that all the money paid by the members of the future dispensaries would be so much saved from wanton waste. Nevertheless, he wisely and urgently appealed to the rich men of Manchester not on this account to lessen their subscriptions to existing charities.

Dr. Ransome and Dr. J. Ford Anderson, both of whom have had large experience in provident dispensaries, affirmed that such institutions, far from injuring the general body of practitioners, invariably proved sources of gain; that, with a proper vigilance committee, improper cases, that is, people who could pay the ordinary fees, would never be admitted; and that, in point of fact, whatever money was paid in to the general fund was so much to the good, inasmuch as, under the present system, the class from whom the members would be drawn never paid at all.

Sir Rutherford Alcock, who followed on the same side, said that all fathers of families whose wages averaged from £1 to £2 a week would be considered proper applicants. He further dwelt upon the pauperising effect which the gratuitous system has exercised upon the poorer classes, and quoted the somewhat hackneyed, and perhaps doubtfully correct, statement, that in London a million people applied for relief to the various medical charities in a single year. I say doubtfully correct, because it is probable that in all these calculations the same patient is often counted over more than once, it may be several times indeed. In Manchester, for example, an out-patient's recommendation is only in force for two months, after which it must be renewed, and the patient entered afresh; so that, if a patient remain, as is not uncommon (in cases of struma, etc.), under treatment for a year, he will be entered six times, and might be counted as six distinct individuals.

Dr. Peter Royle again valiantly, but this time unsuccessfully, led the conservative opposition, and predicted all sorts of lamentation, and evil, and woe, as the result of the scheme being carried into execution. With much vigorous diction, he affirmed that provident dispensaries would injure and impoverish the general body of medical men; that improper cases would certainly be admitted; that they would lower fees, especially midwifery fees; and that the medical men attached to them would perform their duties in a perfunctory manner. His pleading and warning, however, were all in vain, and the meeting resolved to proceed with the scheme.

Nothing daunted by his defeat, he has, by the aid of two other medical men, convened a meeting of the profession alone for Friday, July 18th, when several resolutions, utterly condemnatory of the spirit and principle of provident associations, ranking them, indeed as frauds upon the profession, and subverters of the real objects of the medical charities, will be submitted to the meeting. I cannot say that he has at present succeeded in enlisting any one of professional standing on his side, though there can be no doubt that many medical men regard the proposed innovation with suspicion and dislike. Many indeed who are not opposed to provident dispensaries, yet think that, as they are practically nothing but sick clubs including women and children, they should, like other sick clubs, be got up by the people themselves, and that it is not either wise or necessary to help them to so large an extent to help themselves. Be that as it may, it is now an accomplished fact that the powers that be approve of the new institution, and are both able and willing to carry out the plan proposed. Details are matters of the future: one thing alone is certain, and that is, that provident dispensaries upon a large scale, upon an unprecedented scale indeed, will be introduced, and that shortly, into Manchester.

There is one point which has not been much dwelt upon, but which is important, and which must not be overlooked; and that is, the effect which provident dispensaries will have upon the out-patient department of our hospitals. It is quite clear that hospital out-patients are composed of the very class who will form the members of provident dispensaries, so that it necessarily follows that the out-patient department of the hospitals must either become a sort of rival to the provident dispensaries, which would be clearly undesirable and pregnant with ill to both institutions alike, or it must be swept clean away, or, lastly, it must itself be made provident. Now, to sweep away the out-patient department would be an almost unmixed evil—evil alike to the public, to the profession, and to the medical student. To the public, because cases are constantly being sent to a large hospital by other medical men who have been foiled in treating them, or who have not the large experience or appliances, and means to boot, which obscure and difficult cases often require in treatment—indeed, the outpatients very

largely consist of such cases: rightly or wrongly they regard going to the hospital as a sort of appeal to Caesar, and are vastly comforted thereby. To the profession, again, it would be an evil to abolish the out-patient department, as it is the recognised and necessary arena in which to prepare men for the higher surgical and medical appointments in a hospital; and, lastly, to the student it would be a direct and considerable evil in removing the very best training ground he has for future practice. It is not going too far to say that the out-patient departments of hospitals are "the books, the grounds, the academies" where the student learns to apply the proper drug and ably wield the lance.

It seems, then, that only one course remains; and that is, to make the out-patient department itself provident. There is, perhaps, no great reason why this should not be done, for it is probably visionary to suppose that such a change would either lower the dignity of the hospital surgeon, or interfere with the emoluments of his professional brethren.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

The business of the Meeting will be transacted in six Sections.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.*

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.*

SATURDAY, August 9th.

EXCURSIONS.—By permission, the following among other Excursions will be arranged:—

Excursions to Cliefden, near Maidenhead, the seat of the Marquis of Westminster; and to Windsor Castle.

Excursion to Brighton, and visit to Brighton Aquarium.

Visit to Woolwich Arsenal and the Factories.

Arrangements will be made, of which further details will be published, for facilitating visits during the week to the Print and MSS. Rooms of the British Museum, the Mint, the General Post Office, the Private Collections at Grosvenor House, Stafford House, etc., and to some leading Factories.

* Each member is invited to bring one lady with him to the *soirées* at the Mansion House and at University College.

† By invitation of the Metropolitan Members.

* * Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.
Dr. A. HENRY, 16, Brunswick Square, W.C.
Dr. S. WILKS, F.R.S., 77, Grosvenor Street, W.
GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.
ERNEST HART, Esq., 59, Queen Anne Street, W.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

Communications, objects intended for exhibition, etc., may for the present be addressed to the private care of any of the members of the Museum Committee, or to Mr. FRANCIS FOWKE, at the office of the BRITISH MEDICAL JOURNAL. During the week preceding the meeting, all articles should be sent direct to the Library, King's College, and addressed to the care of the Curator of the Museum of the British Medical Association.

Papers.—The following papers and contributions have been promised in addition to those published at page 21 of JOURNAL for July 5th and page 27 for July 12th.

Morell Mackenzie, M.D. The Treatment of certain forms of Bronchocele by Injections of Iodine.

E. Mackey, M.B. Meningitis in Children.

George Paton, M.D. The Action and Sounds of the Heart.

W. Farr, M.D. 1. Cases illustrating the Endemic and Non-infectious Character of Diphtheria. 2. The Use and Abuse of Purgatives.

R. Norris, M.D. Demonstrations on the Formation of Rouleaux of Red Corpuscles of the Blood, and of the Passage of Leucocytes through the Walls of the Blood-vessels.

James Edmunds, M.D. The Physiological Influence of Alcohol.

E. Lund, Esq. On a Mode of Using a Three-pad Tourniquet in the Treatment of Aneurism.

H. M. Madge, M.D. On Transfusion of Blood.

J. Vose Solomon, Esq. A Disease of the Eyelid not described by authors.

John Ringland, M.D. Transfusion in Extreme Uterine Hæmorrhage.

Robert Boyd, M.D. Observations concerning Medical Relief and Pauper Lunatics, based on Personal Experience.

A. Rasch, M.D. 1. On the Diagnosis of Early Pregnancy. 2. On Retained Placenta after Abortion, with a New Instrument.

R. N. Ingle, Esq. Two Cases of Hysteria with Remarkable Complications: Successful Treatment by Chloroform.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, July 24th, at 2.30 P.M., under the presidency of GEORGE GILLET, Esq. Dinner at 5 o'clock.

Gentlemen are requested to send to the Secretary the titles of communications they wish to make at the meeting.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, June 24th, 1873.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of the above Branch will be held in the Imperial Hotel, Aberdeen, on Saturday, July 26th, 1873, at 1.30 P.M.

It is intended to have an exhibition of books, instruments, drugs, etc., which have appeared within the past year; and members desirous of exhibiting such, are requested to communicate with the Secretary, or with Dr. Findlay, 47, Schoolhill, Aberdeen.

Dinner in the Imperial Hotel at 3 o'clock P.M.

Further particulars will be intimated by circular.

ALEX. OGSTON, M.D., *Honorary Secretary.*

Aberdeen, July 9th, 1873.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

At a meeting of the Committee of Council held at the Queen's Hotel, Birmingham, on Friday, the 11th day of July—present: Mr. G. Southam (President of Council), in the Chair; Mr. Alfred Baker (President of the Association); Dr. Falconer (Treasurer); Mr. Bartlett; Dr. Bryan; Dr. Chadwick; Dr. Foster; Mr. Fowler; Mr. Nicholson; Dr. Roberts; Dr. Steele; Dr. Stewart; Mr. Heckstall Smith; Dr. Wade; and Dr. Waters, Chester.

The minutes of last meeting were read, and found correct.

Resolved—That the recommendations of the Finance and JOURNAL Committee be approved and carried into effect.

The accountant's report having been read and considered, it was

Resolved—That the accountant's report be received and entered on the minutes, together with the balance-sheets; and that the balance-sheets for 1872 be published in the JOURNAL.

That the subject for the Hastings Prize Essay for 1874 be, "The Action of Alcohol in Health and Disease."

Summary of Receipts and Payments during the Year ended 31st December, 1872.

(As prepared by Kain, Bullen, Eldridge, and Co.)

Dr.]	RECEIPTS, &c.	£	s.	d.
Balance in hands of Treasurer on 1st January, 1872	..	1186	1	7
Subscriptions	4685	17	5
Advertisements	2676	10	1
Journals	293	14	6
Interest allowed by Bank	16	1	3
		£8,858	4	10
Cr.]	PAYMENTS, &c.	£	s.	d.
Editor	312	0	0
Sub-Editors	93	15	0
General Secretaries—Williams, £125; Fowke, £350	..	475	0	0
Sundry Salaries	234	18	3
Printer	4847	4	6
Commission	91	5	9
Contributions	952	7	0
Stationery	280	0	6
Sundries	102	0	6
Law Charges	11	3	10
Engraving	31	6	6
Petty Cash	541	6	9
Rent	12	0	0
Furniture	68	13	8
Charges by Roberts, Lubbock, and Co.	1	1	3
Balances on 31st December, 1872, viz.:				
In hands of Treasurer	£625	3	8
General Secretary	0	9	10
Roberts, Lubbock, and Co.	168	17	10
		803	11	4
		£8,858	4	10

Profit and Loss Account (for Year ended 31st December, 1872).

(As prepared by Kain, Bullen, Eldridge, and Co.)

1872.	Dr.]	On 31st December, 1871.	1872.	d.
Dec. 31.	To Contributions ..	£ 655	15	5
"	" Secretary ..	350	0	0
"	" Sundry Salaries ..	156	16	0
"	" Editor ..	250	0	0
"	" Sub-Editors ..	75	0	0
"	" Printing ..	3498	9	6
"	" Stationery ..	228	15	0
"	" Petty Cash ..	403	0	4
"	" Sundries ..	50	18	5
"	" Law Charges, etc. ..	63	14	2
"	" Commissions and Allowances ..	152	8	8
"	" Rent ..	32	2	0
"	" Engraving ..	32	2	0
"	" Banker's Charges ..	58	1	9
"	" Defalcations ..	58	1	9
"	" Stock (profit for the year ended 31st December, 1872) ..	957	2	11
		£7,786	6	10
1872.	Cr.]	On 31st December, 1871.	1872.	d.
Dec. 31.	By Journals ..	£ 171	5	6
"	" Advertisements ..	2479	4	4
"	" Subscriptions ..	4233	11	6
"	" Interest allowed by Bankers ..	16	1	3
		£7,786	6	10

Stock Account.

(As prepared by Kain, Bullen, Eldridge, and Co.)

		Dr.]	£	s.	d.
1872.	December 31.	To Balance carried forward	1817	12	3
			£1,817 12 3		
		Cr.]	£	s.	d.
1872.	Jan. 1.	By Balance at this date	684	5	■
	Dec. 31.	By Profit and Loss	1133	7	3
			£1,817 12 3		
1873.	Jan. 31.	By Balance, excess of Assets over Liabilities brought forward	1,817	12	3

Balance Account, 31st December, 1872.

(As prepared by Kain, Bullen, Eldridge, and Co.)

ASSETS.

		On 31st December, 1871.			1872.		
Dr.]		£	s.	d.	£	s.	d.
Stuckey's .. ..	.. ..	1186	1	7	625	3	8
Roberts and Co. .. ..	.. ..				168	17	10
Advertisements .. ..	.. ..	2419	5	7	2180	17	4
Subscriptions .. ..	.. ..	140	2	0	603	15	0
Fowke, F. .. ..	.. ..	20	6	6	9	9	10
Furniture .. ..	.. ..				68	18	8
					£3,657	2	4

LIABILITIES.

		On 31st December, 1871.			1872.		
Cr.]		£	s.	d.	£	s.	d.
Printing .. ..	.. ..	2598	9	6	1444	19	3
Contributions .. ..	.. ..	377	10	2	331	15	8
Editor .. ..	.. ..	62	10	0	0	10	0
Stationery .. ..	.. ..	51	17	9	14	15	0
Petty Cash .. ..	.. ..	76	18	9	13	12	4
Law Charges .. ..	.. ..				13	10	10
Rent .. ..	.. ..				13	0	0
Engraving .. ..	.. ..	18	1	6	7	7	0
Stock .. ..	.. ..	684	5	0	1817	12	3
		£3,657 2 4					

KAIN, BULLEN, ELDRIDGE, & Co.,

Law and Mercantile Accountants, 69, Chancery Lane, London,
(and at Liverpool).

29th May, 1873.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE thirty-seventh annual meeting of this Branch was held in the Council Chamber of the New Town Hall, Warrington, on Tuesday, June 24th. The Chair was first taken by the retiring President, THOMAS MELLOR, Esq., of Manchester, who, after thanking the members of the Branch for the honour conferred on him in electing him as President last year, introduced his successor, CHARLES WHITE, Esq.

President's Address.—Mr. WHITE, on taking the Chair, delivered an interesting address. Having offered a welcome to the Branch on its first meeting in Warrington, he gave an account of the chief features of the town, commenting on its water-supply. He then briefly noticed the history of the town, and its various manufactures. Among the representatives of the medical profession in the town, he specially mentioned the late Dr. M'Kendrick and Mr. Sharp. Mr. Sharp was first Secretary of the Branch, conjointly with Mr. Hardy (happily yet alive). Turning, then, to general professional topics, he referred to the opposition to specialism in medicine, and to the importance of hygienic measures. Referring to syphilis, he condemned the practice of syphilitic inoculation, and hoped for good results from an extension of the Contagious Diseases Act. He spoke also of the increasing precision in the pharmaceutical treatment of disease. In conclusion, he referred to the elevation of certain members of the profession from an empirical to a scientific atmosphere. [A copious extract from this interesting address is given at page 56.]

Report of Council.—Dr. STEELE, the Honorary Secretary, read the annual report. The Council congratulated the members on holding their thirty-seventh anniversary in Warrington. In thus breaking new ground by holding the annual meeting in a town not previously visited, the progress and interests of the Branch were materially extended and strengthened. A cordial invitation to hold the annual meeting for 1874 in Blackburn had been received by the Council; and in anticipation of the visit, a large accession of new members had been secured from the members of the profession resident in East Lancashire as well

as in Blackburn itself. The Council had much pleasure in reporting the continued and progressive prosperity of the Branch. The canvass for new members originated in 1871, had been again carried out in the latter part of 1872, and had succeeded in securing seventy-four new subscribers to the Parent Association and to the Branch. The results of the yearly appeal to the resident practitioners to join the Association was shown by the following statement of the number of members of the Branch:—In 1868, the members was 252; 1869, 281; 1870, 296; 1871, 354; 1872, 418; 1873, 452. The Council regretted to record the loss of the following members who had died during the year; namely, Dr. Falloon, of Liverpool; Dr. Cocker, of Blackpool; Dr. Evers, of Aigburth; J. C. Foulkes, Esq., of Bunbury; Joseph Hutchinson, Esq., of Cheetham; Dr. Irvine, of Walton; J. Pownall, Esq., of Altrincham; and J. Parker, Esq., of Lytham. Referring to the Medical Act (1858) Amendment Bill, the Council called attention to the fact that the bill was down for reading on the 26th of July, and desired to impress upon all the members of the Branch the importance of supporting it by every means in their power.

The Financial Statement of the Branch showed that at the last annual meeting the balance in hand was £40 : 19 : 4, subscriptions received since, £53 : 2 : 6, making a total of £94 : 1 : 10. The ordinary expenses of the Branch during the past year had been £75 : 19 : 2, leaving in the hands of the Secretary a balance of £18 : 2 : 8.

Dr. NOBLE proposed "That the report of the Council and the financial statement now read be received and adopted." He expressed his gratification at the continued prosperity and vigour of the Branch.

Mr. J. HARRISON (Chester) seconded the proposition, and it was unanimously carried.

Vote of Thanks to the Officers and Council.—Dr. EWING WHITTLE (Liverpool) proposed "That the best thanks of this meeting are due to the retiring presidents, vice-presidents, honorary secretaries, and other members of the Council for their services during the past year." He said they would have gathered from the report some idea of the work which had been thrown upon the Branch during the year.—Dr. JENNETT (Birkenhead) seconded the resolution, and it was unanimously carried.

Next Annual Meeting: President-elect.—Dr. E. WATERS (Chester) proposed "That the annual meeting of the Branch in 1874 be held at Blackburn, and that John Skaife, Esq., of Blackburn, be the President-elect, and Dr. Coultate, of Burnley, and Dr. Noble of Manchester, the Vice-Presidents elect for the ensuing year."—This was seconded by Dr. WILKINSON (Manchester), and passed.

Representatives in the General Council.—Dr. ROYLE (Manchester) moved, Mr. SPINKS (Warrington) seconded, and it was resolved—"That the following members be elected representatives of this Branch in the General Council of the Association:—R. Beales, M.D., Congleton; T. Davies-Colley, M.D., Chester; L. E. Desmond, M.D., Liverpool; W. H. Hall, Esq., Lancaster; James Hardie, M.D., Sale; R. Harrison, Esq., Liverpool; C. Johnson, Esq., Lancaster; E. Lund, Esq., Manchester; W. M'Ewen, M.D., Chester; W. Maitland, Esq., Blackburn; T. Mellor, Esq., Manchester; E. S. Morley, M.D., Blackburn; G. W. Mould, Esq., Cheadle; D. W. Parsons, Esq., Liverpool; A. Ransome, M.D., Manchester; T. L. Rogers, M.D., Rainhill; H. Simpson, M.D., Manchester; George Southam, Esq., Manchester; A. T. H. Waters, M.D., Liverpool; M. A. Wilkinson, M.D., Manchester; Charles White, Esq., Warrington.

Council of Branch.—The following gentlemen were elected members of the Council in place of those retiring by rotation:—John Harrison, Esq., Chester; J. Vose, M.D., Liverpool; E. Waters, M.D., Chester; W. Cooper, Esq., Widnes; M. J. J. Jennett, Esq., Birkenhead; D. Leech, M.B., Manchester.

Papers on various cases were read by Dr. Noble, Dr. Lyster, Mr. John Matthias, Dr. Martin Oxley, Dr. A. B. Steele, Dr. Ransome, and Mr. J. H. Gornall.

Local Secretary.—Mr. D. J. Leech, of Manchester, was appointed Local Secretary for that city, in the place of Mr. Messenger Bradley resigned.

Votes of Thanks were passed to the readers of the papers, and also to the Mayor and Corporation (on the motion of Dr. WATERS, seconded by Mr. STEELE) for the use of the Town Hall for holding the annual meeting.

Dinner.—The majority of the members present afterwards adjourned to the Mess-room of the 4th Royal Lancashire Militia, in Bold Street, and partook of an excellent dinner provided by Mr. Eberle, of Liverpool. The chair was taken by Mr. White, the President of the Branch. The invited guests included the Mayor (Joseph Davies, Esq.), Rev. H. Siddall, and Mr. John Bowes.

SOUTH WALES AND MONMOUTHSHIRE BRANCH : ANNUAL MEETING.

THE annual meeting of this Branch was held on June 27th, at the Joint Counties Asylum, Carmarthen, at 1 P.M. Twenty-three members were present.

The President, T. J. DYKE, Esq., introduced his successor, G. J. HEARDER, M.D., to the Chair, who delivered an address.

New Members.—Five new members were added to the Branch.

Officers and Council.—W. T. Edwards, M.D., of Cardiff, was unanimously chosen President-elect. Messrs. J. G. Hall, Evan Jones, J. H. Wathen, and T. D. Griffiths, M.D., were elected members of the Council in the room of those retiring. Messrs. T. J. Dyke, J. G. Hall, D. Yellowlees, M.D., P. R. Cresswell, and J. Roberts were elected representative members of the Branch in the General Council. The Secretaries were re-elected.

Papers, etc.—1. Mr. WATHEN read a paper on the Causation of Enteric Fever.

2. Dr. GRIFFITHS read a Report and Remarks on a Malignant Case of Typhoid Fever.

3. Mr. DYKE read Remarks on the Proposal to appoint Consultation Officers of Health in Districts to be formed by the Union of Counties in Wales and Monmouthshire.

4. Several patients illustrating Hæmatoma of the Insane were exhibited by the PRESIDENT from among the inmates of the Asylum.

Dinner.—An elegant luncheon was provided by Dr. Hearder for the members on their arrival at Carmarthen, and at the close of the meeting they dined together at the Ivy Bush Hotel. The vicar of Carmarthen, the Chairman of the Board of Guardians, and several other gentlemen were invited to meet them. A very pleasant day thus passed, the chief source of regret being that the routine and other business crowded out the Asylum and its inmates from the observation of the members. They were thus deprived of making the meeting one of special value; but to remedy this, it has been decided to make Bridgend the next place of meeting, and the county asylum there the exclusive object, and psychological matters the sole topic of observation and discussion.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE forty-eighth annual meeting was held at the Fountain Hotel, Canterbury, on Thursday, May 15th, 1873; Mr. REID in the Chair.

The Accounts were audited and passed.

The Secretary was thanked for his past services, and unanimously re-elected to his office.

The Places of Meeting selected for the ensuing year were Margate in September, Faversham in March, and Canterbury in November and May. Mr. Thornton was elected Chairman of the Margate meeting in September.

Papers.—The following papers were read.

1. *Incarcerated Placenta.*—Dr. PARSONS related the particulars of a case of so-called "incarcerated placenta" to which he was called fifty-six hours after premature delivery of twins. The os and cervix readily admitted the hand; but about the middle of the uterus was a constriction which only admitted the fingers as a cone as far as the second joint. Any attempt to introduce the hand further induced violent contraction, and the hand was forcibly expelled. It was a case of genuine "hour-glass" contraction, and is correctly represented by Ramsbotham. Chloroform was administered, and extract of belladonna given internally in half-grain doses every two hours, but no effect was produced on the constriction. Barnes's bags were used as dilators, but the largest was not long enough to dilate both the os and cervix and the contraction at the same time; and the dilation of either separately induced contraction of the other. Portions of the placenta were torn away from time to time with the tips of the fingers, and the womb was washed out every two hours with Condy's fluid and water, when much offensive debris freely came away. The patient was placed on liberal diet with port wine, and was ordered tincture of perchloride of iron in increasing doses. About the thirteenth day after delivery, the appetite failed, the pulse rose, and rapid emaciation set in; and on the eighteenth day the patient died, apparently from blood-poisoning.

2. *Induction of Premature Labour on account of Pelvic Contraction twice in the same Patient by Different Methods.*—Mr. J. REID preceded the relation of the case by some general remarks on the modern misuse of the word *conservative* in connection with some of the proceedings in midwifery and surgery, and also expressed some sentiments on the moral rectitude demanded on the part of medical men in the use of the forceps and the induction of labour. The patient had endured seven

increasingly tedious labours, when in her eleventh confinement, after thirty hours, the head of the child being retained at the brim, forceps failing to overcome the difficulty, delivery of a dead child was accomplished by turning. The conjugate diameter was under three inches. At the next pregnancy, premature labour was induced on the two hundred and twenty-eighth day of gestation by dilatation of the cervix uteri by means of Barnes's bags, and terminated in seven hours and a half, having been accelerated by version. The child lived three hours. Three years afterwards, pregnancy occurred again. Labour was brought on at the two hundred and thirty-second day of gestation. A bougie was passed six inches between the membranes and uterus, and withdrawn after three hours and a half, uterine contraction having commenced. Dilatation was then commenced, and the labour, taking a natural course, the nates presenting, was terminated in six hours, being slightly accelerated by extraction of the child at the end. The child lived six hours. In both labours, the head passed the promontory with a sharp jerk. The contrast of the two operations clearly showed the great advantage gained by the preliminary introduction of the bougie exciting uterine contractions from the first, and that these contractions steadily increased to the end; whereas, in the first proceeding, the want of these forces in spontaneous action retarded the process, and necessitated manual interference.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINDON BRANCHES: ANNUAL MEETING.

THE annual meeting of the above Branches was held at the Town Hall, Great Yarmouth, on Friday, June 20th, under the presidency of J. C. SMITH, Esq. There were about thirty members present, and a few visitors.

The late President.—In consequence of the lamented death of the late President, Robert Muriel, Esq., of Ely, Dr. Pitt, the Honorary Secretary, introduced the President, who stated that the first duty would be to pass a vote of condolence to the family to the late President, which was proposed by Dr. CHEVALIER of Ipswich, and seconded by Dr. BRADBURY of Cambridge.

THE PRESIDENT then gave a short but very interesting Address on the History of Yarmouth, which was followed by a brief report from the local Council.

Resolutions.—The following resolutions were passed.

1. Proposed by Dr. LATHAM, and seconded by Dr. ELLISTON—"That the thanks of this meeting be given to the members of the Council and the Honorary Secretaries for their services during the past year."

2. Proposed by Mr. CLUBBE, and seconded by Mr. CROSSE—"That the members of the Council and Honorary Secretaries be re-elected."

3. Proposed by Dr. DURRANT, and seconded by Dr. BRADBURY—"That the next annual meeting of the East Anglian Branch be held at Cambridge in conjunction with the Cambridge and Huntingdon and South Midland Branches, and that Dr. Humphry of Cambridge be elected President."

4. Proposed by Dr. VORES, and seconded by Mr. AMYOT—"That this meeting expresses its satisfaction with the manner in which the JOURNAL is conducted."

New Members.—The following gentlemen were elected new members. T. H. Moxon, Esq.; W. Wyllys, Esq., Great Yarmouth; Horace Turner, Esq., Norwich; H. Raven, Esq., Litcham, Norfolk; W. H. Short, M.D., Walsham-le-Willows, Suffolk.

Papers.—The following papers were read.

1. Dr. Latham (Cambridge). On a Suppurating Hydatid Cyst of the Liver, which communicated with the Lower Lobe of the Left Lung. This paper elicited considerable discussion, in which Dr. Bradbury, Dr. Lowe, and Mr. Allen took part.

2. Dr. Lowe (Lynn). Abdominal Tumour: Renal Cyst. Mr. Cadge and Mr. Crosse took part in the discussion.

3. W. Cadge, Esq. (Norwich). Removal of Foreign Body from the Bladder. The paper was discussed by Dr. Bradbury, Dr. Lowe, Mr. Crosse, and Mr. Allen.

4. E. B. Adams, Esq. (Bungay). Notes and Specimens of Calculus, which passed through the Scrotum. Mr. Cadge, Dr. Elliston, and Mr. Crosse took part in the discussion.

5. W. H. Clubbe, Esq. Two cases of Recovery of Fractured Skull after Trephining. A discussion arose, in which Mr. Cadge and Mr. Crosse took part.

6. Dr. Elliston. Laceration of the Perineum. Considerable discussion took place, in which Mr. Adams, Dr. Metcalfe, Mr. Gorham, and Mr. Allen took part.

7. W. Palmer, Esq. On Hæmorrhagic Tendencies in particular

persons. Dr. Latham, Dr. Bradbury, and Mr. Allen took part in the discussion.

Vote of Thanks.—Mr. CROSSE proposed a vote of thanks to the President, which was seconded by Dr. DURRANT; and the meeting separated.

Dinner.—The President entertained the members at an elegant luncheon at his own residence, and the dinner took place at the Royal Hotel. The Vice-chair was occupied by Dr. Pitt, Honorary Secretary. The visitors at the dinner were the Mayor of Yarmouth, the Honourable Frederic Walpole, M.P., Sir Edmund Lacon, Bart., M.P., and the Rev. Canon Neville.

CORRESPONDENCE.

THE COUNCIL OF THE COLLEGE OF SURGEONS OF ENGLAND.

SIR,—It is probable that the provincial Fellows of the Royal College of Surgeons will seek to place upon the Council of the College another representative at the election next year. I would suggest that a meeting of the Fellows be held during the annual meeting of the Association in London, to select a suitable Fellow of the College for this onerous and honourable position, and to make such arrangements as may be desirable or necessary to secure his return.

I am, etc.,

T. H. BARTLEET.

Birmingham, July 14, 1873.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

WARRINGTON.—The Local Government Board has sanctioned the appointment of Dr. Richard Sephton, of Culcheth, and Mr. John H. Gornall, of Warrington, as medical officers of health of the Warrington union, at a salary each of £100 *per annum*. The district is equally divided.

WINCHCOMBE.—The name of the medical officer of health for this union, stated in this JOURNAL of June 21st, should have been Mr. A. C. Newman, instead of Mr. T. Newman.

VACCINATION.—The Local Government Board has awarded £22 7s. to Mr. T. T. Blease, of Altrincham, for satisfactory vaccination. The Local Government Board has awarded the sum of £14 13s. to Mr. George Okell of Waisford, Cheshire, for efficient vaccination in his district.

THE METROPOLITAN SICK POOR.

At a recent meeting of the guardians of the St. Olave's Union, a letter was read from the Local Government Board, accompanied by an order requiring the guardians within one month to submit for their approval plans of additions to the Rotherhithe Infirmary, so that it might be capable of receiving one hundred and fifty additional patients, it being at present certified for forty-eight. The Local Government Board stated that, if the order were not complied with, they would direct plans to be prepared at the expense of the union; and, under the powers vested in them, the union would lose the benefit of participation in the Common Poor Fund. They added that they had been compelled to do this, in consequence of the persistent neglect of the guardians to provide sufficient infirmary accommodation for the sick poor of the union.

THE ADULTERATION ACT.

MR. EDMUND SHELLED, a grocer, carrying on business at 160, Westminster Bridge Road, was summoned by Mr. Roffey, the Vestry Clerk of Lambeth, under the third section of the Adulteration of Food Act, for selling adulterated mustard. Mr. Coxhead, one of the sanitary inspectors, said that on the 13th ult. he purchased of defendant, at his shop, a quarter of a pound of mustard, for which he paid him fourpence. Witness told him he intended to have it analysed, when the defendant said it was not genuine, as the public would not like genuine mustard.

Witness told him he had not declared it mixed. Dr. Muter, after analysing the mustard, certified it to be mixed with turmeric and inferior flour. However, it was not injurious to health. The defendant said that all cheap mustard was mixed, and he generally put a label on, "This article is sold free from any injurious mixture." Mr. Partridge told him that would not do, and fined him 40s., and 4s. 6d. costs.

VACCINATION ACT: PROCEEDINGS FOR PENALTIES.

In the case of *Miller v. Rhind*, an important question has been decided by the Court of Queen's Bench as to the effect of the Metropolitan Police Act (2 and 3 Vict., c. 71), with regard to the time within which proceedings may be taken in the metropolis for the recovery of penalties under the Vaccination Acts. The first mentioned Act, by sec. 44, provides that all offences punishable on summary conviction may be heard and determined by a metropolitan police magistrate within six calendar months after the commission of the offence, but not afterwards. The Vaccination Act, 1871, however, contains an enactment (sec. 11), to the effect that any complaint may be made for an offence under the Vaccination Acts, 1867 and 1871, at any time not exceeding twelve months from the time when the matter of the complaint arose. There was therefore a question whether the Metropolitan Police Act barred proceedings under the Vaccination Acts after the expiration of six months from the commission of the offence, or whether the provision in that Act was to be held to be repealed so far as it applied to proceedings under the Vaccination Acts. In the case which came before the Court, the respondent was summoned by the appellant, as the vaccination officer of the guardians of St. Luke, Chelsea, for neglecting to have his child vaccinated, and the case came on for hearing before Mr. Arnold, the police magistrate, on the 13th of June, 1872. The Vaccination Act requires that a child shall be vaccinated within three months after its birth, and the child of the respondent was born on the 10th of September, 1871. The three months therefore expired on the 9th of December, 1871, and when the case was heard, the six calendar months during which proceedings might be taken under the Metropolitan Police Act, had expired; and the magistrate, considering it doubtful whether, under the circumstances, he had jurisdiction, dismissed the case. The Court of Queen's Bench were, however, clearly of opinion, that the Vaccination Act, 1871, gave twelve months in the metropolis, as elsewhere, for proceedings for offences under the Vaccination Acts, notwithstanding the provision in the Metropolitan Police Act, and accordingly gave judgment for the appellant.

POWERS OF RURAL SANITARY AUTHORITIES.

AN inspector publishes the following in the *Local Government Chronicle*, as a rough but conveniently compact summary of the principal powers of a rural sanitary authority.

By 18 and 19 Vict., c. 121, s. 8, and 29 and 30 Vict., c. 90, s. 19, a very wide interpretation is given to the word "nuisance", which thus includes, amongst other things, overcrowded houses, and any privies, cesspools, drains, or premises in such a state as to be injurious to health. In any case of nuisance as thus defined, the rural sanitary authority may summon the owner (which word is explained by 18 and 19 Vict., c. 121, s. 1) before petty sessions, and the justices may then order the owner to abate the nuisance (18 and 19 Vict., c. 121, s. 12), and may order him to supply privies (*ibid.*, s. 13); cleanse drains and cesspools etc. (*ibid.*, s. 13); and order buildings to be closed as unfit for human habitation (*ibid.*, s. 13). The rural sanitary authority may, by a similar process, repress overcrowding (18 and 19 Vict., c. 21, s. 29, and 29 and 30 Vict., c. 90, s. 36). The rural sanitary authority may themselves make sewers (28 and 29 Vict., c. 75, s. 4), and charge the cost on the parish in question (Public Health Act, 1872, s. 17), and may compel owners of houses to make drains (29 and 30 Vict., c. 90, s. 10). They may supply water (29 and 30 Vict., c. 90, s. 10), and prevent the pollution of streams by legal process (28 and 29 Vict., c. 75, s. 10). They may enter on premises (18 and 19 Vict., c. 121, s. 11, and 29 and 30 Vict., c. 90, s. 31), and may cleanse and disinfect, or compel owner to do so (29 and 30 Vict., c. 90, s. 22); and may provide a conveyance for persons having infectious diseases (*ibid.*, s. 24), and disinfect clothes, etc. (*ibid.*, s. 23). Justices may order the removal of a person having an infectious disease to a hospital suitable for the purpose (29 and 30 Vict., c. 90, s. 26), and the rural sanitary authority may provide hospitals (*ibid.*, s. 37). The rural sanitary authority may themselves cleanse privies, etc. (31 and 32 Vict., c. 115, s. 5). As to water-closets and earth-closets, see 31 and 32 Vict., c. 115, ss. 4 and 7. Cellar dwellings regulated by 29 and 30 Vict., c. 90, s. 42, and 11 and 12 Vict., c. 63, s. 67.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

PORT SANITARY AUTHORITY FOR LONDON.—Mr. Stansfeld, on the 7th instant, in answer to a question of Mr. Cadogan, said there had no doubt been some delay on the part of the Corporation, who were the sanitary authority of the Port of London, in fulfilling their duties under the Public Health Act of 1872. But some arrangements had now been made by the sanitary authority. One of her Majesty's ships had been placed at the disposal of the Corporation by the Admiralty, for the purpose of a hospital ship, and would be moored off Gravesend. A duly qualified medical practitioner had been appointed for the ship, with authority to appoint other medical officers, and two ship captains would reside on board with their wives. In cases of emergency, the directors of the Seamen's Hospital at Greenwich were prepared to receive a limited number of cholera cases. Arrangements had also been made for the treatment of dangerous infectious diseases.

THE CHOLERA.—Mr. Dent asked the President of the Local Government Board whether he would issue, without delay, to sanitary authorities, plain directions as to the precautions to be taken for preventing the spread of cholera, and also instructions as to the treatment of the disease, should it unfortunately reach this country. Mr. Stansfeld replied, plain directions as to the precautions to be taken for preventing the spread of cholera have been prepared, but we do not propose to do what has never been done before to my knowledge, namely, to give directions to the medical men in the various localities as to the treatment of cholera.

DIGEST OF SANITARY LAWS.—Mr. Bruen asked whether the Government would prepare, and lay on the table, digests of the statutes in force in Ireland relating to urban and rural sanitary authorities, similar to the digests of statutes on these subjects in force in England, which have lately been presented to Parliament.—The Marquis of Hartington said, the Local Government Board of Ireland were aware of the necessity of having digests of sanitary laws for Ireland similar to those preparing for England, but it was necessary to postpone framing the digests until Ireland had been divided into districts for sanitary purposes.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 3rd, 1873.

Barrow, Frederick, King's College Hospital
Gibbs, Robert, Redcliffe Road, Brompton
Griffith, Arthur Vavassour, Fenton, Staffordshire
McKay, Henry Killock, Guy's Hospital
Reid, Matthew, Horselydown

The following gentlemen also on the same day passed their primary professional examination.

Cory, Frederick William, London Hospital
Hardwick, Edward Arthur, Charing Cross Hospital
Hind, Henry Joseph, Guy's Hospital
Sargent, Arthur Francis, St. Mary's Hospital
Sworder, Horace, St. Mary's Hospital

The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, July 10th, 1873.

Hudson, John, Horsforth, Leeds

The following gentlemen also on the same day passed their primary professional examination.

Cree, William Edward, Middlesex Hospital
Davies, Elijah Knox, Middlesex Hospital
Dry, Herbert Bernard, Guy's Hospital
Newton, Edward Shackfield, Guy's Hospital

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.—At the Trinity Term Examination for the Degree of Bachelor of Medicine, held on June 9th and 10th, 1873, the following passed.

James Browne, F.R.C.S.Irel., Surgeon in Her Majesty's Army, Theodore Stack, Andrew Clarke, Edward G. Levinge, Arthur de Montmorency, Wm. Frazer, John Walker, George Wyndham Crowe, Horace Townsend Newman, Edward J. Marmion, Thomas Huband Gregg, Joseph F. Porter, George A. Pearce, Henry William Oulton, Thomas Crawford Hayes, George Hickson, Edward C. Foot, John J. Greene, James Hoyte, Alexander Bredon, and Thomas B. Garvey.

At the examination for the degree of Master of Surgery, held on Monday and Tuesday, June 16th and 17th, 1873, the following passed.
Andrew Clarke, James Hoyte, and Nathaniel H. K. Kane.

MEDICAL VACANCIES.

The following vacancies are announced:—

ARMY MEDICAL DEPARTMENT—Assistant-Surgeons.
AXBRIDGE RURAL SANITARY DISTRICT—Four Medical Officers of Health: £50 per annum, each, for two years.
BALLINROBE UNION—Apothecary to the Workhouse: £30 per annum.
CHRISTCHURCH UNION—Medical Officer for the Eastern District: £70 p. a.
BIDEFORD UNION—Medical Officer for the Bideford District and Workhouse.
BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Resident Medical Officer: £60 per annum, room, board, washing, and attendance.
BIRMINGHAM BOROUGH PRISON—Surgeon: £100 per annum. Applications to Messrs. Gem and Hebbert.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon: £100 per annum, furnished apartments, etc.
BRADFORD (Yorkshire) INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £50 per annum, board and residence.
CARNARVON UNION—Medical Officer and Public Vaccinator for the Llanrug District: £60 per annum, and fees. Applications to John Thomas, Esq.
CASTLETOWN UNION, co. Cork—Medical Officer for the Workhouse: £50 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilcatherine Dispensary District: £90 per annum, and fees.
CHARING CROSS HOSPITAL—Assistant-Physician.
CHESTER Urban and Rural and other Sanitary Districts—Medical Officer of Health: £600 per annum. Applications to John Walker, Esq., Town Clerk.
CHILDREN'S HOSPITAL, Birmingham—Resident Medical Officer: £60 per annum, rooms, board, etc.
CLAYTON HOSPITAL and WAKEFIELD GENERAL DISPENSARY—House-Surgeon: £700 per annum, residence, etc.
DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon.
GALWAY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Spiddal Dispensary District: £90 per annum, and fees.
GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications to W. T. Grant, Esq.
GRANARD UNION—Medical Officer for the Street Dispensary District: £100 per annum. Applications to John Renny, Esq., Lissanure, Edgeworthstown.
H.M.'s INDIAN MEDICAL SERVICE—Eleven Surgeons.
KNIGHTON UNION—Medical Officer: £100 per annum, exclusive of Medical and Vaccination Fees.
LOYAL UNITED BRETHREN BENEFIT SOCIETY—Surgeon: £40 p. a.
LEICESTER INFIRMARY AND FEVER HOUSE—House-Surgeon and Apothecary: £120 per ann., rising to £150, board, etc., apartments, and washing.
NORTH STAFFORDSHIRE INFIRMARY, Hartshill—House-Surgeon: £80 per annum, increasing £10 per annum, board, etc.
OUGHTERARD UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cloonbur Dispensary District: £90 per annum, and fees. Applications to Michael J. King, Esq., Kilmelken.
PAISLEY INFIRMARY—Resident House-Surgeon: £40 p. ann., bed and board.
ROYAL BERKS HOSPITAL, Reading—Assistant-Physician.
SAFFRON WALDEN, DUNMOW, etc., SANITARY DISTRICTS—Medical Officer of Health: £700 per annum for three years.
ST. ASAPH RURAL SANITARY DISTRICT—Medical Officer of Health: £60 till 25th March next.
ST. PETER'S HOSPITAL FOR STONE, etc.—House-Surgeon.
SEAMEN'S HOSPITAL, Greenwich—Visiting Surgeon.
SHEFFIELD UNION—Medical Officer for the South East District: £40 p. ann.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Medical Officer.
THIRSK RURAL SANITARY DISTRICT—Medical Officer of Health: £50 for one year.
WANDSWORTH and CLAPHAM UNION—Resident Medical Officer to the Workhouse and Infirmary: £250 per annum, and furnished apartments.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Surgeon.
WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—Physician's Assistant: £100 per annum, board, washing, and furnished apartments.
WORCESTER RURAL and URBAN SANITARY DISTRICTS, combined—Medical Officer of Health: £50 per annum.
WREXHAM INFIRMARY AND DISPENSARY—House-Surgeon: £80 per annum, residence and maintenance.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BROWN, George, Esq., appointed House-Surgeon to the Charing Cross Hospital, *vice* Lewis J. Newnham, Esq., resigned.
HARDING, A. W., B.A., M.B.Lond., appointed House-Surgeon to the Liverpool Infirmary for Children, *vice* G. McTwinney, M.D., resigned.
JOHNSTON, Richard, Esq., appointed House-Surgeon to the West Bromwich District Hospital.
MACLEOD, M. D., Esq., appointed Assistant Medical Superintendent of the Cumberland and Westmorland Counties Lunatic Asylum.
ROECKEL, W. J., Esq., appointed House-Surgeon to the Royal United Hospital, Bath.

DEATH FROM SECONDARY HÆMORRHAGE AFTER AMPUTATION.

—An inquest was lately held on the case of a man named Sullivan, who had died in St. George's Hospital from secondary hæmorrhage eight days after amputation of the thigh. The operation, which was performed by Mr. Holmes, was rendered necessary by disease of the knee-joint following injury. The hæmorrhage was the result of ulceration of the artery at the point where the ligature (one of catgut) had been applied. The jury returned a verdict that death had occurred from secondary hæmorrhage, and that they were satisfied with the manner in which the deceased had been treated.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Annual General Meeting; Election of Officers; and President's Address.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

EXERCISES ON ANÆSTHESIA.

We find in the *Buffalo Medical Journal* the following curious programme of a public lecture on Anæsthesia, lately delivered in New York.

"Order of Exercises.—Organ Voluntary. History of Anæsthesia, Dr. J. Marion Sims; Chemistry of Anæsthetics, Prof. R. Ogden Doremus, M.D.; with Experiments. Practical Application of Anæsthetics in Surgery: Professor Frank H. Hamilton, M.D. Address by Rev. Henry Ward Beecher. Organist, Mr. Charles Walter. Mayor Havemeyer will preside. For this occasion Mr. William Steinway has kindly tendered the use of Steinway Hall, Wednesday Evening, May 21st, 1873, at 8 o'clock."

It is a curious illustration of the difference of "the point of view", that this display was promoted by a number of the most eminent physicians and citizens of New York, and evidently suggests to their mind nothing which savours of the ludicrous or unseemly. No one would be bold enough on this side of the water to attempt what appears to us as incongruous a series of "exercises" as were ever presented on the boards of a theatre.

THE *Buffalo Medical and Surgical Journal* for June 1873 contains some comical passages concerning ourselves. The *Buffalo Medical and Surgical Society* does not flourish, and its members are discussing the means of enlarging its influence. The example of our Association and its JOURNAL was pointed to; and lessons were drawn as to the means of success of a most amusing character. Said one speaker: "We must get young men into the Society; we must have visitors. We should have a journal to express our ideas. Let one journal have a friendly contest with the other. Have you seen the last journal? one one would say: it has an article by Gay attacking White; another by Rochester against some one else. The 'London Association Journal' fights the others continuously" (a compliment due to an article from a London paper, ascribing the success of the JOURNAL to its "pugnacity", which has been extensively circulated and quoted in America, but which we venture modestly to disclaim). Said another speaker: "Without the press in these days, hardly anything can succeed. We must have a medium through which we can express our ideas. In London, the meetings of the Association are held in Society Hall. Sometimes one hundred are present; frequently twenty or thirty of these will not be practitioners. The discussions are so interesting, others are attracted to the meetings."

PRE-EMINENCE IN DIRT.

"SPECTATOR" writes to the Editor of the *Times*: "I see by your paper of Friday week that the BRITISH MEDICAL JOURNAL has given to the town of Flimby, near Cockermouth, the reputation of being the dirtiest town or townlet in England. The writer in the MEDICAL JOURNAL has, I fear, but a limited acquaintance with towns in the North, or he would have admitted a few others into competition for the 'dirtiest'. What he has written of Flimby could have been written almost word for word of Brampton, in the same county, with three times the population of Flimby."

Thanks to the new Local Act, the authorities are now moving—in proof of which and of what I have said above, I enclose a notice lately issued by the Nuisance Inspector.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

A MEMBER'S SON (Scotland) asks our opinion on the following cases:—1. A gentleman died suddenly. The Fiscal (Procurator) telegraphed, asking to reply by telegram whether there was anything suspicious in the death. The medical attendant replied by telegram, that there was nothing suspicious; and, looking upon his telegram as a report supplying important information to the Fiscal, sent in an account of £1 1s. The Fiscal replied that he regretted that by the rules of exchequer he was prevented paying the fee, as he (the Fiscal) had prepaid the telegram. Is the medical man not at least entitled to the usual fee for a report, provided he deducts the price of the prepaid reply?—2. A person died suddenly. The medical attendant telegraphed to the Fiscal, informing him that a sudden death had taken place, but that there was nothing suspicious in it, and suggests a *sectio cadaveris*. Is the medical man entitled to any fee for his information? No investigation took place in the case.

* A well informed Scottish correspondent states his opinion thus: In the first case, if the telegram from the Procurator Fiscal was addressed to the medical attendant, and not (as is usual under such circumstances) to the constable or inspector for the district, the medical attendant is clearly entitled to a fee of half a guinea for his reply, even though the telegram was prepaid. In the second case, the medical attendant volunteers unasked for information, and is entitled to no fee.

"INCOME TAX: ITS INJUSTICE."

SIR,—The subject of the injustice of the income-tax, as imposed on medical men, forcibly presents itself again to numbers of us; and the suggestion of "Anti-injustice", in the last copy of the JOURNAL, that the matter be discussed at the London meeting of the Association, is one which would doubtless be beneficial. I for one will heartily join a movement antagonistic to the tax, as it affects our profession. At the end of the first two or three months after entering upon a country practice I was assessed, and had to pay, although the receipts at that time were nil. On the completion of a full year I made the required "Return", showing an income upon which the abatement of £80 should have been allowed. When the assessment was made I found my return had been discredited, and that I was charged upon £300 with no abatement. I appealed, and laid before the Commissioners a statement of every item of receipt and expense. The appeal was successful, and the assessment made upon a sum subject to the proper abatement. But why should we have to submit to the tax at all; and, in addition to that, have to bear the insult and annoyance, entailing loss of much time, of being obliged to present to a body of officials a statement of particulars in order to defend ourselves against the imputation of having made a fraudulent return, or else pay a surcharge made according to the opinion or caprice of the assessors?

Enclosing my card; I am etc.,
July 14th, 1873.

A COUNTRY SURGEON.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 12th; The Manchester Guardian, July 16th; The Aberdeen Daily Free Press, July 12th; The Bath Express, July 12th; The Birmingham Daily Post, July 16th; The Herts and Essex Observer; The Roscommon Journal; The Hull Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Sussex Daily News; The City Press; The Birmingham Daily Mail; The Kendal Mercury; The Daily Review; The Western Mail; The Wrexham Guardian; The Lincolnshire Chronicle; The Inquirer; The Lincoln Gazette; The Redruth Times, July 11th; The Liverpool Albion; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. G. Rolleston, Oxford; Dr. Noble, Manchester; Dr. G. M. Humphry, Cambridge; Mr. G. F. Hodgson, Brighton; Dr. Drysdale, London; Dr. George Johnson, London; Mr. Annandale, Edinburgh; Mr. W. Brown, Callington; An Associate; Mr. Dyke, Merthyr Tydfil; Dr. Hearder, Carmarthen; Dr. Eustace Smith, London; Dr. Ogston, Aberdeen; Mr. W. Adams, London; Our Dublin Correspondent; Dr. Cheadle, London; Dr. Sawyer, Birmingham; Our Glasgow Correspondent; Dr. J. Batty Tuke, Cupar Fife; Mr. C. S. Jeaffreson, Newcastle-upon-Tyne; Mr. J. Foster, London; Dr. T. Clifford Allbutt, Leeds; A Member; Mr. Dyte, London; Dr. Maclean, Glasgow; Dr. Boggs, Paris; Our Manchester Correspondent; Dr. Campbell Black, Glasgow; Dr. J. Hughlings Jackson, London; Dr. Day, London; Mr. A. Davies, Swansea; Mr. Redwood, Rhymney; Mr. Bartlett, Birmingham; Dr. Sankey, Cheltenham; M.R.C.S.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. E. L. Fox, Clifton; Dr. Arnison, Newcastle-upon-Tyne; Mr. Leeds, Sheffield; Dr. Kelly, Taunton; Mr. J. Crocker, Bingley; Mr. Maberley, Birmingham; Mr. Edmund Owen, London; Dr. Barnes, Carlisle; Mr. W. Dalrymple, Leicester; Mr. D. Kent Jones, Beaumaris; Dr. Gairdner, Glasgow; Dr. Steele, Liverpool; Mr. Galton, Wakefield; Dr. Royle, Manchester; Mrs. Nicol, Duftown; Mr. Stelliard, Birmingham; Dr. S. W. D. Williams, Haywards Heath; Dr. C. M. Campbell, Staunton; Mr. Woodman, Exeter; Mr. Lund, Manchester; Mr. North, York; Dr. Hays, Philadelphia; Dr. Gubler, Paris; Mr. Welch, London; Dr. Bell Taylor, Nottingham; Mr. T. Charters White, London; Dr. Stewart, Whitby; Mr. Nason, Stratford-on-Avon; Dr. T. B. Bott, Bury; etc.

BOOKS, ETC., RECEIVED.

A Treatise on the Continued Fevers of Great Britain. By C. Murchison, M.D. London: 1873.

The Retrospect of Medicine. By W. Braithwaite, M.D. London: 1873.

Ships, Yachts, and Full-power Steamers. By Wm. Thompson. Melbourne: 1873. Annual Report of the Sanitary Commissioner for the Central Provinces, 1871. Nagpur: 1872.

THE
PAST, PRESENT, AND FUTURE,
OF THE
BRITISH MEDICAL ASSOCIATION :

*Being Abstract of an Address delivered at the Annual Meeting
of the Metropolitan Counties Branch, July 15th.*

By RICHARD QUAIN, M.D., F.R.S.,

Physician to the Hospital for Diseases of the Chest at Brompton ;
President of the Branch.

GENTLEMEN,—My first duty, on taking this chair, is to thank you for the mark of confidence to which the honourable position of being elected your President for the ensuing year bears witness. It shall be my duty and my pleasure, with your aid and your forbearance, to retain that confidence undiminished to the close of my year of office—a year which can scarcely fail to be one of great importance in the history of our Association. For it will include the meeting for the second time in London of the Parent Society. The Metropolitan Counties Branch initiated the steps which have led to this visit, and on the Metropolitan Counties Branch will largely depend the success of the approaching meeting.

Gentlemen, it is not my desire to occupy your attention with any very lengthened observations in the form of an address. Within a very few days, you will hear Sir William Fergusson, my distinguished predecessor in this chair, address you as members of a much larger audience, from a higher rostrum, after a more comprehensive fashion, and with far greater ability and weight than are at my disposal. You will likewise hear the learned orators who have, each in his special sphere, undertaken to address you, illustrate at length subjects specially worthy of the attention of an Association like ours. Under these circumstances, it seems to me that I should but ill requite your confidence by occupying at any length the brief time we have this afternoon at our disposal, partly for the performance of the necessary business of our Branch, but still more, I am thankful to say, for rest, and for some social recreation. Still it may be well, at the present epoch in the Society's history, to say a few words as to what it has been and is doing, and to anticipate something of its future history—to assume for a few minutes the character of the historian and the prophet.

We all know that the Association was founded by Sir Charles Hastings, on the 17th of the present month, in the year 1832, at a meeting of some fifty medical men in the boardroom of the Worcester Infirmary. This meeting was addressed on that occasion by the founder, who for many years subsequently acted as Honorary Secretary and as Treasurer, and who, I need scarcely tell you, never ceased to take an active and abiding interest in the Association until his lamented death in 1866. In the first address to the Society, he expressed a hope that the new Association would "exercise no inconsiderable influence on the progress of medical science, feeling" (as he did) "the disadvantage under which the prosecutors of medicine resident in English provincial towns have laboured, in consequence of the want of any system of co-operation, by which their separate exertions for the promotion of our knowledge of the healing art may be so united as to render them more influential and more extensively useful." He enumerated the objects of the Association as being :

"1. The collection of useful information, whether speculative or practical, through original essays, or reports of provincial hospitals, infirmaries, or dispensaries, or of private practice.

"2. Increase of knowledge of the medical topography of England through statistical, meteorological, geological, and botanical inquiries.

"3. Investigation of the modifications of endemic and epidemic diseases in different situations and at various periods, so as to trace, so far as the present imperfect state of the art will permit, their connections with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

"4. Advancement of medico-legal science, through succinct reports of whatever cases may occur in provincial courts of judicature.

"5. Maintenance of the honour and respectability of the profession generally in the provinces, by promoting friendly intercourse and free communication of its members, and by establishing among them the

harmony and good feeling which ought ever to characterise a liberal profession."

The founder of our Association long enjoyed the happiness of witnessing the realisation of his hopes and anticipations, whether looking to the number who joined the Association as members, or to its achievements. At the close of the first year of its existence, the number of members was 310. In the year 1842, at the end of the first decade, the number was 1,300; eight years ago it was a few over 2,000; whilst the number at the present moment falls little short of 5,500. The average increase of members during each of the last six years has been at the rate of 600. And here it is but just to observe that this increase is coincident with the vast improvement which has taken place in the management of our JOURNAL in the hands of the present editor, Mr. Ernest Hart. The results of that management are before us and speak for themselves, in facts more gratifying to Mr. Hart than any words of mine could be. Contrast the JOURNAL of to-day with the JOURNAL of the past, which I hold in my hand, and let the difference signify the progress of our Society.

Looking to the achievements of the Association, whether of a medico-political or of a scientific character, we shall find that they have been neither few nor unimportant. Passing over minor events, we observe that, as early as 1834, the subject of Provident dispensaries enlisted the sympathies of the Association. This subject is now attracting much attention in connection with the abuse of the system of out-patient hospital relief. The question of gratuitous relief has been before our Branch of the Association more or less since the year 1853. I may mention that, as the result of recent proceedings, a special committee of the Charity Organisation Society has been appointed to consider the subject, which has obtained the notice, not only of the metropolitan but of the provincial press, notably at Manchester, and of such intelligent and energetic laymen as Sir Charles Trevelyan and Mr. Bosanquet. The deplorable system of indiscriminate gratuitous medical relief, alike injurious to those who give and to those who receive it, can scarcely fail to be modified or improved, now that attention has been so widely directed to its results.

The efforts of the Association to ameliorate the mode of administration of the Poor-law, and more especially of the conditions of service of medical men under those laws, have been continuous. As early as 1836, the Association recommended that drugs should be paid for, or be supplied independently of the salaries of the medical officers—advice tardily, and even not yet universally, followed. The Association achieved a great success when it accomplished the abolition of the wretched system of tendering for Poor-law medical appointments, as the butchers and bakers tendered for the supply of meat and bread. This sort of Dutch auction, degrading to a learned profession, had led to the appointment of persons holding no legal qualification, of whom there were found to be so appointed not fewer than 238 individuals.

The early efforts of the Association were marked by a very considerable prevision of what was required for the interests of the profession and the public in reference to "medical reform." It spoke, in one of its earliest manifestoes, of the necessity for establishing reciprocity of practice, with sufficiency and uniformity of qualification. Other points of interest subsequently arose; but the two points just mentioned have been from the first, as they are at the present, the objects of chief importance. Time does not afford an opportunity for now entering on this wide question. Suffice it to say, that the Act of 1858, whilst conferring on all licensing bodies the power to give a qualification to practise anywhere through the kingdom, secured one of the objects sought for by the Association, viz., what was then called reciprocity of practice. In other words, a license conferred by any one of the nineteen licensing bodies, constituted a license to practise in any part of Great Britain and Ireland. The second object of the Association, viz., uniformity of qualification (and, in speaking of the Association, I do not mean to limit this aim and object to the Association alone) was, by an improvident policy, allowed to be separated from the first; hence has arisen a just cause of complaint, that our *Medical Register* is a register of legally qualified, but that it is by no means a register of invariably fully competent, practitioners. Hence it is that we still have discussion on conjoint schemes, on one portal to the profession, and so on.

If the original proposals of the Association had been adopted, there would exist no ground for such discussion. But, unfortunately, the Act of 1858 left any such conjoint action of licensing bodies purely voluntary, as it left much besides. It left the Medical Council open to the charge of doing little, whilst it gave that body no authority to insist on anything being done. It gave authority to approve of co-operation amongst licensing bodies, but not to compel it. The Medical Bill of 1870, which never became more than a Bill, supplied this defect in the original Act. It proposed a scheme which would to the fullest extent have carried out the intentions of the fathers of medical reform amongst

our associates. This Bill, had it become law, would have secured uniformity and sufficiency of qualification amongst medical practitioners. But, alas! newer notions of medical reform arose amongst us; and some notably amongst the members of our Medical Reform Committee, insisting on what they call "direct representation", succeeded in setting aside the Bill which would have secured the second great object for which our early reformers contended, and which was within our reach. In grasping the shadow, I grieve to see we have lost the substance. We have sacrificed the really important for the unimportant; for, whilst all admit the paramount value of a sufficient and uniform qualification for men entering the profession, many believe that this direct representation would be but a source of expense and trouble without any corresponding advantages. They believe that the members chosen by popular election would not differ in character, in aspiration, or in ability, from those who constitute the Council as at present. They believe, too, that the duties imposed on the Medical Council, if they were legally authorised to carry them out, viz. to insure competence in professional knowledge of all persons claiming a right to be placed on the *Register*, in securing accuracy in that *Register*, in removing from it those whose characters may disgrace it, and in publishing a *Pharmacopœia*—they believe that those duties would be as well performed by the Council constituted as at present, as by any other mode of election. They see in periodical elections the elements of rivalries, of agitations, and of strifes; and they do not see corresponding advantages in the results. They appeal to experience in cases in which a partial trial of a like system may be witnessed, and to similar contests from which some of the best men stand aloof, whilst mere seniority, backed by an active canvass, has sufficed to secure a place.

I confess that I am one of those who lament the loss of a Bill which secured a compulsory and a uniform test for candidates entering the profession; and that I am also one of those who do not think direct representation of paramount importance. I feel that we are contesting against a sentimental, and not a real, grievance; and that we ought, with all the power of this Association, to adhere to the original aims of our reformers—"reciprocity of practice and uniformity of qualification."

Whilst thus referring to the medico-political character of the Association, we must not lose sight of its scientific, its social, and ethical functions. During the earlier years of its existence, volumes of *Transactions* were published to the number of nineteen. These volumes testify to the scientific work which provincial practitioners are capable of accomplishing. Here is a volume distinguished amongst its fellows for containing the classical memoir on variola vaccinia by Mr. Ceely—a provincial practitioner who is, happily, still spared to us, an honour to his profession and his class; and the series contains many essays of scarcely less importance. We have no longer these annual volumes of *Transactions*; but the *JOURNAL* bears weekly evidence of the scientific activity which the Association has developed in every corner of the country, whilst its Branch meetings encourage local practitioners to note and to record their experiences which would otherwise have been lost.

Of the ethical function of the Society, one need only say that the mere fact of association and the declared attachment to high and recognised principles has established an influence difficult to over-estimate. The code thus widely spread and practically maintained throughout the country is not less elevated than that which rules amongst the highest of our corporate bodies, and will take its place where no such corporate rules exist. We happily now seldom hear of professional squabbles, or of any gross infringement of professional propriety—results greatly due, I believe, to the working and to the influence of our Association; for examples of stern repression of such infringement amongst the most eminent, as well as the least distinguished, are not wanting, though happily they are few in the history of our body. With regard to the social influence of the Association, we can refer to the generous and friendly feelings which have been evoked year after year, both at the Branch and district meetings, as well as at our great annual gatherings. These influences have not been confined to England, but are finding a response in Scotland and in Ireland. Let us hope, and let us try to realise the expectation, that the approaching meeting may afford a type of all the most useful energies and functions of the Association in reference alike to its scientific and to its social aspects.

At these meetings, old friendships are revived, new friendships are formed. Visitors are made familiar, under the best auspices, with all objects of interest in the localities which they visit. Whether these objects geological or topographical, purely scientific or historical; whether they be the works of Nature or of man, our associates see all under the best guidance—that of their professional brethren. Need I seek to illustrate further the interest and value of these meetings by referring to the condensed epitome of scientific progress placed before us at each meeting in the addresses of our President, and of the appointed orators?

If after this brief retrospect, we look to the future, we can recognise a vast and widening prospect of increasing usefulness. When we remember that the thousands of whom we have spoken are men of high education, of elevated principles, aiming at objects which are essentially those of the public good, we can scarcely conceive the existence of a greater power for the accomplishment of nobler objects. That power is already making itself felt in every department. The power of association is great, and never before has such a numerous band of the members of one profession been brought together for common objects. We shall include ere long 6,000 members; and if the present rate of increase continue, we may hope at the close of another decade to number 10,000 members.

We may refer to the future of the Association as to its past in its political and scientific aspect. That we have a Public Health Act at all, may be said to be chiefly due to the efforts of our Association, and the names of our associates, Drs. Stokes, Acland, Patrick Stewart, and Rumsey, will be ever associated with that great and life-saving measure of sanitary progress. Had the plan laid down by the Association been more closely followed, the results would have been more satisfactory than they are.

We should not have seen the country mapped out into districts confused, irregular, and so destitute of plan that, whilst some are utterly unworkable from their extent and irregular character, trusting to chance for subordinate arrangements, others are as mischievously small and devoid of any controlling influence whatever. In one case we have heads without limbs, and in the other limbs without heads. Nor should we see the skilled medical staff of the Local Government Board obliged to look on idly whilst lawyers, military officers, and county gentlemen—all good men in their way—are called upon to perform duties for which they are necessarily incompetent from want of technical education. To have such gentlemen as government inspectors of the administration of the public health laws, is not less absurd than it would be to appoint doctors of Medicine or of Divinity to inspect the working of the circuits of the County Court judges. There is no object, it seems to me to which a portion of the energies of this great Association could be more fitly devoted, than in trying to counteract and correct these signal and disastrous errors of administration in an important department of the government, and in insisting that our profession, both in respect for itself and in its duty to the public, should have its proper place in the new organisation. Never was there a better opportunity of placing the sanitary administration of the country on a satisfactory footing than that afforded by the Health Acts of 1871-2, and never have the public funds of the country, given with unprecedented liberality, been more entirely wasted, so far as the Local Government Board has hitherto gone, in the creation of a machinery without plan or order, which can but end in comparative failure.

The Association has rendered great service in the past to the Army and Navy Medical Services, and it is at this moment exerting its influence, with every probability of success, to secure these services against the encroachments made by the recent warrant on privileges not long since accorded to them. I may remark that the Parliamentary Bills Committee, which originated with this Branch, but is now so extended as to include and to represent the full power of our Association, is doing most excellent work. No measure is or can be brought before Parliament, affecting the public health or any branch of the profession in either of the three countries, which is not brought before that committee, or on which it does not exercise its influence in modifying it so as to secure their interests.

Looking to the scientific future of the Association, we can desire but that the Branches should pursue their course of prosperous activity; that the *JOURNAL* should continue to maintain its vigour, and to publish for all the results of the scientific labours of each branch; these are rich mines which can be worked for years to come with success. In no better manner can the stores of experience and information, gathered by the busy practitioners in the country or in our great towns and cities, be brought to light and utilised. I think there are many ways by which the Branches may be made more useful even than at present; the system of appointing local branch committees throughout the country for definite objects has not yet been sufficiently developed.

1. For example, how valuable and important would be the reports of local committees, working in their several districts according to a systematic method from year to year, on the influence of trades and occupations on health and mortality, and on the effects of legislation and other measures intended for their improvement.

2. If local committees were appointed to report, quarterly, on an uniform plan, on the ordinary or reigning epidemic or endemic diseases, such as the committee of the *Société des Hôpitaux* in Paris, these reports, digested by a central committee, would afford such a contem-

porary picture of the epidemic constitution of the country as has never yet been attained, and as would throw a light on the etiology, course, and natural history of disease, such as for centuries we have vainly sought.

3. Questions like that raised by a recent committee of the Lancashire and Cheshire Branch, viz., the duration of infection in contagion, might be still more effectually carried out if all the Branches concerned should join in the inquiry by co-operating committees. The scheme which I would suggest would in outline be this. Any Branch having resolved on an investigation, such, for example, as that proposed at Manchester, having drawn out its plan and prepared its schedule, might submit its views to the Committee of Council, by whom they would be adopted and recommended to all the Branches for the use of a committee of each Branch. The reports so obtained from the several Branches would be collected at definite intervals, and collated by a central committee. This plan might be adopted for any one of the subjects to which I am now referring, and the annual general meeting could not be more profitably engaged than in the consideration and discussion of such reports. Indeed, it does seem to me, that the time of our annual meeting might be greatly utilised, if reports and communications on definite subjects previously arranged should be systematically brought forward in the several sections, rather than that papers on a variety of subjects should be read, or described as read, as they have hitherto been. For this purpose, previously selected subjects, such, for example, as the etiology and communicability of cholera, the comparative value of anæsthetics, etc., might be discussed at length.

4. There are also many points connected with therapeutical investigations, in which the labours of committees might be healthfully employed. Our knowledge of morbid texture and morbid anatomy approaches perfection. Our pathological information has made rapid advances. We are no longer content with describing disease in the gross. The microscope reveals to us its intimate structure, and experimental pathology is telling us how these morbid changes come to take place. We connect, too, these changes with the phenomena which they present during life, and thus are established means of diagnosis which insure an amount of accuracy previously unattainable; but, alas! our means of curing disease do not make equally rapid progress. This is not, as some assert, because disease cannot be cured; it is simply because our knowledge of remedies is deficient. If, knowing the character of the morbid process and its result, we were equally well informed as to the means by the application of which this morbid process could be controlled, we would at once be able to establish a system of scientific therapeutics.

This time must come. Our age has witnessed the solution of more difficult problems; and when the time does arrive, our knowledge will enable us to say, this is such and such a morbid process, and to add, that such and such an agent exercises a direct influence over it. One will be able to assert, "I know that if I prescribe this or that agent the patient will be cured." When that time comes, and I repeat my conviction that it will come, our profession will take that rank which power confers, and we shall no longer be looked on with suspicious indulgence, it may be, as the practitioners of an art which has, in too many instances, mere chance for its chief ally.

I can well conceive some of our Associates helping forward such enquiries, and submitting them to the appreciation of the meetings of our Association hereafter.

Having said so much on the Association generally, let me say a few words about our special Branch of it. This Branch, I need not remind you, was founded in 1852, as the Metropolitan Counties Branch, the Association still retaining its provincial title. Mr. Baker, the President of the Association, happily referred to the event in his able address at Birmingham last year in the following words.

"Permit me to congratulate you on that most important decision which was proposed and carried at a special general meeting, held in this place in 1856, which changed the title from Provincial to British. The nationality of the aims which it was sought to accomplish have been thereby declared and accepted; and its name has consequently become imperial. This is not only right in itself, but is an act of the simplest justice to our esteemed metropolitan members, who have freely joined our ranks, have aided their provincial colleagues by counsel and labour, and have exhibited deep interest in the management and success of our enterprise. Their fraternal conduct proves the soundness of the effort made to gather the army of medical practitioners in this country under one banner, to unite their strength, and to direct it into those channels in which it may be best exerted for the public good. It is also a graceful admission that, whilst London cannot fail, from its magnitude, its gigantic opportunities, and its liberal rewards, to attract and foster the ripest intellects, the most commanding genius that this country produces, it arrogates to itself no claim to a monopoly of talent, no despotic control of general medical policy."

At the close of the first decade the Branch numbered 132 members, now, at the close of a second decade, it numbers more than 500 members. And of members resident in the metropolitan counties the Association has, I believe, more than 900.

This Branch, founded, and having its fixed seat in, the metropolis, has always had peculiar and distinctive features. Surrounded by purely medical societies, it has found its most useful influence in discussing medico-political, sanitary, and social questions, rather than in aiming at scientific discussion, otherwise adequately provided for. Its proximity to the seat of legislation, and the personal influence of many of its members with members of the legislature, have enabled the Branch to exercise a most salutary influence in many measures of great public importance. I have said that the Parliamentary Bills Committee originated with us; and when we look back to the activity of the Branch, and to the results of its influence, we shall see that it has done much, for example, in promoting amendment in the laws of public vaccination, and in the reform of hospital administration and of the public services generally. Twice this Branch has had the good fortune to induce the British Medical Association to hold its meetings in London, from the first of which, in 1862, dates a great access of power and influence to the Association; and it is not too much to anticipate like results from the meeting which we are now about to entertain.

Finally, let me say that an impressive lesson may be learnt from this brief review of the numbers, the power, the intelligence, and the grants of this Association. Its objects are high and well-defined; its influence is great and growing; surely, then, it behoves all of us who have influence in the Councils and the work of the Association—and few of us are without such influence—to be heedful that we guide aright the direction of these vast energies. Let us bring to our work in the Association our best intelligence, our most mature thought, our calmest judgment, our most brotherly feeling; especially let us be sure that we aim always at making the Association a means of union and strength for the whole professional body, an instrument in elevating the moral, social, and scientific character of our profession and of advancing the public good, with which all our best aims are intimately allied. These were the objects which the founders of the Association had in view; they are those which it has followed, and it behoves us still steadily to pursue them. While we do so, we may feel sure that the future can but have in store for us years, it may be of difficulty or of trial, but certainly of usefulness and ultimate satisfaction.

SCIENCE TEACHING.—The last report just issued by the Science and Art Department shows that some progress has been made with advanced scientific instruction. Last year it was decided to remove the College of Chemistry from Oxford Street, and the instruction in physics and biology from the Royal School of Mines in Jermyn Street to the new buildings at South Kensington. The instruction in physics and biology had hitherto consisted of lectures only. It is now supplemented by laboratory practice. Eight teachers have been brought up for training at each of the courses, which are much longer and more complete than the special summer courses for provincial teachers. The number of students, including the Royal Exhibitioners, who attended the entire course of instruction for the diploma of associate during the session of 1871-72 was 20, or five more than in the session of 1870-71. The greatest increase, however, which has occurred since the foundation of the school was in October last, when the courses of instruction in physics and biology were transferred to the new buildings at South Kensington. The number of students at present attending the full course is 33, being 13 more than the maximum of previous years; 148 occasional students attended one or more of the courses in 1871-72, showing an increase of 26 as compared with the number in 1870-71. The number of students attending the practical course of instruction in chemical analysis and manipulation given in Oxford Street and in the new schools at South Kensington, to which the college was removed on October 1st, was much larger during 1872 than at any previous period; and Dr. Frankland reports that soon after the opening of the new laboratories every available place was occupied. The return of the number of individual students for the three terms of 1871-72 presents an increase of 64 on the attendance in the preceding session; the respective totals being 148 in 1871 and 212 in 1872. The number of students in the Royal School of Naval Architecture and Marine Engineering was 35, of whom 30 were sent by the Admiralty. The School is to be closed at the end of the present session.

LECTURES ON THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,

Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

LECTURE III.—Wednesday,

VARIETIES IN THE MUSCLES OF THE LOWER LIMB.

THE MUSCLES OF THE PELVIS AND THIGH.

THE irregularities in the lower limb are less numerous and of less frequent occurrence than those in the upper limb. This results, in some measure, from the fact, that the fixity of the pelvic girdle both prevents the development of muscles—the homologues of which, in the upper limb, are subject to many varieties—and also gives a more firm basis to the muscles passing from the girdle and trunk to the limb. Moreover, the difference in pronation and supination, and the less varied movements of the digits, admit of a simpler disposition of the muscles in this limb.

In the components of the outer muscular sheet covering the hip, the recorded irregularities are very few. I have not found any worthy of note in the gracilis or the tensor vaginæ femoris. The gluteus maximus has been seen in two layers; and its posterior or coccygeal fibres have been found separate from the rest. The sartorius is somewhat more erratic: it is occasionally absent. Hyrtl observed it to be crossed by a transverse inscription; and Kelch found it interrupted by a tendinous portion, an inch and a half long, which was connected with the fascia. It now and then divides—one part going to the femur, or to the fascia over the vastus internus, as is the case in the two-toed Sloth, or to the ligamentum posticum of the knee, or both parts being inserted into the tibia. Its origin sometimes extends along Poupart's ligament, or is connected with the fibres of the iliacus muscle, much as I found it in the two-toed Sloth and the two-toed Anteater.* It is worthy of remark, that of all the members of this sheet the sartorius is by far the most variable in the lower animals, and is the one which has the least precisely isolated function in them and in Man, so that its mode of development is less definitely impressed than that of either of the others, by the cogencies attendant upon utility.

Of the muscles lying closer to the hip-joint, the pyriformis is the most liable to variations. It is not unfrequently in two parts, with a branch of the sciatic nerve passing between them. It has been found in three parts, separated by two branches of the nerve. It is sometimes blended with the gluteus medius above, or with the internal obturator and the gemellus superior below, or with these muscles both above and below, the usual segmentation having failed to take place. This most frequently occurs near the insertion: the muscular part, however, often extends upon the ilium, and blends here with the gluteus medius. In the case of the gluteus medius, the anterior portion is sometimes separate, forming a "scansorius". A segmentation also sometimes is found from the deeper part of the gluteal mass, constituting a "gluteus quartus" or an "ilio-capsularis." The superior gemellus is often small or absent. The inferior gemellus and the quadratus have each been found absent, or in two parts; and the psoas magnus and the iliacus are each occasionally in two parts.

With regard to the adductor mass, varieties in the segmentation are not unfrequent—each of the several muscles being occasionally divided into two or more parts, or connected with one or more of the others by slips. Slips, more particularly from the pectineus, have been seen crossing in front of the femoral artery; and slips sometimes pass from the adductor brevis to the obturator externus.

In my lectures last year and elsewhere† I expressed the view, derived from the dissection of the lower vertebrates, that the biceps flexor cruris is a derivative from the gluteo-rectus mass—in other words, from the same muscular sheet as that from which the gluteus maximus and the quadriceps extensor cruris are formed; but that, inclining to the flexor aspect of the limb, it acquires a flexor action, as is not uncommonly the

case with the marginal parts of extensor groups in other regions of the body. If this be so, the original connections of the biceps are with the gluteus maximus, and its true, or rather its primitive, origin is from the sacrum and coccyx. The more important and frequent irregularities in the long head are confirmatory of this, for they hark back, as it were, to its primary sources and connections. Thus additional portions or prolongations of it have been found extending over the ischium to the crista of the ilium, or to the fascia near it, or to the strong fascia on the deep surface of the gluteus; or the tendinous ischial origins have been continued over the great sacro-sciatic ligament to the side of the sacrum.* An interesting variety, of a different kind, yet confirmatory of this view, is described by Gruber† in the form of a slip, muscular in its middle part, passing from a little above the middle of the long head of the biceps over the ham, and losing itself in the sural fascia. This offset is evidently a representative of the muscle I have called "caudo-pedal,"‡ which arises from the tail in many of the lower vertebrates, and forms the most superficial stratum on the plantar aspect of the thigh and leg, and terminates in the plantar fascia.

The short head of the biceps cruris is a derivative from a deeper stratum, and corresponds with the brachialis anticus in the upper limb. It is not usually present in Mammals, and when it is present it sometimes remains distinct from the long head. It is occasionally absent in Man; or it may be supplemented by a third head from the upper part of the linea aspera; or it may be joined near its insertion by a slip from the inner head of the gastrocnemius, as observed by Gruber. Hallett found a band passing from it across the ham, between the popliteal nerve and artery, to the tendon of the adductor magnus; and Gruber describes a similar variety—viz., a muscle which he calls "tensor capsulæ genualis posticus", arising from the linea aspera near the biceps, and crossing the ham to the ligamentum posticum, the adductor magnus, and the inner head of the gastrocnemius. These slips indicate a relationship between the short head of the biceps and the adductors, similar to that which I have pointed out between the brachialis anticus and the coraco-brachialis, and are confirmatory of the view that this part of the biceps is the serial homologue of the brachialis anticus.

The other muscles of the thigh—the semitendinosus, semimembranosus, and the quadriceps§—appear to be remarkably free from irregularities; and the same may be said of the popliteus.

THE MUSCLES OF THE LEG AND FOOT.

It is a fact of no small morphological interest that, although the great calf-muscle—gastrocnemius soleus and plantaris—is exceptionally developed and complicated in Man, yet the irregularities, except in the instance of the plantaris, are almost always on the side of excess, or further development and greater complication, rather than on that of deficiency and greater simplicity.

Thus in the case of the gastrocnemius, I have not met with the mention of any instance in which a part of it was absent; but many examples are recorded of its being joined by additional heads or slips. Some of these were superficial, arising from the biceps or the fascia, and showing the semblance of their being representatives of the caudo-pedal muscle of Urodela, after the manner of the superficial slip just mentioned in speaking of the irregularities of the biceps flexor cruris. More frequently the additional slips were deeply situated, arising from one other of the condyles, or from the popliteal surface of the femur near to the condyles, or from the surface of the ligament of Winslow, or from the ridge leading upwards from the inner condyle, or from the popliteal surface between the condyles, or from a tendinous arch between the inner condyle and the ham. In some instances, they crossed superficially to the popliteal vessels and nerves, and in some they were traced between the popliteal vessels. They have been most commonly found in connection with the inner head of the gastrocnemius. Quain (*Commentaries on the Arteries*, pp. 474 and 534) mentions such a slip as of not unfrequent occurrence, arising from one of the condyles of the inner line of the femur. It passed between the artery and the vein in every instance, except one in which it separated the internal popliteal nerve from the blood-vessels. I may here observe, that the inner head of that muscle is more variable than the outer head in the lower vertebrates; being absent in most Reptiles, whereas it is extended much beyond the usual area in most Birds. These additional slips furnish illustrations of the occurrence as variety in Man of that imperfection of concentration, of that more diffused or promiscuous attachment of

* Wood, *Proceedings of the Royal Society*, 1867, p. 540; and Macalister, quoted by Wood.

† *Mélanges Biol. de l'Acad. St. Petersburg*, vii, 687.

‡ *Observations on Myology*, pp. 7, 152; *Journal of Anatomy*, vi, 7, 360.

§ In *Journal of Anatomy and Physiology*, vii, 310, is a notice of a case, by Professor Drachmann, of congenital absence of the quadriceps extensor cruris on both sides in a young woman. The patella was atrophied; the flexor and adductor muscles were rather more atrophied than usual. The observations were made on the living person; we do not, therefore, know the exact condition of the parts.

* *Journal of Anatomy*, iv, 54.

† BRITISH MED. JOURNAL; *Journal of Anatomy*, vi, 355; *Observations in Myology*, p. 167.

muscular fibres, which is commonly observable in lower animals, more particularly the lower Mammals, Reptiles, and Amphibians. Bearing in mind the contiguity of the inner head of the gastrocnemius to the adductor magnus, and the close relations between these two which exist in many of the lower animals, we might have anticipated the occasional blending of the two in Man by connecting slips, or in other ways. This, however, I have not found to be the case. Gruber* relates a curious instance of a muscle arising from the outer side of the inner head of the gastrocnemius, and taking the place of the ordinary external muscular part of that head, which crossed behind the vessels and nerves of the ham, downwards and outwards, to join the tendon of the biceps just above its insertion; but I have not met with any other instance of the deviation of these fibres from their normal concentration upon the inner head of the gastrocnemius, and conclude that they were kept to their legitimate ranks by constraining forces attendant on the definite and important action of the muscle in the human leg as an agent in progression. Sesamoid bodies and sesamoid bones, so common in lower Mammals, have sometimes been met with in the outer head, and occasionally in the inner head, of the gastrocnemius.

In the soleus, although the tibial origin is rarely present in any animal besides Man, I have not seen the mention of any instance in which it was absent in Man. Additional slips are sometimes found arising from the tibia or from the fascia beneath the soleus. These, in some instances, join the soleus or the tendo Achillis near the heel; or they are inserted separately into the os calcis on the inner side of the tendo Achillis, or into the internal annular ligament†.

The plantaris, which I regard as the condyloid remnant of the flexor sublimis digitorum, is sometimes absent, though, perhaps, less frequently than might have been anticipated, and than is generally thought. Hallett observes that it was not absent once in one hundred and fifty subjects dissected by him; sometimes its muscular part is inseparable from the outer head of the gastrocnemius; and sometimes its tendon is blended with that of the tendo Achillis, or is lost between the gastrocnemius and the soleus. It has been found arising from the fascia over the popliteus, from the popliteal line of the tibia, from the posterior ligament of the knee-joint, and from the head of the fibula; and it has been found inserted into the internal annular ligament and into the fascia of the leg above it, and imbedded in the substance of the tendo Achillis. Wood found a double muscular belly joining a single tendon larger than usual. He also found a muscular slip passing from the inner side of the origin of the plantaris to be inserted into the posterior ligament of Winslow close to the semimembranosus. This curious slip he regarded as an instance of the development of muscular fibres in the substance of a tendon.‡

The tibialis posticus is, above, sometimes imperfectly segmented from the flexor digitorum; and, below, it sometimes sends a slip on to the internal cuneiform bone, which may be blended with the flexor brevis pollicis. A sesamoid bone is not unfrequently developed in its tendon where it plays under the astragalus, which, as Wood remarks, is a reminder of the additional tarsal bone found in this situation in the Armadilloes and other Edentates.

In considering the varieties in the flexors of the toes, we must remember that they—the flexor sublimis, *alias brevis*, the flexor communis with the accessorius and the lumbricales, and the flexor hallucis—are segments from one flexor mass; and the varieties, which are numerous, consist, for the most part, of blendings or connections which are remnants of the primitive closer union which these muscles present in some of the lower animals.§

The flexor brevis, which in many of the lower Mammals is continuous with the plantaris, forming a flexor sublimis derived from the fibular condyle, and corresponding with the flexor sublimis of the upper limb, presents in its irregularities many reminders of that disposition. Particularly is this the case with regard to its division to the fifth digit, which, even more frequently than the like division of the flexor sublimis in the hand, is imperfectly separated from the deep flexor. In

some instances it does not appear as a separate muscle at all. In some it is an offset from the division to this digit of the flexor profundus. In some it is formed by derivatives from both the muscles (flexor sublimis and flexor profundus) which blend in a common perforated tendon. In some it passes into, or blends with, the perforating tendon. In some instances it has been derived, wholly or partially, from the accessorius. It has also arisen separately from the os calcis between the accessorius and the flexor brevis. A similar disposition has been found, though more rarely, in the case of the perforated or superficial flexor tendons to the other toes. Thus the perforated tendon to the third toe has been derived from the flexor profundus; and that to the second toe has been derived from the flexor profundus, and also from the flexor hallucis; or they have received slips from those deeper tendons. These varieties are not unfrequent in the lower Mammals; and the irregularities of the division to the fifth toe have often been noticed in *Quadrupana*. Indeed, the blending of the superficial with the deeper stratum sometimes, in lower animals, affects the tibialis posticus as well as the flexors of the digits. Thus, I found, both in *Orycteropus* and *Unau*, portions of this tibialis posticus extending into the flexor sublimis digitorum.*

I have said that, in the upper limb, the segmentation of the flexor pollicis from the flexor digitorum profundus frequently fails to be complete. In the case of the flexor hallucis, which is formed from somewhat different serial elements of the deep stratum, it is rarely complete†—so rarely that the entire separation of the two muscles constitutes a rather unusual form of variety. More commonly its union with the flexor digitorum exceeds that of the normal arrangement, and so approximates to the forms prevalent in *Quadrupana* and other lower animals. It sometimes entirely supplies the deep tendon to the second toe as well as to the hallux. In 100 specimens dissected by Schultze, it sent a slip to the tendon of the second toe in 32 instances, to the second and third toes in 58, and to the second, third, and fourth toes in 10. In 29 specimens, a slip passed from the flexor digitorum to the flexor hallucis.‡ Additional examples of imperfect segmentation are afforded by the instances in which it receives slips from the accessorius, as well as by those just mentioned in which it supplied slips to the flexor sublimis; and, further, by those in which it sent slips to the lumbricales.

Except in its relations to the other members of this flexor stratum, some of which have just been mentioned, and some of which are presently to be alluded to when I come to speak of the accessorius and the lumbricales, the flexor digitorum profundus does not present many variations. It shows an occasional want of concentration of its elements. Thus, a separate portion of it forming a special flexor to the second toe has been described;§ also a distinct muscle to the fifth toe has been found arising from the inner tubercle of the os calcis.|| Above, it is sometimes extended upon the tibia; and a slip from the back of the tibia has been seen to join it near its union with the flexor hallucis.*

The accessorius part of the flexor digitorum group varies a good deal. This muscle is a remnant of the extensive origin which the primitive pronator-flexor mass of the back of the leg derives from the tarsal and metatarsal bones, as well as from the bones of the leg. Although it is normally restricted to the small muscle, with which we are familiar, passing from the outer and under part of the os calcis to the tendon of the flexor profundus digitorum, yet we are not surprised to find occasional remnants of its former grandeur indicated by extensions up the leg, and by wider connections towards the digits. Thus its range of origin is sometimes increased upon the os calcis, and sometimes upon the tibia a little above the ankle; and many examples have been described of its receiving an accession—an “accessorius longus” or “secundus” from higher up the leg. The muscle so named has arisen either from the fibula at the upper part of its lower third, between the peroneus brevis and the flexor hallucis, or from the deep fascia of the leg over the tibial vessels, or from the flexor digitorum. The muscles described by Wood as additional plantaris, and by Gantzer as “accessorius ad calcaneum,” are probably to be referred to this extension of the accessorius.** They arose from the back of the fibula below the soleus, and were inserted by their tendons upon the inner side of the

* Müller's *Archiv*, 1848, p. 430.

† J. Beswick Perrin describes a digastric soleus; the second belly arising from the anterior surface of the lower part of the tendon of the soleus, and being inserted on the inner side of the os calcis, superficial to the plantaris (*Medical Times and Gazette*, Dec. 14, 1872). Quain (*Commentaries on the Arteries*, pp. 504, 540) almost mentions a similar muscular mass covering the internal tibial artery. In *Guy's Hospital Reports* is an account of a “second soleus,” arising from the oblique line on the back of the tibia and the fascia over the flex. dig., as well as from the fibula, and inserted in the os calcis.

‡ “In one body the plantaris arose on both sides by two heads; one from its usual point of origin, but unusually large; the second from the posterior ligament of the knee-joint: the latter joined the tendon of the muscle about two inches after its origin. The tendon itself was broad at its insertion, and completely ensheathed the tendo Achillis” (*Guy's Hospital Reports*, xvi, 154).

§ See description of these muscles in Cryptobranch in my *Observations in Myology*, and *Journal of Anatomy*, v.

* *Journal of Anatomy*, ii, 314; and iv, 60.

† Wood, *Proceedings of the Royal Society*, 1867, p. 534.

‡ In each of fifty specimens dissected by Turner (*Transactions of the Royal Society of Edinburgh*, xxx, 181), the flexor hallucis sent a slip to the flexor digitorum, the disposition of which varied: indeed, the same anatomist observes (*ibid.*, xxiv, 181) that the disposition of the flexor hallucis, flexor digitorum, accessorius, and lumbricalis, is seldom to be found alike in two specimens.

§ Balmsen, *Journal of Anatomy*, iii, 105.

|| Wood, *Proceedings of the Royal Society*, 1864, p. 303.

** *Guy's Hospital Reports*, xiv.

** So also probably are the additional long flexor of the great toe (described in *Guy's Hospital Reports*, xvi, 154) inserted into the sustentaculum tali, and the muscle (described by Curnow, *Journal of Anatomy*, vii, 307) arising from the back of the fibula and inserted into the os calcis near the inner bend of the accessorius.

calcaneum. In one instance, fibres were traced from the lower part of its outer border into the plantaris tendon.* The fibres were in each instance superficial to the rest of the deep flexor; and I conceive they were interrupted by the os calcis on their way to the accessorius, just as the plantaris is interrupted by the same process on its way to the flexor sublimis, and just as the tendo Achillis is cut off from the plantar fascia. Moreover, the fibres of the two muscles—the plantaris and the accessorius longus—both interrupted nearly at the same spot and by the same bony process, were found in one specimen blended with each other.

Traced downwards, the remnants of the wide relations of the accessorius are shown by its occasional junction with the flexor hallucis, and by occasional more extensive connection than usual with the flexor perforans digitorum, of which it sometimes supplies the tendon to the fifth toe. It was also found by Wood in two instances to supply the perforated tendon to the fifth toe, and in one that to the third toe; and Turner saw a slip from it which divided to each moiety of the tendon of the flexor sublimis to the fifth toe. It has sometimes been extensively attached to the tendon of the flexor hallucis, as well as to that of the flexor digitorum.†

I may observe that the accessorius longus has sometimes been more or less independent of the accessorius proper, being inserted with it, or independently of it, into the flexor hallucis or the flexor digitorum. Wood describes a fully developed specimen of the flexor longus accessorius arising from the lower third of the hinder surface of the fibula and the adjacent aponeurosis, as a distinct muscle ending in a stout tendon which passed under the annular ligament outside the vessels, and was joined by the muscular fibres of the massa carnea Sylvii, and by the tendons of the perforans in the middle of the sole. The fibres of its tendon passed exclusively to the three outer toes.‡ In another case,§ the flexor accessorius was made up four distinct heads—1, the long head from the fibula; 2, another tapering fleshy belly from the upper part of the os calcis and the insertion of the plantaris tendon in front of the tendo Achillis, and ending in a distinct tendon; 3, the usual massa carnea from the hollow surface of the os calcis; and 4, an outer tendinous slip from the long plantar ligament; these all uniting, joined with a large slip from the tendon of the flexor longus hallucis, to form a distinct or third set of flexor tendons passing to the four outer toes. Each of these joined that of the perforans in the inside of the sheath, about the first joint. These third or intermediate flexors remind us of other instances in which we have intermediate muscles segmented as irregularities from between two similarly disposed muscles—for example, the intermediate extensor carpi radialis; and we shall find the same thing in connexion with the extensors of the toes.

The lumbricales in the foot show less frequent irregularities than do those in the hand. The irregularities occur in the case of the fourth lumbricalis more often than in either of the others; whereas in the hand the third muscle is the one most often affected. Either of them may be absent; and they in various ways show evidence of the primitive oneness of the several parts of the flexor mass. Thus one of them is sometimes derived from the flexor sublimis, or the flexor hallucis, or the accessorius; or they may be continuous with the latter, or may derive accessory slips from either of these muscles. There may be also other varieties similar to those mentioned as occurring in the hand, and, like them, indicating a disposition to maintain their position upon the two sides of each digit; though such varieties are comparatively rare in the foot. Either of the lumbricales may be derived from adjacent sides of two tendons, or may be connected by slips with the sides of the adjacent tendons; or there may be two in one space, one passing to the fibular, as well as one to the tibial, side of the toe. I have not, however, seen the mention of their being joined by any long slip from the leg similar to those which are occasionally derived from the forearm by the lumbricales in the upper limb. Such irregular slips in the leg appear, as we have just seen, to attach themselves to the accessorius rather than to the lumbricales; though it is true that they may connect themselves with the latter muscles through the medium of the former. Indeed, we may regard the accessorius as a structure intermediate between the lumbricales and the supernumerary flexor elements in the middle division of the limb, which we have just been considering.

In the ball of the great toe, either the adductor or the flexor brevis may send a slip beneath, deeper than, the transversus, to the first phalanx of the second toe. Wood found this slip from the adductor in

several instances, and remarks that a similar slip is said by Meckel to be found in the foot of the White Bear.

In connexion with the fifth toe, a muscle has been noted by Wood as frequently passing from the outer tubercle of the os calcis to the base of the metatarsal bone, and has been named by him “abductor ossis metatarsi quinti”. It may be regarded as a prolongation backwards of the abductor minimi digiti derived from the mass which forms that muscle in the Cryptobranch, and which is a part of the supinato-extensor mass. It is found in *Quadrupana* and many animals. An *opponens minimi digiti* is sometimes well developed, and it is common in many of the lower animals. Wood found it largely developed in the Orang, but not present in the Bonnet Monkey. He remarks that Cuvier and Laurillard represent it as very large in the Lion and the Panther. In one instance, the same anatomist found the abductor minimi digiti provided with two tendons.

The transversalis pedis has in several instances been found deficient or absent.

[To be continued.]

ON CASES OF SIMPLE VERTIGO.*

By T. CLIFFORD ALLBUTT, M.A., M.D.,

Physician to the Infirmary, Leeds.

I WISH to consult rather than to try to instruct my brethren in my remarks of to-day, for I propose to read you the short notes of a few cases selected from a much larger number, and to ask what is the meaning of their symptoms, and how they are to be cured. When I speak of their symptoms, indeed, I speak with almost unnecessary comprehension, for the one symptom—vertigo—is the only one that can be called constant; and we find a singular absence of any such concomitant morbid phenomena as might help us to the understanding of the disease or disorder. This vertigo occurs generally in males. Of my cases, I find that all are males. It is often so severe as to be extremely distressing; it may continue for months or years, and it is very rebellious to treatment. Ultimately, however, it disappears without the necessary development of any further evidence of nervous or other mischief. The average of age in my cases, which number twenty-seven, is rather high, being 44.7, or thereabouts; but I do not find that the patients, as a rule, have manifested any definite arterial or other tissue degenerations.

As I have said that the vertigo to which I refer generally exists alone, I thereby implied, and now would state explicitly, that from my class of cases I have excluded all those instances of vertigo in which was found any evidence of disease or disorder of the encephalon or arterial system, or any evident dyspepsia or external injuries. In women, I should also exclude menstrual disorders. I have also excluded all cases of vertigo in which the symptom has been but a transient one, and dependent upon some chance and passing derangement. Few of us, perhaps, have not experienced some vertigo at times. The vertigo in the cases from which I extract a few examples is not transient, or, if transient, is continually recurring, or ebbing and flowing. The patients complain of a dizziness so severe as to cause a great sense of uncertainty in gait, to cause actual reeling in the gait; or, again, even to hurl them about the room, or to throw them down. In the cases which I describe, consciousness is always retained, however bewildered the patient may be; nor is there ever any *petit mal* or other epileptical condition. The connection of it with other neuroses, if neurosis it be, is not very evident, though there is some argument in favour of such a connection. One patient suffered from *migraine*, which ceased about the time of the onset of the vertigo; another belonged to a neurotic family. Many of them were men of anxious or irritable temperaments, or placed in positions of anxiety and heavy responsibility. In another patient, also a male, there was some hysteria, evidenced by temper, and by discharge of large quantities of limpid urine. I am satisfied that the complaint depends primarily upon the nervous system, either directly or through the mediation of vascular changes. Whether in any of my cases disease of the internal ear exists or has existed, I cannot tell; I have not overlooked the chances of such a thing, but cannot say anything more than this: perhaps no means exist of detecting such a thing. I do not think that the attacks depend upon any changes, negative or positive, in the quantity of blood in the brain, for I have had these patients closely watched by their friends, in order to ascertain whether pallor or flush preceded or accompanied the attacks. All have agreed in saying that the complexion does not change in these respects. The state of dizziness described is not attended with sinking or nausea, except in any severe cases where sickness may follow; indeed, in this its identity with common dizziness is further shown, for

* *Proceedings of the Royal Society*, 1867, p. 541. Similar varieties are given in *Guy's Hospital Reports*, xiv.

† Curpen (*Journal of Anatomy*, vii, 308) found a tendon from the accessorius perforating the flexor brevis, which was inserted into the proximal phalanx, and running on to the second phalanx, into which it was inserted, being in its turn perforated by the tendon of the long flexor.

‡ *Proceedings of the Royal Society*, 1867, p. 547.

§ *Ibid.*, 1866, p. 240.

* Read before the Yorkshire Branch.

I believe that there is such identity. The precise symptoms described so graphically by my patients may be brought on readily by turning round. The best plan is to place the poker upright upon the floor, and rest the forehead upon its upper end, and then to move in a circle about the poker as an axis. If the movement be rapid and the radius short, the performer will not only find himself unable to walk across the room without staggering, but may find himself hurled by an invisible force against the wall or on to the floor. In my patients, the vertigo seems to come on at any time, but is generally worse in the forenoon. Assuming the erect posture in the morning often produces it, so that the sufferer has again and again to return to his pillow. The noise and whirl of the streets is a common exciting cause, and patients have told me that the sight of a carriage will compel them to clutch a rail or a post for support, so strong is the effect produced. The vertigo, however, often recurs during quiet, or even in the dark. But I must not detain you longer, and my first case shall be:

CASE I.—Mr. P., who, when he first consulted me in April 1871, had suffered from vertigo, as above described, for fifteen years. The attacks often lasted half-an-hour. They might disappear for months, and return again. He had had attacks even of great severity when in bed, as though he were rolling out of bed and across the room. The worst attacks are followed by nausea and sickness. He could not accuse overwork or anxiety as their causes. He was very largely concerned in business, but was very wealthy and successful, and had a manly cheerful temper. His home was very happy. Two children were nervous and neuralgic, but might have derived this from the mother. He was himself in every respect a picture of health.

CASE II.—Mr. F., a few years younger than the preceding, was of a hesitating and somewhat anxious and despondent habit, but was a very successful professional man, of large independent means, and very happy home. For ten years he suffered distressingly from vertigo, often so severe as to cause him to lay hold of anything at hand to support himself. Like other patients, carriages in the street affected him excessively. It was in this patient that I observed hysterical phenomena. He has now been cured of his malady for two or three years.

CASE III.—Mr. B. is engaged in a large business, and is also a very keen sportsman. He will work all day, then go by night to the moors, and walk or shoot from 5 a.m. till noon, and then return to work in town, or *vice versa*. He has had very much anxiety and distress in home matters. Like all others whose cases I read to-day, he is of temperate habits. For the last two years he has had the vertigo very commonly. He seems as if drunk in the street, and fears to run or jostle against people. If it be very severe, he may vomit after the attack. He is generally easy when lying down. The heart and kidneys are normal as in the other cases: in fact, save for the vertigo, he has good health.

CASE IV.—Mr. S. W., aged 65, overlooker, has had vertigo six months, in extreme forms commonly, and in less degrees constantly. He has often to catch hold of furniture, lest he should fall. The other details are as in the previous cases. He consulted me this spring, but is as yet without relief.

CASE V.—Mr. W., engineer, aged 47, about three years ago was seized with intense occipital headache of unusual duration and severity. It was accompanied by dizziness, and in a few days the headache ceased, the dizziness remaining. He has fallen down three or four times, and often staggers or walks as if intoxicated. There is nothing important to be made out in his personal or family history. His general health is excellent. He consulted me some weeks ago, as yet without any benefit.

CASE VI.—Mr. F. D., a country gentleman, of large means and good health, and of spare and active frame, consulted me about two years ago for a dizziness which had made him miserable for some months. He had never fallen, but often reeled. On rising from his knees at morning prayers, he felt so insecure that he had to give up the office to others. He had been almost obliged to give up hunting and riding altogether; nor dare he drive in a dog-cart. He lost a very dear daughter a short time before, whom I had seen many times in consultation, and I had occasion to see that he was very deeply affected by the trial. Medicine did but little for him, I fear. In about twelve months the affection became less, and now has passed away under the good effects of care and change of scene.

CASE VII.—The Rev. T. A. suffered very much as the preceding—so much so that he was in much difficulty about rising from his knees after prayer, unless he had railings at hand to offer him ample support. This gentleman had suffered in previous life from sick headaches, and was a man much worn by overwork. He gained but little from medicine; but in the course of two years the affection wore away, under the influence of foreign travel and relief from all duty.

CASE VIII.—Mr. W. H., a patient of Mr. Rayner of Birstal, is a man

of some little property, and no regular occupation; but he busies himself most anxiously in local politics, and is thus a nervous, irritable, overworked man. His vertigo, as in many others of my cases, began suddenly one morning on assuming the erect posture. He reels in walking, and dare not turn his head. Sometimes he has vomited. In all other respects he is well, but a nervous subject. He improved in a few months, but doubted whether medicine did much for him.

CASE IX.—Mr. J. B., aged 46, a healthy farmer of temperate habits and comfortable circumstances, was sent to me by Mr. Bramley of Halifax. This was a very bad case. The dizziness had commenced suddenly as in the preceding case, but continued, and often attacked him most severely. He often had to take a cab in the streets and go home. Like many others of these patients, he suffered from the great mental depression caused by the unfounded suspicion of drunkenness to which his gait gave rise. At one time the dizziness was so bad that he had to stay altogether in bed. He had some headache and lifting pains at the vertex. His general health and physical state were good. I did him no good, and Mr. Bramley told me some months later that he was no better, and had left him for other advisers.

CASE X.—Mr. R. P., a tradesman in very large business in Wakefield, has suffered from vertigo for eighteen months, which agrees in all its phenomena and conditions with that above described. He is a spare nervous man, and belongs to a highly neurotic family, in which are both epilepsy and insanity. He has himself had severe *migraine* in past years. His age is now 35.

I could add the notes of fifteen more cases at least to the above, but I should occupy your time to no further good purpose. The affection, whatever it be, is very constant in its characters: it is not flushing, like the head-swimming of women, who have disordered or suppressed menstruation; and it does not seem to depend upon vascular changes. I have questioned all my patients very closely as to the kind of dizziness—whether they themselves seem to spin round, or external objects to spin round them, etc. The same person, however, will give different replies, and the description of the vertigo seems to vary with its degree. When very bad, patients will say that the ground seems to rise up under their feet. I fancy the sensation closely resembles that of alcoholic intoxication. My own impression is, that the affection is one of the cerebellum, or of the great basal ganglia near it. I cannot find any evidence of its belonging to dyspepsia, as was supposed by Trousseau, who has given the only good account of the malady which I have seen; nor is it generally relieved by antiseptic remedies. Like *migraine*, it offers very great resistance to treatment. Trousseau's plan of giving alkaline powders after meals, and bitters between meals, has answered in a few of my cases; but I have not been led to any great faith in it. The most potent remedies are two—first, complete change of scene and removal of all causes of nervous depression; and, secondly, Turkish baths. The first remedy is the best. A continental tour, a moor in Scotland, a fishing-hut on the Tweed, are the means for the wealthy, and will probably succeed well. Turkish baths I have also found of very great value in every case for which I have been able to try them. Of drugs, strychnine is the only one which has helped me much, and it rarely fails to be of some use. Galvanism I have not tried; but I intend to test the value of the continuous current applied to the occipital and cervical regions. Happily, the affection does not seem to point to any approaching cerebral disease, which these patients often dread; and it tends to wear itself out in times which vary from a few weeks to two or three years. It not unfrequently, however, reappears after a time. Nearly all the patients who have consulted me have had leeches, blisters, etc., and brisk purges at the commencement of their illness; but all have assured me that such measures did them more harm than good.

GASTROTOMY IN A CASE OF EXTRAUTERINE GESTATION.

By F. H. MABERLY, M.R.C.S., etc.,

Surgeon Chloroformist to the Dental Hospital, Birmingham.

MR. BAILEY, surgeon of this town, requested me, on June 21st, to see Mrs. —, a young woman aged 27, mother of two children, the youngest being two years old. I found her suffering from excruciating pains in the abdomen, and constant sickness. Her face was pinched, and expressive of great anxiety; the pulse rapid and feeble. On examining the abdomen, I found its walls exquisitely sensitive, so that no pressure could be borne; yet, on the right side, could be seen and felt a solid substance, springing evidently from within the pelvis, rising to a level with the umbilicus, and slightly crossing the median line to the left. The history showed that this substance had been forming for

about six months, during which time she had constantly suffered with severe intermitting pains of a bearing-down nature, together with frequent nausea and vomiting; the bowels had been very constipated, with tenesmus coming on at intervals, and sometimes she had had complete retention of urine for some hours; all these symptoms had become very much aggravated about ten days before I saw her. There were no breast-signs of pregnancy, and she had never felt any movements. A vaginal examination with the finger revealed the uterus carried high up, and greatly anteverted. The menstrual discharge had been very irregular from the commencement of the symptoms. She was ordered full doses of opium, and a turpentine stupe to be applied over the abdomen. Next day she appeared somewhat better, and I did not see her again till the evening of June 26th, when I found the symptoms, if anything, increased in severity, and she had had some rigors. As no efficient examination could be made without the use of chloroform, I determined to place her under its influence on the following day; and having done so I was enabled, by the additional evidence thrown on the case, to express a decided opinion that it was one of extrauterine pregnancy; for not only did the history and symptoms entirely favour this view, but nearly every other possible disease could be excluded.

Owing to the extremely precarious state of the patient, it was thought advisable, before proceeding to operate, that another opinion should be had, although the patient and her friends were most anxious that what was necessary should be done at once, notwithstanding only a very slight chance of recovery was held out to them. I was extremely fortunate in obtaining the opinion of my esteemed friend, Dr. Savage, the same afternoon, when he agreed that immediate operation was the proper course. I therefore, in the presence of Mr. Bailey, Dr. Savage, Mr. Priestley Smith, who kindly gave the chloroform, and two others, performed gastrotomy.

An incision about four inches in length was made in the median line between the umbilicus and the pubes. Dissecting down through the linea alba, the peritoneum was reached, and opened upon a director, when a quantity of dark blood began to flow from the abdominal cavity. The tumour was now exposed; and, as it was somewhat elastic to the touch, an ovarian trocar, for safety's sake, was thrust into it; but, as no fluid escaped, I withdrew the instrument, and introduced my finger through the opening it had made, when, to my extreme satisfaction, I found my diagnosis to be correct, as I at once felt the limbs of the foetus. Opening the cyst, I removed it by the feet; and, in doing so, found the head lodged deeply in the pelvis. The foetus weighed about a pound and a half. All blood was removed as completely as possible from the abdominal cavity. Its effusion had been caused by a rupture in the cyst, which no doubt occurred at the time when the symptoms increased in severity—viz., about ten days before I saw her. The cyst-wall was then stitched to the abdominal parietes, the placenta being left *in situ*. A pad of wet lint placed over the wound, covered with tenax, and a bandage, completed the operation. The patient was then removed to bed; and a small quantity of brandy was administered, as she appeared faint. She soon, however, became very restless, and in about three hours breathed her last. The next day, I was permitted to examine the parts. I therefore enlarged the abdominal wound, and exposed the cyst, etc. The peritoneum in the right lumbar region was covered with blood, which had evidently been effused for some days. Adhesive inflammation had been set up about the part of the cyst where the rupture had occurred, gluing it to the ascending colon, and slightly to the parietal peritoneum. The omentum was likewise covered in patches with discoloured blood, and was of a greenish cast in many places. The cyst was found to be connected with the right Fallopian tube, and no trace of an ovary could be found on that side. The uterus was rather enlarged. The ovary, round ligament, and Fallopian tube on the left side, were all healthy.

I purpose showing the cyst, uterus, and foetus, at the annual meeting of the British Medical Association.

SIMPLE COMMUNED FRACTURE OF THE CLAVICLE TREATED BY THE REMOVAL OF A SHARP FRAGMENT.

By THOMAS ANNANDALE, F.R.S.E.,

Surgeon to the Edinburgh Royal Infirmary, and Lecturer on Clinical Surgery.

IN connection with the interesting case of Mr. Erichsen, and the clinical note of Mr. Griffith, recently reported in the JOURNAL, I am induced to publish a brief account of the following case, treated by me a few years ago.

The result of the treatment adopted in the case will, I hope, be an encouragement to others who may have to treat a similar accident.

From the nature and position of the broken fragment removed, and from the delirious restlessness of the patient caused by the head-injury, I feel very certain that in the progress of the case some serious injury would have been inflicted on the large artery or vein had the operation not been performed. Under the careful use of the antiseptic dressing, I have every confidence that the risks of such an operation are of the slightest, and I should have no hesitation in resorting to this proceeding in any other like case.

J. R., aged 35, was admitted into the Edinburgh Infirmary on the 30th December, 1870, on account of a severe injury to the head and left shoulder, the result of a blow from a crane-handle. On admission, the patient was only partially sensible, and there was bleeding from his right ear. The left clavicle was fractured through its middle third, the fracture being a simple but comminuted one. One fragment was fixed in a vertical position between the principal broken portions. This fragment could be felt to have sharp ends, and its lower extremity lay immediately over the position of the axillary vessels. Attempts were made by manipulation to displace this fragment from its dangerous position; but these failing, I made an incision, under the antiseptic spray, over the fragment, and removed it. The portion of bone thus removed was one and three-quarters of an inch in length and half an inch in width, and was sharply pointed at both ends. It was stripped of its periosteum except at one small part, and was only attached to the surrounding textures by a few muscular fibres. Antiseptic dressing was applied to the wound, and a proper appliance adapted to keep the fractured bone in position. Owing to the delirium and restlessness of the patient, it was found impossible to keep the parts properly at rest; and the dressing, too, was more than once displaced. In consequence of the interference with the strictly antiseptic treatment, considerable suppuration took place; but the pus was never at any time putrid, and it gradually diminished in quantity. On the 20th January, 1871, the wound over the clavicle was superficial, and the union of the bone was progressing most satisfactorily; but the patient was suffering from symptoms due to the head-injury, to which I need not further refer. These symptoms became steadily worse, and proved fatal on February 1st.

At the *post mortem* examination, a fissure through the base of the skull, with suppuration of the brain, was—as had been previously diagnosed—discovered. The wound over the clavicle was firmly healed, except a very small superficial sore confined to the skin. The union of the bone was not completely osseous, but the process had been apparently progressing favourably towards it, as the surrounding periosteum and other textures were studded with osseous points.

LACERATION OF THE INTERNAL JUGULAR VEIN BY A PORTION OF FRACTURED CLAVICLE.

By JOHN W. OGLE, M.D.,

Physician to St. George's Hospital.

IN the number of the JOURNAL for June 7th last, Mr. Erichsen has described an interesting case of fracture of the clavicle, with compression of the subclavian vein by one of the fragments. Commenting upon this form of fracture, he observes that "the most common form of injury which it may give rise to is compression or laceration of the subclavian vein—the latter being exceedingly rare, though a case of the kind occurred in this hospital some years ago, and, as is well known, the late Sir Robert Peel died of this accident."

There is another result of fractured clavicle which may occur, and which is even, I believe, more rare than laceration of the subclavian vein, and that is laceration of the internal jugular vein. It so happened that a case of this kind occurred when I was curator of the pathological museum at St. George's Hospital, and I added the specimen which I had prepared to our collection. The case had additional interest at the time, inasmuch as Sir Robert Peel had been thrown from his horse and died but shortly before, owing, as it was thought, to the wounding of the subclavian vein by a fractured clavicle. I published the case in Beale's *Archives of Medicine*, vol. iv, p. 125; but I think it cannot fail to be desirable to notice it afresh, in connexion with Mr. Erichsen's rare case before alluded to.

The patient was a young man aged 23, apparently in good health, who was standing under some trees in Hyde Park on July 1st, 1851, in a thunderstorm, when a rotten bough fell down and struck him against some hurdles. He died almost immediately, and was brought into St. George's Hospital, where I found the following lesions. There were great swelling and deformity about the lower part of the neck on both sides; and, on opening the chest and removing the sternum, I found that both clavicles were extensively fractured, and that a very large

amount of blood was extravasated about the portions of the fractured clavicles, and also beneath the cervical fascia. Fracture of the second rib on one side also existed; and, in connexion with this, there was a large quantity of extravasated blood among the pectoral muscles, and much also in both mediastina. On removing the fractured clavicles, I found that the lower part of the right internal jugular vein, at a point about a quarter of an inch above its junction with the subclavian to form the innominate vein, had been lacerated by depression of some fragments of the broken clavicle. The lacerated opening was oval in shape, its longest diameter being across the vessel, and was of such a size that it would about have admitted an ordinary sized pea. There was nothing like firm coagulum around or within the injured vein. The jugular vein of the opposite side was uninjured, and the subclavian veins on both sides were unaffected. On further examination, some broken ribs were found on one side, and the lung corresponding was lacerated. Moreover, the sternum was found to be fractured. Blood was also found extravasated between the peritoneum and the abdominal muscles. Nothing worthy of note was further observed in the body.

OBSERVATIONS.—Death was no doubt occasioned by hæmorrhage into the mediastina and the tissues of the muscles, etc. At least, this must have contributed very materially to the fatal issue; and it is very clear that, even if medical advice had been at hand at the moment of the accident, it would have been unavailing. How far the physical appearances presented by the neck and parts round the fractured clavicles resembled those in the case of Sir Robert Peel above alluded to, is of course entirely a matter of conjecture; but it is quite possible that examination of those parts after the accident, and before death, would have shown, as in Sir R. Peel's case, the existence of a swelling pulsating to the touch, and resembling a "diffused false aneurism". Of course the two cases so far differ, in that we have in the one case the lower part of the internal jugular vein lacerated, whereas in the other "it was supposed" that it was the subclavian vein that was injured. I do not see how it would be possible by *ante mortem* appearances to diagnose laceration of the subclavian from that of the internal jugular vein at a point so low down as the injury in the present instance. As in Sir R. Peel's case, fracture of the ribs was found in this one also.

The above description in Beale's *Archives* is accompanied by an illustration (Plate VIII) showing laceration of the vein.†

THE MEDICAL PROFESSION IN ITS RELATION WITH THE PUBLIC.‡

By EDWARD GARRAWAY, Esq., Faversham.

IT is not my sense of fitness that brings me here, but a strong sense of the duty I owe to this great Association, which throughout the length and breadth of the land is ever working for the public weal. And, alas! how little do the public recognise it. Actuaries will tell us that the value of human life is something like three years more than it was in the days of our grandsires. This is a strong and palpable evidence of the success of our efforts to ameliorate the condition of the human family during the last two generations. I speak advisedly when I say *our* efforts; for it is undeniable that all the sanitary improvements, from the introduction of vaccination to the closing of graveyards and the disinfection of the scarlatina chamber of yesterday—all the varied phases of the so-called "preventive medicine"—have been originated and carried out regardless of self-interest by our own noble and self-sacrificing profession. So, also, in the quiet of the consulting-room, the same spirit of self-sacrifice obtains. The patient is not only if possible cured, but he is instructed how best to avoid falling into trouble for the time to come. For instance, one comes to you with that apparently trivial but most miserable form of torture, "in-growing toe-nail". By judicious management, you effect a cure; but you know perfectly well that the patient must come to you again in a few months if left to his own devices. You therefore instruct him how to cut and treat the nail so as to prevent a recurrence of this malady. The surgeon does this from the mere force of the instinct of right which is in him; but the patient appreciates it not. He pays his fee, perhaps; but thinks not of the years of comfort it has purchased, nor of the future fees from which his adviser has cut himself off. The public do not sufficiently consider our relative positions; they do not reflect that all our powers of mind and body are constantly employed in discovering and anni-

hilating the very sources whence we gain our daily bread. They do not perceive the false position in which we are placed; that if we were not imbued with the highest, noblest, purest motives, society would become disorganised and fall to pieces. But society believes and trusts; because it knows that its confidence and its trust never have been, and never will be, betrayed. And what is our reward? Look over, year by year, those painful lists of applicants for our various charities: widows and orphans of men who have been cut off in the prime of life—slain by the enemy with whom they were contending on behalf of others; or of men who have worked laboriously and lived closely, and yet been unable to make provision for themselves, or those dearer to them even than self. Think of Mr. Partridge, recently President of the Royal Medical and Chirurgical Society, dying worth only a few hundreds. Think of a son of Holmes Coote an applicant for a foundation scholarship at Epsom. Gentlemen, amidst a wise and discerning people, such things ought not to be. Our vocation is exceptional, unlike all others. Is it Utopian to hope that the doctor may one day be recognised in his true capacity as a servant of the state, and rewarded according to his sacrificings and deservings? A notable step has now been made by the passing of the recent Act appointing officers of health. The sanitary authorities do not appear to be altogether carrying out the intentions of the legislature; but we are glad to accept this Act both as a recognition of the past and an earnest of the future. Our own Branch has taken a very active interest in this matter, as you will learn from the Report of our Council to be read presently. It is a matter of congratulation to ourselves and the public that the health of the community has been so exceptionally good, and the bills of mortality so unprecedentedly low during the past year; the deaths in the metropolis diminishing week by week during the summer, autumn, and winter months, until in the third week of January they were no less than 708 below the average. At this period, we had experienced thirteen weeks of incessant rain, six inches and a half having fallen in November alone; and to this continued downpour may probably, in some measure, be attributed our condition of unwonted salubrity: floating spores and disease-germs, noxious gases, exhalations, and miasmata being daily washed down into the earth, leaving the atmosphere in an unusual state of purity. It is noteworthy that, during these months of November and December, Wanklyn's analysis of the water supplied by the various London companies showed a large amount of impurity, the result of the continued floods; and yet the health of the metropolis was better than had ever been known; whence we may infer that however desirable an uncontaminated water-supply may be, a pure air is more important still. So many and such strenuous efforts are now being directed to the one object of staving off disease and death, that we may fairly hope for a continuously diminished rate of mortality. The improved drainage of lands and of towns; the more efficient ventilation of houses; the greater cleanliness of persons; the more wholesome dietary; and, lastly, the advanced science and skill of the profession, must tend to this desirable consummation.

ANATOMICAL MEMORANDA.

THE HUMAN HOMOLOGUE OF THE "MODERATOR BAND" OF REIL.

WHILE reading the interesting description of the rudimentary human homologue of the ruminant "moderator band" of Reil, which occurs in the Harveian oration recently delivered by my old teacher, Professor Rolleston, and reported in the *BRITISH MEDICAL JOURNAL*, I was reminded of a specimen of this structure which I had seen in the Pathological Institute of the Allgemeine Krankenhaus at Vienna, at a course of pathological demonstrations given by Dr. Kundrath. On referring to my note-book, I find the following entry:—"Heart, in which a strong and thick muscular band, in right ventricle, passed from ventricular septum to anterior wall of ventricle. From this band—a modified *columna carnea*—some of the 'chordæ tendinæ' of the tricuspid valve took origin. [Compare with *moderator band* in heart of ruminants.] Friday, Nov. 10, 1871."

West Riding Asylum, July 9th.

JOHN C. GALTON.

P.S.—Since writing the above, I have seen in the heart of a male general paralytic, on whom a *post mortem* examination was made this evening, a very fair example of the structure in question. To the upper part of a *columna carnea* which formed the prolongation of its septal attachment, the *chordæ tendinæ* re-passed from what may be conveniently termed the "septal" cusp of the right auriculo-ventricular valve.

July 15th.

J. C. G.

† For there was no *post mortem* examination.

‡ The specimen is catalogued in our Hospital Catalogue as No. 172, Series vi.

§ Extract from President's Address delivered at the Annual Meeting of the South Eastern Branch.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

SUPPURATING HYDATID TUMOUR OF THE LIVER; PLEURISY AND
PERITONITIS: SUCCESSFUL TREATMENT.

(Under the care of Dr. ROBERT LIVEING.)

ELIZA JENNINGS, aged 29, married, was admitted March 22nd, 1873. Her father and mother are both alive and well. Her health had been generally good, with the exception of a slight cough, during the last few winters. She had one child living, and had had one miscarriage; catamenia regular. Her present illness began about three weeks before her admission, with a cough and loss of appetite; this was followed by shiverings, with pain in the right side of the chest and shortness of breath, which continued up to the time when she was admitted into the hospital. On admission, the patient was a pale and rather thin woman, with a somewhat anxious expression. Her breathing was short, and she had a troublesome cough. Pulse 120; temperature 103.4. Her chest was well formed, and the expansion and resonance on percussion were everywhere good in front. There was a little sibilus heard under the left clavicle. Behind, dulness on percussion extended over the lower half of the right lung, and the vocal fremitus and breathing sounds were diminished over the same region. There was no marked bulging of the ribs on the right side. Rather fine crepitation could be heard over both lungs behind. In short, the patient had all the signs of pleurisy with effusion on the right side, and more or less bronchitis of both lungs. The liver-dulness began about three inches below the nipple. The margin could be well felt below the ribs on the right side, but towards the left the extent of hepatic dulness was not well defined. The physical signs showed that the liver was somewhat enlarged, or pushed a little downwards.

During the first few days after her admission, the physical signs remained unchanged, except that the crepitation in the lungs diminished. On March 25th, the pulse was 96, and temperature 99.6; and as she was constantly sweating, she was ordered a grain of sulphate of zinc, in a pill, twice a day. On the evening of the 30th, her pulse rose to 126, and her temperature from 99.8 to 103.8.

On the 31st, the pulse was 120, the respirations 32, the temperature 101.4. The patient complained of great thirst, and pain on the right side of the chest. Over this region a loud pleuritic friction-sound could be heard. Her tongue was rather dry; the liver was found to extend further below the ribs than when she was admitted.

By April 4th, the liver-dulness had much increased; the patient vomited her food, and complained, for the first time, of pain and tenderness in the abdomen. On auscultation, a well-marked peritoneal friction-sound was heard just below and to the left of the umbilicus. In short, she had all the signs of local peritonitis.

April 5th. Pulse 110, temperature 99.8. A visible bulging was noticed on the right side over the region of the liver, and the upper part of the abdomen on that side was found to measure in circumference an inch and a half more than on the left. The right lobe of the liver extended down to the level of the umbilicus, and its thin edge could be very easily felt; towards the left side, the edge of the liver could not be determined, but there was increased abnormal dulness on percussion over that part. No fluctuation could be detected in the liver, but the swelling was elastic to the touch. The peritoneal friction continued, and was distinctly felt on placing the hand on the abdomen. The pleuritic rub also remained unchanged, and lying on the left side caused much pain.

On April 9th, the pulse was 130, temperature 100.2. The girth of the upper part of the abdomen had again increased rather more than half an inch. The patient had an anxious expression. On the afternoon of the 9th, the tumour was tapped by Mr. Lawson, and forty-six ounces of very fetid pus removed. The purulent fluid contained a large number of small hydatid cysts, which constantly blocked up the cannula, and rendered the removal of the contents of the sac very tedious. A gum-elastic catheter could be passed into the sac for nearly its whole length, with the exception of an inch or two. After the removal of a large quantity of pus, the cannula was retained in its position by means of tape tied round the abdomen, and the cavity of the sac was washed out with a weak solution of Condy's fluid and water. The opening was made just below the ribs, and about four inches to the right of the median line. It was found that, after the tapping, the liver had returned very nearly to its normal position.

On April 10th, the morning after the tapping, it was reported that the patient had slept well, and that there had been a considerable discharge of pus during the night. Seven inches of gum-elastic catheter could be passed into the sac. The cavity was washed out with a solution of one part of carbolic acid to one hundred and twenty parts of water, of temperature 95 deg. The patient suffered no pain; her tongue was clean and moist. Pulse 110, temperature 99.6.

April 12th. The patient passed a good night. The prominence in the epigastric region had almost disappeared. The cavity was again washed out with the carbolic acid lotion.

April 15th. In consequence of the altered position of the liver, the cannula had a tendency to be pushed out, and the channel of communication with the cyst had become very oblique; it was therefore removed, and a gum-elastic tube introduced. The discharge at this date consisted chiefly of bilious matter, with a little pus.

April 19th. To-day, ten days after the tapping, in consequence of the tube causing pain and annoyance, it was removed, and about half an ounce of pus escaped at the time from the opening. In spite of frequent probings, the opening closed within forty-eight hours from the time the tube was removed.

April 27th. The patient, after sitting up in bed for longer than usual, had a slight rigor. From that time she had no bad symptom, her appetite returned, and she gained flesh and strength daily. The signs of pleurisy had almost, but not quite, disappeared.

On May 13th, she was discharged perfectly well; and on May 17th she continued quite well.

REMARKS BY DR. ROBERT LIVEING.—The history and diagnosis of this case are perfectly clear. The origin of all the mischief was a hydatid tumour, deeply seated in the thick posterior part of the liver. Probably this tumour was originally not very large. How long it had existed in a quiescent state before the patient was admitted into the hospital, it is impossible to say, inasmuch as its very existence was not known, even at the time of her admission, and she never suffered from any inconvenience, pain, or swelling of the liver or abdomen. This hydatid sac became inflamed, leading to a copious pouring out of pus into its cavity, and a consequent rapid enlargement of the tumour, the inflammatory process setting up at the same time the peritonitis, and probably also the pleurisy (?). The sac, as it enlarged, pointed at the posterior part of the upper surface of the liver, and thus gradually pressed that organ downwards towards the umbilicus.

The chief points of interest in this case are, first, the difficulty in forming an exact diagnosis in the early stages of the disease; and secondly, the treatment adopted.

With regard to the first point, it is worthy of notice, that the woman was admitted as suffering from an ordinary attack of pleurisy of the right side, with moderate effusion, and some bronchitis of both lungs (of which class of cases we have had plenty lately.) The liver, it is true, was noted as rather large, or, as we thought at the time, a little pushed down. There was, however, no bulging of the right side; and, in a woman with pleurisy of that side, there was nothing remarkable in the fact that the edge of the liver should be felt two inches below the ribs. There was, moreover, not the slightest pain in the abdomen at the time of her admission. Later on, however, when local peritonitis was set up, and there was also a gradual pressing downwards of the liver towards the umbilicus, and when the girth on the right side was increasing, it became quite evident that there was a tumour in the liver enlarging pretty rapidly.

Secondly, with regard to treatment. All who had watched the case felt sure that tapping might be performed with safety, local peritonitis having been observed at least five days before. The question was, whether, as the tumour was deep-seated, it could be easily reached. A long fine trocar and cannula was first used, and introduced, at my request, by Mr. Lawson; and, when it was evident that the sac had been tapped, a much larger one was immediately employed, and a great quantity of pus removed. After the tube had been kept in for ten days, it was removed, partly in consequence of the annoyance it gave to the patient, and the irritation which it was evidently producing. Whether I acted wisely or not in dispensing with the tube at this early period after the tapping, I am not prepared to say; at all events, the result has been in the highest degree satisfactory.

ROYAL INFIRMARY OF EDINBURGH.

MR. J. BELL'S METHOD OF SKIN-GRAFTING ULCERS, WITH CASES.

(Reported by M. D. MACLEOD, House-Surgeon.)

IN procuring portions of skin for grafting, Mr. Bell takes them from some sound part of the patient's body, preferably from the arm. A piece of skin is pinched up by a pair of common catch-forceps, and cut off to the required size with a pair of scissors. This piece is divided

into smaller pieces about the size of a grain of rice, and is planted among the granulations of the ulcer by means of a probe; one small piece being sufficient for about a square inch of surface. Over each of the grafts is laid a piece of gutta-percha tissue, half a square inch in size, previously dipped in some antiseptic solution. The ulcer is then covered by two layers of similar pieces of gutta-percha tissue placed on each other in an imbricated manner, and over these a dressing of antiseptic gauze and a bandage. This dressing is not removed for two or three days, when it is replaced as at first. To ensure success before grafting, the ulcers should be free from foetor, and the dressings should be changed under spray. The advantages of this method of grafting are alleged to be—that no special apparatus is required; that it is extremely simple; and that, by the movement of the pieces of gutta-percha on each other, the grafts are protected from all sources of disturbance.

The following four cases are selected as examples of the application of this method of dressing.

CASE I.—Mrs. W., aged 53, had scirrhus tumour removed from the left breast on May 15th, 1872. The lower flap of skin sloughed away, leaving a weak ulcer of the size of a man's hand. On June 17th, four grafts were applied. The ulcer was healed on July 13th.

CASE II.—Robina R., aged 19, was admitted on August 21st, 1872, suffering from a large ulcer extending from the knee to the ankle. She was very weak and anæmic, and the ulcers were very foetid. Charcoal poultices were applied for a few days, after which gauze dressing was applied. Grafts were applied on September 27th. The ulcer was healed on November 7th.

CASE III.—Frances P., aged 37, was admitted on January 11th, 1873, with ulcers on both legs. The ulcer on the left leg measured four by four inches, that on the right was about half as large. Solution of chloride of zinc (forty grains to an ounce) was applied, and then antiseptic dressing. Grafts were applied to the ulcer on the left leg on January 23rd. She was discharged cured on February 6th. The ulcer which was grafted, although twice the size of the other, was healed first.

CASE IV.—John B., aged 61, was admitted on January 16th, 1873, with a callous ulcer, measuring seven by four inches, on his left foot and ankle. He had suffered from this ulcer for fourteen years. A blister was applied to the edges, and the sore was afterwards dressed antiseptically. Grafts were applied on February 14th. The grafts did not take root from the unhealthy condition of the granulations. Grafts were again applied on March 14th. The ulcer healed rapidly, cicatrising from the grafts, and was healed on April 25th.

SELECTIONS FROM JOURNALS.

SURGERY.

PNEUMATIC ASPIRATION IN HYDRARTHROSIS OF THE KNEE-JOINT.

—Dr. Rasmussen, of Copenhagen (*Irish Hospital Gazette*, June 16th), describes seven cases in which he practised aspiration in eight knee-joints, of which three were punctured twice. In none of these cases did the slightest trace of inflammatory reaction show itself after the operation. Even in the cases where there had been severe pains and considerable tenderness of the joint, it was quite free from pain a few days after the operation, so that the treatment by *massage* could be employed for the removal of the remainder of the effusion. He considers that aspiration in arthritis of the knee is an useful remedy, both in the chronic form of this affection, which will not yield to any other treatment, and in the acute form, which causes severe pain, owing to the distention of the capsule of the joint. Dr. Dieulafoy, the author of the method, has already recorded eight successful cases. The following is Dr. Rasmussen's operation procedure. Broad strips of adhesive plaster, clipped at the ends, are applied above and below the joint, and are then gradually tightened according as the evacuation of the fluid by suction, which takes place very slowly, proceeds. By the continued application of the adhesive plaster the fluid is forced downwards towards the cannula. This should, as a rule, have a diameter of from .06 to .08 inch, so that the viscid portion of the fluid can at least pass through it. At first, Dr. Rasmussen used to make the puncture through the extensor muscles, in the highest pouch of the capsule, for fear the fluid should continue to ooze through the comparatively large opening, if the latter were at a low level. This proved subsequently, however, to be both unnecessary and inexpedient, for by this plan the fluid could with difficulty be all drawn off. The puncture is now made in an upward direction, at the external edge of the patella. When all the fluid has been removed, the opening is closed with a little English charpie, dipped in styptic colloid; the last strip of plaster is applied in the centre, and thus at the

end of the operation compression is effected in such a way that the joint can at once obtain the necessary absolute rest. The more completely to secure this, the leg is bandaged, and an ice-bladder is applied to the knee-joint, although this is perhaps quite superfluous. The chief thing is certainly an even firm compress of adhesive plaster, and absolute rest. Occasionally slight cedema of the foot and ankle appears, but this quickly vanishes on clipping, and so loosening, the strips of adhesive plaster. After the lapse of three or four days, the bandage may be removed, and the joint is then quite free from pain; the effusion has either completely disappeared, or has recurred; as a rule, however, to a far less extent than before the operation. In employing the aspirator, especially at an hospital, it is most essential that the instrument should be subjected to the most careful and thorough disinfection before it is used. As a matter of course, no one would dream of puncturing a knee-joint in a ward wherein pyæmia or erysipelas happened to be prevalent, or even in the immediate vicinity of large suppurating wounds or surfaces.

PARACENTESIS THORACIS.—A valuable letter addressed to Dr. Clifford Allbutt by Dr. Bowditch of Boston, on Paracentesis Thoracis, has been published by the *Practitioner* for April 1873. Dr. Bowditch has employed the pneumatic aspirator on two hundred and seventy occasions during the last twenty years without injury ensuing. He admits some grave accidents, such as tapping the lung, driving air into the pleura by a careless turn of the handle, etc. The following are some of his conclusions. 1. He uses a very fine trocar, and thrusts it in fearlessly and quickly, so as to avoid carrying in pleural false membrane. He selects a point in the back on a line with the angle of the scapula, and between the eighth and ninth or ninth and tenth ribs, and at least an inch and a half above a horizontal line drawn through the lowest point at which the respiratory murmur is heard in the opposite lung. 2. No complication whatever prevents his operating if he find a large effusion or any effusion that he thinks may be adding to the distress of the patient already very ill. 3. Age, sex, and pregnancy are of no importance in a severe case. He has tapped a pregnant woman four times before and five times after delivery. His criteria are: Is the dyspnoea severe enough? Has it occurred, even once, so as to threaten life even momentarily? Has sufficient time elapsed for remedies to have effect without result? 4. If there have been temporary orthopnoea, or if dyspnoea is present, he operates instantly, however serious and complicated the other signs may be. If the illness be recent, the effusion small, the dyspnoea but slight—if remedies seem to be having a beneficial effect, he waits sometimes three or four weeks. He adds: "I think we may operate in any case where the quantity of fluid is obviously so large as to seriously obstruct the greater part of a lung, as when the level rises to the middle of the back, and, in so doing, oppresses the respiratory murmur in the entire organ." Any valvular opening he considers as worse than useless, as absolutely bad. "It is wholly uncalled for with the aspirator cannula." It also clogs the exit of pus, should the fluid be of that character. When ought a permanent opening to be made? This is often very difficult. He inclines to it in a young or middle-aged subject, generally healthy, who has been ill but a short time. Pus must have been drawn at least once. This pus must show a tendency to reaccumulate rapidly. In elderly people and in those with signs of phthisis, he prefers repeated tapplings with the aspirator; still, even this he regards as open to discussion. So long as serum flows from the aspirator, he thinks a permanent opening is not justified. Blood always contraindicates it. Blood at the first tapping has generally indicated malignant disease. In making a permanent opening, a very free incision is preferred to the use of any tube or trocar whatever, however large. That incision, it is recommended, should be low in the back, instead of in front, as is usual. Free washings with warm or carbolic water are also advocated.

PUBLIC BATHS FOR DUBLIN.—Owing to the introduction of the Varrity water into Dublin, the city basins, which formerly acted as reservoirs, are now useless, and it has been proposed that they should be converted into public bathing places for the poorer classes, where for a nominal sum sufficient to cover the cost of management, a bath could be obtained, and where instruction in the art of swimming could be procured. That the object is a most desirable one as regards health, is unquestionable; and the old adage, that "cleanliness is next to godliness," has undoubtedly a large amount of truth in it. The Corporation, however, have the ownership of these basins; and, unless the sites are purchased by the citizens, we can see no chance of success for the undertaking in question, which has been referred by that body to the Waterworks Committee for their opinion.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 26TH, 1873.

THE BRANCH MEETINGS AND THE ANNUAL MEETING.

THE annual general meeting of the Association, which closes the history of one year of its progress, and turns the leaf of a new page, is always marked by the records of the successive annual meetings of its various Branches, each of which has its own local autonomous existence, its own form of activity, its individual life, and its own annals; so that, as our pages to-day bear witness, through the agency of the Branches, the Association has an active decentralised series of forces, which exercise a vital influence, each in its own locality. By a happy elasticity, each Branch, while it receives and imparts additional power through its representative relation to the whole Association, maintains an existence fully individualised, and developing itself freely according to the exigencies and characters of the locality. In some districts, as in the south-eastern counties, where a Branch occupies a country marked by many scattered centres of population, it subdivides itself into a well conceived series of districts or subbranches, each with its own officers, and bearing a somewhat similar relation to the Branch to that which the Branch bears to the Association. These district organisations hold stated meetings, and provide for the scientific and social activity of all the villages and towns of the south-eastern counties. In other large seats of population, such as Birmingham, the Branch affords not only an academic shelter for the medical activity of the town, but, dividing itself into pathological and microscopical branches, it awakens and assists the development of the whole scientific progress of the medical community, and furnishes the chief exposition of the social, scientific, and political growth of the profession there. These two typical Branches, indeed, show the fullest development of varieties of Branch management. Between these and besides these, are many differentiated types. In London, where scientific societies are numerous and powerful, the Branch assumes a chiefly political and social character. It studies questions of state medicine and of legislative action; it watches the course of parliamentary events, the lines of development of public policy in respect to the public services, to hospital management, to vaccination, the army and navy, and the Poor-law. In other localities, the times and places of meeting and the nature of business vary greatly, according to the character of other existing organisations and the local exigencies of the profession. This gives to the Branches and to the whole Association a real and vital strength; and, although the annual meetings, which occur simultaneously, have all a certain community of form which imparts to their records an element of sameness, they have yet a healthful and interesting individuality, if examined as they now appear side by side. Not to delay the publication of the proceedings, and in order to present a complete picture of progress, a very large part of our space is devoted at this season to the report of these annual proceedings, which form an interesting and important prelude to the annual general meeting. The President's addresses, naturally and wisely, for the most part assume the character of local reviews, and are not intended for circulation throughout the profession otherwise than in abstract; but, as in all societies, some of them enter freely into other subjects, and either discuss from a new point of view questions of imperial interest, or assume

the form of special dissertations. Twenty-one annual addresses, as a preface to half a dozen others by selected eminent hands addressed to the whole Association, would be something of a surfeit in orations; but we are always able to furnish at this season some abstracts and selections of local addresses which aim at forming, and do form, a valuable contribution to the permanent literary records of the Association and the profession. We have already published some interesting communications of this kind this year. We publish to-day one from the pen of Dr. Quain, of which we should be at liberty to speak more freely, did it not refer flatteringly to ourselves, but of which the value is sufficiently apparent, both in historical retrospect and characteristically sagacious and suggestive prospect. Others will also appear.

The address of Dr. Harder bears testimony to the vigour and prosperity of one of our very youngest branches; and the report of the Aberdeen branch shows how kindly the autonomous, self-reliant, and unfettered organisation of branches flourishes on Scottish soil when once it plants itself spontaneously, as it has done there. In Ireland, where we have many valued members, whom we hope to welcome at the annual meeting, the bond is one of general association; and in both countries there is reason to hope that the facility which our rules afford for association on the footing of the most complete freedom and fraternal equality will assist to bring the whole profession more and more largely each year into community of feeling and action throughout the three kingdoms. To this end, such meetings as that which is about to be held in London will, it may be hoped, contribute. The meeting is now close at hand, and the arrangements are nearly completed. No doubt it will be very numerous attended; and, in order to be able to arrange for the comfortable reception of all in the scientific meetings and evening receptions, it is very desirable that all who propose to attend, and who have not yet filled up and forwarded the notice to be found at the end of last week's JOURNAL, should do so without delay. We have already stated that evening receptions will be given by the Lord Mayor at the Mansion House, by the College of Surgeons, and by the Council and Medical Faculty of University College. The entertainment of the Lord Mayor will take the form of a concert and artistic *conversazione*. Each member of the Association attending the meeting is invited, and with him a lady. The extensive preparations necessary for receiving adequately so large a body of guests—one of the largest ever received at the Mansion House—will prevent the possibility of any supplemental complimentary reception of some of the heads of the Association, such as was at first spoken of. The professors of University College also invite our members to bring with them each a lady, if such be their pleasure. The business and pleasure arrangements will be found detailed in the programme in our pages to-day, and more fully in that which will be placed in each member's hand on his arrival at the reception-room in King's College. The authorities at the National Gallery have kindly intimated that the national galleries will be open to our members on the days on which they are ordinarily closed to members. The British Museum will also accord a similar extension of privileges in respect to its choicest and rarely shown treasures. The Archbishop of Canterbury opens Lambeth Palace and its rare library. General Adye throws open the public factories and Arsenal of Woolwich, and will provide guides for previously arranged parties. The Duke of Sutherland opens the galleries of Stafford House; and the Marquis of Westminster those of Grosvenor House. The Botanical Society opens its Gardens. The Royal Medical and Chirurgical Society, the Obstetrical Society of London, and the Medical Society of London, throw open their libraries and the use of their reading-rooms to our associates attending the meeting; and a writing- and newspaper-room will be provided in King's College. Special arrangements will be made for showing the members over the leading hospitals at convenient hours. The Benchers of Lincoln's Inn have very kindly granted the use of their hall for the dinner of the Association.

Unfortunately, the necessity of postponing these meetings till a date which will allow the lecturers in universities and provincial schools to

attend it, takes them beyond the period at which the London season, and some of its most characteristic sights and amusements, close. But London is never altogether empty, and rarely altogether uninteresting. The business of the sections is arranged to close soon after three o'clock, P.M., each day, so as to allow some amount of sight seeing without interfering with the business. The material provided for discussion in the sections is so ample and of so high a quality, that it may be hoped that no allurements of pleasure will tempt members to desert the sections till the hour for closing them has arrived.

The latter part of Friday and the whole of Saturday are devoted to pleasure. Besides the sights of London, on Saturday excursions are organised to Brighton, including a visit to the aquarium, which will be thoroughly explored under experienced and friendly guidance, and other lions of London by the Sea; a visit to Windsor Castle, where, by the gracious command of Her Majesty, most interesting parts of the Castle, not usually shown to visitors, will be open to visit; thence to the scenery of the Thames at Maidenhead, and the grounds of Cliefden, which, by the permission of the Marquis of Westminster, will be open to the members on that day. Arrangements will be made at Woolwich Arsenal to receive a party, and show some interesting operations, as far as can be done on a half-holiday. Others may be tempted by the galleries and gardens of Hampton Palace, the beauties of Bushey Park, and the hospitality of Dr. Langdon Down. On the whole, the programme seems to be varied and well filled; and although some difficulty may be found in fitting in smoothly all the parts of so extensive and temporary machinery as this large meeting will necessitate, pains will, we feel sure, not be spared by the hosts, nor will a good tempered allowance for any accidental or involuntary shortcomings be wanting on the part of the guests.

THE LONDON COLLEGE OF PHYSICIANS.

WE return to the subject broached in our pages a fortnight since, believing that recent communications and discussions indicate the desirability of some further words of frank explanation and amicable comment. Little more need be said as to the unfortunate and long persisting misunderstanding which arose out of what has been explained to be a postal miscarriage. The original delay in arranging a reply to the letter of the Reception Committee, arose from the fact that that letter intimated only an intention to invite the Association to meet in London, and that the meeting would take place at the end of July or in the beginning of August. It was thought better to postpone the reply until it was definitely fixed that the Association would meet in London, and until the date of the meeting was settled. When it was announced in the JOURNAL that the College of Surgeons had replied to the communication, but that the College of Physicians had not, the president of the latter College immediately read over the original letter from the local secretaries of the Reception Committee, and settled with the registrar of the College the terms of a courteous and friendly reply.* That reply, most unfortunately, did not reach its destination. Most unfortunately, also, no verbal communications passed on either side; and a variety of minor circumstances led persons, least likely to err in the matter, to the belief that the silence was intentional, and thus that impression prevailed widely and without question. Hence arose a feeling of irritation which was based upon an accident, which we have reason to know that no one regrets more than the president of the College, who was, on the occasion of our former meeting in London, the president of the Association, and who spared no exertion to promote its welfare; thus arose, too, our comments, which were founded upon what appeared, at the time, to be accurate as they were official data, but which we are only too happy to recognise now as erroneous and unfounded, and for which we are only too happy to be able to express, in withdrawing them, our sincere regret. We are happy to know that the same kindly feelings exist now in the Col-

lege towards the Association as were manifested in 1862, and we feel sure that they are and will be reciprocated in our body.

We come now to another and wider question. Passing from the consideration of this merely temporary incident, we pointed out that the College of Physicians was at this period on the eve of entering, by means of the conjoint scheme of examination, upon a wider and more intimate relation with all branches of the profession than it has held in its past history. It is about to become a College, not only of Physicians—in the limited meaning which during this century had been implied by that term—but of medical practitioners of all classes. A probable result of this arrangement—an arrangement which alone in the medical press we have heartily advocated in its main features—will be, that the College will probably receive in future years, after the payment of all expenses of examination, an annual income from the examination of licentiates estimated at about £1,200. It has been imputed to us that, in stating the fact, we implied that the College was actuated by sordid motives and a sole or chief desire for gain. That thought has never been in our minds; we cannot find it expressed in any line of what was written; and we regret that it should have been possible for any one so to interpret what was written. We emphatically disavow any such opinion. We have, on the contrary, uniformly and repeatedly applauded the intelligence and public spirit which have guided the College of Physicians in forsaking the beaten path, in assuming its rightful place in the van of professional education, examination, and guidance, and in shaping a near approach to unification of the minimum test of professional education in this country. But such a plan, framed *in camera* and passed *in comitiis*, is thoroughly open to public criticism. It has never been held to be a discredit to any corporation, however learned and dignified—and in learning and dignity none surpass the London College of Physicians—that it derives a profit from its examinations and diplomas. We know of only one medical body which does not, which is the Apothecaries' Society of Ireland, which we believe gives, for reasons of its own, a well conducted examination and a diploma for the sum of half a guinea. The actual fee available for the College from each candidate will, indeed, under the new scheme, be £10, instead of £15 as at present; and its profit will be derived from the greater number of candidates and from the joint arrangements under the scheme for defraying the expenses of the conjoint board of examiners. There remains, however, we believe, the fact that the estimated income from the examination of licentiates is that which we have named. The criticism which we put forward upon these facts was, that it will, in our view, behove the College to recognise in all respects its enlarged relations to the whole body of practitioners, and to consider how its licentiates, as well as its other diplomates, may be treated as forming an integral part of its organisation, and how they may be brought into free, friendly, and binding relations with it, as occasions offer. Such an occasion seemed recently to offer, and to have been overlooked.

The accidental nature of the circumstances have been fully explained. Their peculiar character may be pleaded in excuse of any harshness of expression on our part. If that plea be insufficient, we are not only willing but anxious to supplement it by an expression of sincere regret, and of frank withdrawal of any obnoxious expressions. The principle which we have advocated, the course we have traced, and the objects we have defined, we believe to be identified with the highest interests of the profession and the College. We feel assured that they will find a wide sympathy in both, and that the result will be a marked increase in the influence of the College of Physicians, and an advantage to the profession from its closer relations with that body.

THE LOSS OF SPEECH.

IN discussions on cases of sleeplessness, enough prominence is not always given to certain differences which we shall call Clinical. Very properly, affections of speech are considered in their bearings on mental physiology. But from a want of clearness in defining accompanying symptoms and conditions, very different cases of affections of speech, and even cases of loss

* It was clearly an error of memory on the part of the Registrar when he wrote lately that the President stated to him at this time that the JOURNAL had said that "the College of Physicians had not deigned a reply;" for no such statement was made, no such language was used by us, and there existed in the President's mind none but the most friendly feeling on the subject.

of power to talk from palsy of the organs for the exteriorisation of speech, are sometimes called aphasic. The marked thing in several cases may be that the patients do not talk, whilst the real condition of each patient is very different. Without saying anything of memory, or will, of voluntary and automatic, we shall consider the more important clinical points in several kinds of cases. What we concern ourselves with now, in other words, is with symptoms bearing on prognosis and on the estimation of the results of treatment. We take as a starting point for our remarks, a case recently related by Mr. F. D. Finucane. Let us first say that this case is of very great interest, whatever interpretation may be put on the facts of it. Mr. Finucane has done good service in giving a brief—rather too brief—note of it. A lady, who could not utter “the slightest sound”, recovered completely in one night after the use of a stimulating anodyne liniment rubbed along the lumbar region. Apparently, recovery occurred during the application; for “I felt”, she said, “something ascend along my spine until it arrived opposite the stomach, where it halted for a second. I then felt it again ascend along the spine towards the back of the head, when suddenly I got the idea I could speak, and exclaimed, ‘How strange, I have recovered my voice’.” The author thinks recovery was the result of the medication. After quoting Carpenter, and reproducing his well known diagram to illustrate that physiologist’s views on reflex action, Mr. Finucane says:

We have, I think, an accurate drawing of the above table in the simple language used by the patient. Beginning with the impression produced by the liniment, we have a something ascend; in fact, a sensation along the spinal cord, and, although it halts for a second, it terminates in the idea of speech and intellectual operation in conversation. In the above case, the will could not accomplish the production of any sound until it was stimulated by the reception of a sensation conveyed to it by the cord; and I cannot do better than again quote from the same able authority, who says: “No definite tone can be produced by a voluntary effort unless that tone be present to the consciousness during an interval, however momentary, either as immediately produced by an act of sensation, recalled by an act of conception, or anticipated by an effort of the imagination. When thus present, the will can enable the muscles to assume the condition requisite to produce it, but under no other circumstances does this happen, unless the particular mode of discipline by which the congenitally deaf may be trained to speak.”

We would suggest that the facts admit a different interpretation. It is fair, however, to say that Mr. Finucane’s explanation is one which would, we believe, be accepted by some of our best authorities, although, perhaps, they would not commit themselves to so detailed an account of the explanation as Mr. Finucane courageously does. Mr. Durham (Holmes’s *Surgery*, vol. iv, p. 592) has related the case of a young lady, nineteen years of age, who, the first time for six months, spoke suddenly. Mr. Durham asked her to say “Oh”. “Pushing away my hand, she immediately and impatiently exclaimed, in fair natural voice, ‘How can I with that thing in my throat’. And then she added, ‘Oh dear! I have spoken’. It is almost needless to add that the cure was complete.” Before we pass on, we must remark that in both these cases the patients had not lost voice only; as they did not get out a word, the symptom of loss of speech was present too, or purported to be present.

It would be considered as begging the question, to assert that all the patients who recover so suddenly from entire inability to utter a sound, are hysterical, or that there is pretence. But there can be no kind of objection to stating the *clinical* differences betwixt cases such as those above described, and cases of loss of speech from *local* disease of the brain (aphasic cases). The differences are very marked, involve no theorising, and can be stated very succinctly. For convenience of distinction, the first class of patients shall be spoken of as those who *do not* speak, and the second as those who *cannot* speak.

1. The patient who cannot speak, can usually utter some one or two words, some phrase, or some jargon (his utterance is always the same). The exceptions to this rule are excessively rare in chronic cases. The patient who does not speak utters nothing at all.

2. The patient who cannot speak has no affection of *voice*; he can

usually shout, and may sing. The patient who does not speak, emits no sound at all, or only grunts (occasionally “is deaf”).

3. The patient who cannot speak, cannot write (*i. e.*, express himself in writing; he may copy writing; he may sign his name). The patient who does not speak, writes as well as ever.

4. The same is the case with reading.

5. The patient who cannot speak, has no obvious palsy of his articulatory organs (excluding, in hemiplegics, slight palsy of the face and tongue of one side, which can have nothing to do with *loss* of speech). The patient who does not speak, mostly does not put out his tongue when urged. However, we must say that this test by itself is only of value in chronic cases. A patient, aphasic from local brain-disease, may be long unable to put his tongue out when he tries.

6. The patient who cannot speak, is or has been hemiplegic. The patient who does not speak, has usually no paralysis, and is scarcely ever hemiplegic. If he be hemiplegic, the distribution of the palsy is anomalous.

Lastly, we have to mention that the cases of patients who *do not* talk differ from cases of loss of articulation (owing to disease of the medulla oblongata or lingual, etc., nerves). For the reason mentioned in the paragraph 5, the distinction is not easy without care. The patient who cannot talk because the articulatory muscles will not move, cannot swallow well. He can write well. The nature of the case may occasionally be guessed at a distance. The patient slavers and therefore carries his pocket-handkerchief in his hand; he often carries, too, a little slate at his button-hole. The “salivation” is due to the fact that he cannot swallow (*i. e.*, easily, frequently, and unconsciously) his saliva. The patient who *does not* talk, eats and swallows very well, and has no pseudo-salivation.

The patients of whom we have spoken as those who do not speak, belong neither to the class aphasia nor to the class of loss of articulation. They must be grouped separately. The patients are nearly always women; they often recover suddenly. We cannot suppose there to be any local central lesion. We commend the whole subject to the attention of clinical observers.

A FEMALE quack in Turin, named Rolfi, has been fined 300 *lire* (£12) for the illegal practice of medicine and sale of drugs.

THE Berlin papers announce the death, at the age of 75, of Gustav Rose, the distinguished mineralogist, director of the mineralogical cabinet in the University of Berlin.

THE great hospital of San Giovanni Battista in Turin being in financial difficulties, an appeal on its behalf was recently made in the Municipal Council of that city, by Signor Sclopis, one of the members. The Council unanimously agreed to grant aid to the hospital.

WE regret to learn that M. Littré, the great lexicographer and Academician, is very ill. He is suffering from a carbuncle on the chest; and, owing to his age, his medical attendants are naturally anxious as to the result.

A LETTER from Vienna states that the health of that city is now in a satisfactory state. From the 4th to the 9th instant the cases of summer-cholera amounted to 66, the population being 800,000. Since then the heat had diminished, and there had been a falling off in the number of cases. Meanwhile, every attention was being paid to the sanitary condition of the city.

DR. CURNOW, who has been elected to succeed the late Professor Partridge at King’s College as Professor of Anatomy, is one of the most distinguished pupils of the College and graduates of the University of London. His labours in scientific anatomy have already made him well known; and, in providing a suitable career for its distinguished young graduates, King’s College is reverting to a healthy tradition.

THE City Corporation, at a meeting of the Common Council held on the 24th instant, elected Mr. Harry Leach as Medical Officer of Health for the Port of London. This district comprises more than sixty miles of waterway, as well as all docks, creeks, and channels abutting on the Thames between Teddington Lock and the Nore.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

IMPORTANT changes have been effected in this school to meet the present requirements for clinical and scientific training. The comfort and convenience of the students are being increased by alterations in connection with the dissecting-room. Dr. Basham and Mr. Holthouse have been appointed special Lecturers on Clinical Medicine and Surgery, Mr. Pearse and Mr. Cowell have been elected to the chairs of Surgery and Practical Surgery, and Mr. Davy has succeeded to that of Anatomy. Amongst other changes, Dr. Potter takes charge of the class of Forensic Medicine and Hygiene, Dr. Dupré lectures on Toxicology, and Dr. Allchin will teach Pathology and Morbid Anatomy, as well as Practical Physiology and Histology. In addition to the present special courses, Mr. Bond has been appointed to deliver a course of lectures on Diseases of the Skin. Two entrance scholarships and an additional exhibition have been founded, and a few of the clerkships and dresserships have, on certain conditions, been thrown open to students of other hospitals. Mr. Cowell is the new Dean of the School, and will deliver the Introductory Lecture on October 1st.

MEDICAL PROGRESS.

THE *Philadelphia Medical and Surgical Reporter* announces another medical college in Philadelphia—the Medical Department of Lincoln University. This institution, located at Oxford, Chester County, in this State, was established some years ago, and is rapidly growing in importance. It is intended especially to meet the educational wants of the Negro, Mongolian, and Indian races.

METROPOLITAN HOSPITAL SUNDAY.

THE daily papers give the results of the distribution of the metropolitan Hospital Sunday collections. Only £1000 pounds are awarded to dispensaries. We applaud the wisdom of a resolution which is evidently intended to control the abuse of out-patient charities. A wrangle arose on this subject between two medical men who have found their way on to that committee, and who had better have washed their dirty linen in the columns of their own medical journal. But we believe that the resolution of the Committee to aim a blow at the out-patient sham is an admirable and useful resolve, and one which will be generally approved. The details of distribution are so widely published, that we need not here reproduce them.

DR. TRACY OF MELBOURNE.

The *Australian Melbourne Journal* contains an interesting account of a meeting of the profession in Victoria to take farewell of Dr. Tracy of Melbourne, on the occasion of a "twelve months' visit to the home country." Prior to leaving, Dr. Tracy seems to have been loaded with marks of esteem and regard. Besides receiving complimentary addresses, dinners, resolutions from various quarters, he was presented with £600 to be expended in plate, and with other substantial testimonials. At the farewell dinner of the Medical Society, it was mentioned that Dr. Tracy was the first to perform ovariectomy in Melbourne, and has now performed the operation in twenty-two cases with only four deaths. Dr. Tracy will be among the visitors at the forthcoming meeting of the Association in London.

CANCER-CURES.

OUR contemporary the *Mirror* is indignant with us for having called attention to the cures performed at the Cancer Hospital, and would wish to make it appear as though the cured cases named in the Report were not cancers at all. That this was not the impression of the governors to whom the Report of the Hospital was read, is clear from the observations made by the Chairman, who desired that the Report might be widely circulated, so that the public might know what great

things were done. Why so, if nothing more were effected by the surgeons of the Cancer Hospital than by any other? But what means this in connexion with the asserted cures: "The possibility of arresting cancer for a great number of years, and in some instances curing it, by a combination of local and constitutional remedies, we believe to be fully established". What means this? "Were it permitted us to mention particular cases, we might give very many most gratifying instances of arrest, and even cure, of this malady". Our remarks have had the effect of eliciting a manly straightforward letter from Mr. Foster, which will be remembered to his credit, and a more tortuous disclaimer of any special means of curing cancer from Mr. Marsden and the *Mirror*. We may, in reply to Mr. Marsden, state that we have quoted the words of the Report of 1871 correctly, and have not substituted "cured" for "relieved". The *Mirror* tells us that the same form of report has been presented for many years. If future reports be less misleading, we shall be satisfied that we have done service to the profession and the public by bringing the subject before them.

REMOVAL OF TONGUE AND LOWER JAW.

WE read in the *Canada Lancet* of July that the old man on whom Dr. Hingston of Montreal performed this formidable operation in autumn last, for malignant disease involving both structures, is in perfect health, eats and drinks with ease, and articulates so as to be understood. The operation, so far, is unique.

CHOLERA ALARMS.

THE unfortunate gentleman who hastily announced this week the advent of Asiatic cholera in Limehouse, must have more than sufficient reason to regret his imprudence, and we do not wish to add by reproaches to his pains of memory; but, as this is not a solitary false alarm of the kind, and as the cry of "wolf" may be raised so heedlessly and so often as to cease to have effect, it may be well to remind all gentlemen that first cases of Asiatic cholera are of the highest scientific and national importance; that it is upon them that the greatest efforts of preventive and state medicine must be concentrated, in order to trace their origin, and to prevent their extension; and that there exists in Parliament Street an organisation of skilled inspectors administered by Mr. John Simon, among whom are persons specially skilled in the history, diagnosis, and mode of dealing with cholera and other zymotic outbreaks. The tidings of a first Asiatic cholera case—so believed—should therefore, in the first instance, be immediately communicated to the Medical Department of the Local Government Board in Parliament Street, when it would be promptly investigated, and its scientific character and public significance would be established without delay and without false alarms.

DR. LOCHÉE.

THE *Kentish Observer* of July 17th, mentions that one of the most pleasing incidents at the late commemoration at St. Augustine's was the presentation to the College of a portrait of Dr. A. Lochée, who has for more than twenty years acted as medical lecturer. In the earliest days of the College an offer was made by him of his services, which were most gladly accepted. From that time to the present he has had a medical class, consisting of the students in their last year of residence. It was thought that the twenty-fifth anniversary of the opening of the College was a suitable time for expressing the gratitude felt for his gratuitous and unweary services; and his old pupils, who are scattered over the world, warmly united in placing within the College walls a lasting record of his labours in the form of his portrait. The execution of this was entrusted to Mr. E. U. Eddis, who has produced a successful likeness. It hangs in the new reading-room, where it was exhibited for the first time on St. Peter's Day. After a few words from the Warden, the Rev. J. Stephenson presented it to the College in the name of the old students. He expressed, in a hearty manner, the feelings entertained by his brethren towards Dr. Lochée, to which that gentleman feelingly replied.

FOUNDER'S DAY AT EPSOM COLLEGE.

THIS anniversary this year has a very melancholy interest in connection with the visit of the late Bishop of Winchester, who, it is believed, performed his last public religious ceremonial in the chapel, confirming upwards of thirty-eight of the boys, in addition to presiding during the speeches and presentation of the prizes by the head master, the Rev. Dr. West, D.D. The Council of the College were represented by Drs. Jonson, Carr, and Hogg; and Messrs. F. Hird and Bransby Powys. The general company included the Rev. Dr. Hessey, Professor Key, Dr. Webster of Dulwich, Dr. Price of Deptford, and a large gathering of ladies, among whom were two daughters of the founder, the Misses Probert. The Carmen Gratulatorium Latinum was well pronounced, in the new style, by Mr. Bannister, the Senior Prefect, and contained many brilliant passages; the Greek of Messrs. Sloman, Growse, and Cutfield was warmly applauded; the elocution, both in Latin and English, of Mr. Noble, deservedly commended; and the recitation and acting of a piece from Shakespeare by a whole troupe, evidenced good training. The modern languages were excluded in consequence of want of time, although we know that they form an important part of the College course. All the friends of the College may feel assured that its work is being well done; and that the addition of the Erasmus Wilson House, which is almost complete, will prove of great value in extending the growing utility of Epsom College.

THE CHOLERA IN EUROPE.

DURING the week from July 10th to 17th, 191 new cases of cholera occurred in Vienna, making, with 248 remaining from the previous week, a total of 439, of whom 100 died. The greatest daily number of cases (46) occurred on the 15th; it then fell to 31 on the 16th, and to 15 on the next day. In one of the garrison hospitals, from July 4th to 19th, there were 11 cases of true cholera with 4 deaths; in the other, 65 cases with 19 deaths.—A case of Asiatic cholera was reported in Berlin on July 16th.—In Breslau, from July 12th to 15th, there were 6 new cases, and 4 deaths; 9 persons remained under treatment.—In Ratibor, up to July 14th, there were 29 cases, of whom 6 died and 17 recovered.—In Warsaw, the disease is reported to be daily spreading and become more severe. The number of new cases *per diem* varies from 20 to 25.—According to the latest official returns, 247 cases of cholera had occurred in the districts of Dresden and Döhlen in Saxony up to July 14th; of these, 86, or nearly 35 per cent., had died. Dr. Lehmann reports that the first three cases which occurred in the neighbourhood of Dresden occurred on board a Magdeburg steamer arriving from Bohemia, where cholera was present; and he attributes the disease in these cases to drinking the water of the Elbe, which contained cholera germs. One of the three patients went to his home in Gorbitz, and from him the disease spread to his family, and afterwards to the inhabitants of that and several other parishes. The other two were taken into the Dresden hospital; and the woman who washed their linen took the disease.

LAW AND NATURE.

MR. JUSTICE QUAIN has been complaining, not without reason, of the oppressive heat in one of the courts at Guildhall in which he has had the misfortune to preside during the past week. Dr. Kenealy has been allowed to address the judges in the Tichborne case without a wig. Why should not the judges follow his example? No small part of the summer sufferings of the Bench and Bar are due to that curious and senseless appendage with which they still consent to burden themselves—the forensic wig. It would appear that the wearing of wigs by people of fashion set in early in the seventeenth century, and lasted till the end of the last century, when it was superseded by the queue with hair-powder. Both fashions have long since passed away so far as the general public is concerned, but the first has been retained with tenacity by the Bench and the Bar; and the latter by the coachmen and footmen of the upper ten thousand. Experience shows how little hopeful it is to attempt to overthrow a long-rooted fashion; and we can hardly

expect to procure the abolition of this one; but we suggest to the learned judges, for their own health's sake, that they should lay their wigs before them, or beside them, or even behind them, and not defy nature, at least during the dog-days. Speaking artistically, a judge's wig is perhaps about as great a monstrosity as could be conceived. What would an artist think if he had to portray Moses, Solomon, or any other law-giver in a wig of the pure Westminster Hall cut, and with or without a flowing beard? He would surely abandon the effort in despair; but our judges and barristers have more courage; they try to counterbalance one monstrosity by another; they cut off the flowing beard at the bottom of the face, and improve nature by sticking a wig at the top of it. Fashion is proverbially a tyrannical power; and, in respect to forensic wigs, those who submit to it, although they are men, show themselves to be as powerless to withstand it as women.

MEDICAL TREATMENT OF SAILORS.

A CORRESPONDENT writes *à propos* of what we last week published under this head. A case came under my notice some few years ago which illustrates the danger of permitting those who have a very limited knowledge of the doses and actions of drugs to prescribe for patients suffering from diseases often difficult of diagnosis. A vessel entered a foreign port in which I was residing at the time, having on board a seaman suffering from the effects of violent salivation induced by the too liberal use of blue pill during the voyage. The captain being under the impression that the sailor's illness was due to syphilis, immediately commenced mercurial treatment. When the symptoms of ptyalism made their appearance, he only considered them to be additional proof of the nature of the disease, and as demonstrating the correctness of his diagnosis. In fact, as the symptoms increased in severity, so the call for the more active administration of mercury seemed to the captain's mind imperative. Luckily for the patient, the ship arrived in harbour, and under proper medical treatment the man eventually recovered; but it was months before he could again follow his occupation.

THE REPRESSIVE TREATMENT OF SYPHILIS.

THERE are many devices adopted by municipalities for the control and diminution of syphilitic diseases. Registration, licensing, inspection, have been each and all tried, with varied results. It is whispered (says the *Richmond and Louisville Medical Journal*) that in Louisville a new and altogether original plan is to be adopted. This consists in practically regarding syphilis as an eruptive disease, and sending all syphilitics to the Eruptive Hospital, where, with the patients suffering from variola, varioloid, etc., they may not only be subjected to medical treatment, and consequently take the chances of life and death, but, by the operation of this novel penal code (far more ingenious and terrible than that of Draco), they may be induced to abandon the error of their ways. The staff of the Eruptive Hospital are thus made queer, if not fit missionaries, to convert the wicked from their iniquities; and the Eruptive Hospital, like Luther, becomes thus an eloquent agent in the cause of reformation.

"MEDICAL NOTES AND QUERIES."

OUR attention has been called by more than one correspondent to a popular publication called *Medical Notes and Queries*, and especially to "Correspondence and Replies." It purports to be "a household and professional journal of intercommunication on all the ills that flesh is heir to." The number before us at this moment is that for Saturday last. It contains, among other articles, one by a gentleman who has attained an unhappy notoriety as a medical adviser, Mr. Harry Lobb, "On Electricity as a Remedial Agent"; and that gentleman's well-known advertisement on hypogastria, loss of nervous and physical powers, appears as an advertisement on the back page. Other articles are on the diseases of children, the ear and its treatment, the air we breathe; with leaders on "The Dignity of the Profession," "The Macclesfield County Asylum," and other subjects. Part of its contents are of an unobjectionable and even useful character, very popular expositions of hygiene and sanitary matters. Other parts are highly

objectionable, and most objectionable is the column of Notes and Queries. How dangerous and objectionable these columns are may be gathered from the first two, which are printed. "S. C.—Use a large-sized elastic bougie greased with lard for half-an-hour daily, only passing it just beyond the painful spot." "F. F.—Is the painful lump in the bone, or in the fleshy calf of your leg? Let us know, and we may perhaps be able to advise you for your benefit". It is unnecessary to say to our readers how much danger and mischief there is in this the worst conceivable form of indiscriminate medical advice; where the social and scientific dangers of "advice gratis" are indefinitely multiplied. It is not we think, likely that any physician connected with the London College would thus transgress their rules and the rules of wisdom and propriety. The anonymous character of the proceeding adds to its danger; and it calls for general and unqualified reprobation.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE following is the list of names of members nominated by the Council and proposed to the College for election to the Fellowship: William Wilson, M.D., Florence; Henry Moon, M.D., Brighton; Francis Cornelius Webb, M.D., Woburn Place; Alfred Hall, M.D., Brighton; Sigismund Sutro, M.D., Finsbury Square; John Cameron, M.D., Liverpool; Sir Joseph R. L. Dickson, M.D., Teheran; Robert Elliot M.D., Carlisle; Charles Coates, M.D., Bath; Alfred Meadows, M.D., George Street, Hanover Square; Thomas B. Christie, M.D., Royal India Asylum, Ealing; Alfred B. Duffin, M.D., Devonshire Street; Christopher M. Durrant, M.D., Ipswich; William W. Williams, M.D., Cheltenham; John Beddoe, M.D., Clifton; William C. B. Eatwell, M.D., Oriental Club; Peter Eade, M.D., Norwich; George H. Philipson, M.D., Newcastle-on-Tyne; Balthazar W. Foster, M.D., Birmingham; Thomas T. Whipham, M.B., Green Street; Thomas Buzzard, M.D., Grosvenor Street; R. Douglas Powell, M.D., Henrietta Street; J. F. Payne, M.B., Savile Row.

MEETING OF POOR-LAW MEDICAL OFFICERS OF ENGLAND AND WALES.

It is proposed to hold a meeting of Poor-law medical officers of England and Wales on Thursday, August 7th, at 3.30 P.M., in one of the lecture-rooms of King's College, in connexion with the approaching annual meeting of the British Medical Association, under the auspices of the Poor-law Medical Officers' Association, and under the presidency of Dr. Lush, M.P., President of that Association. The attendance of Poor-law medical officers is invited, to discuss the objects at which the Association should aim, and the best mode of furthering the same in the next Parliament.

TYPHUS FEVER IN LONDON.

AN increase of typhus fever was reported to the Metropolitan Asylums Board at their meeting on Saturday, under Dr. Brewer, M.P., and Mr. J. A. Shaw Stewart. The Chairman of the Stockwell Asylums Committee stated that the increase was from St. Olave's Union, the fever cases from there being greater in number than from any other locality south of the Thames. On the motion of Mr. Stewart, it was resolved to call the attention of the sanitary authorities of the Union in question to this most serious matter. Mr. Stewart said that, in the whole, 20 cases of fever had been admitted during the fortnight, 6 had died, 22 had been discharged, and there were 13 still under treatment.

THE CONJOINT SCHEME.

THE Bill to enable the University of London to take part in the proposed conjoint examinations for England has passed the Commons, and is passing rapidly through the Lords. It contains, however, a remarkable clause, which seems to have escaped the attention of the University, and must have been the work of the government draftsman. It gives power to the Home Secretary at any time to withdraw the University from participation in the scheme on his own motion, and without the assent of the University. This is a very unusual provision.

THE WEATHER.

SEVERAL cases of sunstroke are reported as the effect of the recent excessive heat; and from some parts of the country violent thunderstorms are spoken of as having helped to clear the atmosphere. One or two of these electric tempests were fatal to human life; and in particular, at Bolton, a party of children were struck, and two of them killed.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN. THE directors of the Society held their usual quarterly court on July 9th. The chair was taken by the President, Dr. Burrows. A legacy of £1,000 from Miss Brackenbury was announced. There were two fresh applications from widows for assistance. Fifty-six widows and twenty-eight children applied for a continuation of their grants; and a sum of £1,260:10 was voted, to be distributed according to the wants of the applicants. The expenses of the quarter amounted to £61:12:3. The meeting heard with regret of the death of the late Treasurer, Dr. Hamilton Roe, and directed a letter of condolence to be written to Mrs. Roe. It was resolved that Dr. Quain should be recommended for election as Treasurer at the next general meeting.

SIR WILLIAM FERGUSSON, BART.

WE last week noticed that it is proposed to have a portrait painted of Sir William Fergusson, and placed in the Royal College of Surgeons. A Committee which has been formed for the purpose includes the Duke of Beaufort, Sir Charles Locock, Bart., Dr. Burrows (President of the Royal College of Physicians), Mr. Curling (President of the Royal College of Surgeons), Dr. Gream, Sir William Jenner, Bart., Sir H. Thompson, Sir William Gull, Bart., Sir T. G. Logan, K.C.B., Sir A. Armstrong, K.C.B., Sir Ranald Martin, K.C.B., Sir Robert Christison, Bart., Dr. Farre, Dr. C. J. B. Williams, Mr. W. H. Smith, M.P., and Mr. Henry Hancock.

IRELAND.

PRESENTATION TO DR. O'KEEFFE.

A VERY flattering mark of the respect in which Dr. P. O'Keeffe is held by the people of Cannaway, among whom he performed his arduous duties as a painstaking and attentive public servant for several years, has been bestowed upon that gentleman; a number of his friends having presented him with an address and a purse containing one hundred and ten sovereigns. About thirty gentlemen sat down to a *déjeuner* on the occasion, and the proceedings were marked by the warmest wishes on the part of all present for the success of Dr. O'Keeffe in his new sphere of duty as medical superintendent of Spike Island.

DUBLIN MAIN DRAINAGE.

THE Dublin drainage scheme has at present been upset. Mr. Bazalgette, the eminent engineer, estimated the cost of draining the city by means of intercepting sewers at about £400,000; but the lowest tender by any contractor came to over £700,000. This enormous cost the Corporation are totally unprepared to grapple with, and therefore the scheme must necessarily be abandoned. The plan suggested in a late number of the JOURNAL seems a desirable one—viz., by using flood-gates at various distances in the Liffey, thereby causing a certain amount of water always to be present in the river, and thus preventing any effluvia from the decomposing filth and sewers which pour their contents into the river. The cost of constructing these flood-gates would be very trifling; the result in a sanitary point of view would be incalculable.

HEALTH OF DUBLIN.

THE Registrar-General for Ireland's report for the quarter ending June last shows that during that period there were 2,372 births, and 1,941 deaths registered in Dublin. The death-rate was equivalent to 25 in every 1,000 of the population, a rather high mortality. The following were some of the principal causes of death:—76 were ascribed to fever; whooping-cough was very fatal, causing 81 deaths; scarlatina, 23 deaths; measles, 10; diphtheria, 8; and croup, 22; convulsions, as usual, produced a high mortality, causing 127 deaths; consumption, 289; and bronchitis, 255; 99 were ascribed to heart-disease; and 41 to liver affections; whilst 35 were referred to paralysis; 34 to apoplexy; and 10 to epilepsy.

INTENDED CONFERENCES DURING THE LONDON MEETING.

THE ensuing meeting in London is likely to develop into practical effect the suggestions we have made, to avail ourselves of these great professional gatherings for the purpose of holding conferences among members of the public services with the view of discussing and bringing under professional notice and under the notice of the Association circumstances connected with those services. Thus the officers of the Poor-law medical service will hold a conference during the meeting, under the presidency of Dr. Lush, M.P. The suggestion which we last week discussed for holding a conference of medical officers of health has been so generally approved, that steps are in progress to give effect to it. Similar facilities will be offered to the militia surgeons; and those who desire to confer upon the present conditions of the service, by meeting during the first week in August, will have the opportunity of doing so, in a room set apart for them, and at a convenient hour, which has yet to be arranged. We hope that there will be a good attendance of militia surgeons on the occasion. Finally, Fellows of the College of Surgeons of England will, on the proposition of Mr. Bartleet of Birmingham, meet to consider the propriety of somewhat increasing the representation of country fellows in the Council of the College, and perhaps also the question of permitting vote by proxy.

ACTION ARISING OUT OF A DEATH FROM CHLOROFORM.

WICKLOW ASSIZES.—Tuesday, July 22.

(Before Mr. Justice O'Brien and a Special Jury.)

JOHANNA LAMB v. JOHN BARTON AND EDWARD H. BENNETT.

This action, by Johanna Lamb, widow of Joseph Lamb, against Dr. Barton and Dr. Bennett, surgeon of Sir Patrick Dun's Hospital in Dublin, for the death of her husband, by reason of their alleged negligence in administering chloroform to him on February 12, came on for trial on Tuesday. It appeared to excite considerable interest amongst the medical profession in Dublin and Wicklow. There was a numerous attendance of members of the medical profession. Damages were laid at £1,000.

Mr. Purcell, Q.C., stated the plaintiff's case. He said his client was the widow of the late Joseph Lamb, and the action was brought by her to recover compensation for the death of her husband, occasioned, as she alleged, by the negligence and want of care of the defendants. Joseph Lamb had been married for some years to the plaintiff, the daughter of a respectable coach-builder in Dublin, and the deceased man was himself a coach-builder, and earned from £2 10s. to £3 per week, with which he maintained himself, his wife, and three children. Unfortunately, while he was at work in February last, a weight fell upon his foot. He walked home after the accident, and when his boot was taken off he was about to dress the foot when his wife advised him to go to Sir Patrick Dun's Hospital. He did so, and saw Dr. Barton, the resident surgeon, and asked to have the foot dressed, but Dr. Barton told him that the injury was more serious than he imagined, and advised him to remain in the hospital. Lamb remained; and next day Dr. Bennett saw him, and advised amputation of a portion of the foot. Immediately upon assenting to the operation he was placed upon a table, and chloroform was administered to him by Dr. Barton in the presence of Dr. Bennett, and in about five minutes the man was found to be dead. A coroner's inquest was held. Dr. Barton would not swear that the man had died or that he had not died from an overdose of chloroform. Dr. Barton also said that no examination was made as to the state of the man's heart before administering the chloroform. Dr. Bennett was present when these answers were given, and did not dissent. *Prima facie* the fact that the man died under the administration of chloroform—that fact being unexplained—was evidence of negligence on the part of the defendants, for which they were answerable. No doubt Joseph Lamb was a patient in a hospital where he was to be treated free of charge. It was the duty of the medical officers of the hospital to use skill and care, and if they did not do so they were liable for the consequences. The only substantial question for the jury was

whether the defendants exercised that reasonable care and attention which they were bound to exercise towards the patient. It was admitted that no previous examination of the deceased, as to the condition of his heart or other organs, was made. If, upon the skilled evidence they would hear, they were satisfied it was the duty of the defendants to make such examination, and that they did not do so, that would be conclusive evidence of negligence. If the jury believed Joseph Lamb was a healthy man, and a fit subject for an ordinary dose of chloroform, but that he got an overdose, that would also be conclusive evidence of negligence. There was a difference of opinion amongst medical men, as to the use of chloroform, and its use was condemned on the continent and in America. One of the most eminent of surgeons, Erichsen, said: "Ether is safer, but chloroform is more convenient, because its effects are quicker and it leaves no unpleasant odour after it." If medical men choose to use chloroform, they should take particular care to guard against injurious results. Death may result in three ways from the use of chloroform: First, from the effects upon the heart, producing syncope and death; second, by the action upon the lungs, by producing suffocation; thirdly, by the action upon the brain, where the patient had disease of the kidneys. In this case there was no previous examination of the man as to the state of the heart, the brain, or the kidneys. Neither was there a *post mortem* examination. To guard against almost certain death from the chloroform, it was absolutely necessary to introduce into it atmospheric air, otherwise congestion of the lungs would be caused. An eminent medical authority thus described the effects of chloroform. "First stage: excitement, where the patient struggles and cries; the eye has a wild, staring expression, the face flushed, the pulse supernaturally quick; this varies much in degree and duration. The second stage then ensues, and the patient gradually lapses into unconsciousness; feeling and intellect are suspended, and, if this is carried farther, coma ensues, and the appearance will be apoplectic. As yet all is safe; but a few more whiffs, and an important link in the chain of life may give way, and the patient be sent into eternity." That gave them a very striking and impressive idea of the effects of chloroform, and the necessity for extreme caution in its administration. The pulse should be watched by a skilful and competent person. Some were of opinion the persons administering the chloroform should have one hand on the pulse, able to detect the faintest warning of danger, and instantly arrest the supply. In this case no qualified man had charge of the pulse. This duty was entrusted to a student. This was want of care on the part of the operators. The most intelligent student may be unfit for so delicate and important a duty. He (counsel) submitted that Dr. Barton should have himself discharged this duty. This matter took place in an hospital where no friend of the plaintiff was present, and he (counsel) was now stating the case from what appeared at the inquest. He said, from the evidence there given, that there was neglect; the *prima facie* presumption of neglect was not and could not be rebutted. If the defendants themselves would not swear death may not have resulted from an overdose of chloroform, then there was nothing to rebut the presumption of negligence causing the death of a hale, powerful man, of only thirty-two years of age. The plaintiff brought this action by virtue of Lord Campbell's Act, and to recover compensation for herself and her children, because of the loss they had sustained. Though medical men gave their time and skill gratuitously in hospitals, that was no reason why they should perform their hospital duty carelessly or hurriedly, perhaps to get away to a wealthy patient. Besides, the attendance at hospitals was with a view to acquire experience, training, and fame, afterwards converted into handsome incomes. Juries would hold medical men strictly to the proper performance of their duties, whether those duties were performed for reward, or gratuitously in hospitals.

Johanna Lamb, examined by Mr. Crean: I was the wife of the late Joseph Lamb. I remember my husband having received an injury in February last. A shoeing-flag fell upon his foot. He was an operative coach-builder. The first joint of the big toe of the right foot was broken. He came home and took off his boot. He told my mother to send for Dr. Bredin, but I advised him to go to the hospital. He called a cab and drove to Sir Patrick Dun's Hospital, which was near to our house in Denzille Street. That was on Wednesday. I never saw him alive after that. I saw him dead on Friday. I have three children: the eldest is seven years of age. He earned £2 5 a week wages, and he had also bonuses from Mr. Brown, his employer. The last bonus on the profits of the year's business was £15. Some time before my husband's death I went into the drapery business in a small way.—The witness was not cross-examined.

George Lamb: The deceased, Joseph Lamb, was my brother. I saw him on the 12th of February last in St. Patrick Dun's Hospital. He then seemed to me to be in a very good state of health, but to be uneasy about his business being disturbed by his meeting with the acci-

dent. He was lying in bed with his foot supported. He said the flag struck him on the toe, and that one or two joints were broken. I remained with him for about half an hour. I never saw him alive again. Next morning I saw him dead about half-past eleven o'clock. He was about thirty-two or thirty-three years of age.—The witness was not cross-examined.

Mrs. Linda Byrne : I knew the late Joseph Lamb very well. I remember calling at Sir Patrick Dun's Hospital on the 12th of February last. I was refused admission, and called a second time and was admitted, and I saw Joseph Lamb lying dead. He seemed as if asleep. I looked at his feet. None of the toes had been cut off. The bandage was on the foot, the first toe of which appeared to have been injured.—Witness was not cross-examined.

John Fox : I was one of the jurors at the inquest held upon Joseph Lamb. Two students—Mr. Forsyth and Mr. Chester—were examined. Drs. Barton and Bennett were present at the inquest. Dr. Barton was not sworn at the inquest; but a doctor was asked whether the deceased man's heart had been examined. I cannot say by whom the question was asked. It was answered, but I cannot say by whom.

J. Ganby : I was one of the jurors at the inquest on Lamb. Dr. Bennett came in during the inquiry, and Dr. Barton was present at the whole of the inquiry. I asked Dr. Barton, was Lamb medically examined for disease of the heart, and he said not. I then said, was it not necessary to examine for premonitory disease of the heart or for fatty degeneration? and Dr. Barton said not. I became a little excited at the answer, and said I thought every schoolboy knew it was necessary to examine, and that ether-vapour was safer than chloroform; and the coroner, Dr. White, stopped me. No reply was made to that by Dr. Barton. Dr. Bennett was present at this. Dr. Bennett was asked whether the man died of chloroform or of an overdose of chloroform. He first said, "I think not;" and then he was asked, "Will you swear he did not?" and he answered, "I will not." I heard Dr. Bennett make a statement about chloroform, but cannot tell what it was.

Cross-examined : I am not a bit of a doctor myself. I suppose I should have average intelligence to understand what was said. I am almost certain it was Dr. Bennett who was asked the questions I have stated, and do not recollect his asking to be examined.

To a Juror : That gentleman (Dr. Bennett) said it was not usual to examine as to the heart before administering chloroform.

To Mr. Purcell : Dr. Bennett was asked by Mr. Fox, a juror, who had charge of the pulse while the chloroform was being administered, and Dr. Bennett said a student.

George Forsythe : I am a medical student at Sir Patrick Dun's Hospital. I know the defendants. I was present when the chloroform was administered to Joseph Lamb in the hospital. Dr. Barton administered the chloroform. One or two of the man's toes were to be amputated. Dr. Bennett was to be the operator. He was the only visiting surgeon present. Dr. Barton commenced to administer the chloroform about ten o'clock in the morning. He used an instrument known as Skinner's apparatus. A student had charge of the patient's pulse. No examination was made of his heart or lungs that I saw, but I was not in the theatre the whole time. I should say that Dr. Barton commenced to administer the chloroform to Lamb in about ten minutes after he was brought into the operating theatre. There was a compound fracture of the large toe, and the next two were injured. Lamb was a stout full man. He became violent, and the chloroform was removed from his mouth by Dr. Barton. When he became quiet, the chloroform was renewed. [Dr. Barton here exhibited in court Skinner's apparatus.] Examination continued : The man became violent three or four times, when the chloroform was renewed. He died in about five minutes after the first application. Artificial respiration and the galvanic battery and other remedies were resorted to. He had become motionless, and the pulse stopped. This is my third year as a student. I saw chloroform administered before in other cases; and in one or two instances there were previous examinations of the heart in that hospital.

Cross-examined : I have seen chloroform administered several hundred times. Skinner's apparatus was used. I recollect only two cases in which the heart was examined. I do not recollect whether the patients in these two cases were old and weak, or otherwise. About five minutes elapsed from the commencement of the administration of the chloroform till the death. The apparatus was off the face half that time. Dr. Bennett was present the whole time. The resident surgeon always administered the chloroform. Dr. Barton has been the resident surgeon for about two years. I did not hear Lamb either consent to the operation, or say he wished to have chloroform administered. When the pulse stopped, every possible means were used for about an hour to restore animation. I had my hand on the femoral artery when pulsation ceased, and Mr. Pim had his hand on the pulse. About four weak beats before pulsation ceased, I called out to Dr. Barton to the effect

that the pulse was becoming weak. Mr. Pim called out at the same time. After I called out to Dr. Barton, I felt four or five weak beats, and then the pulse ceased altogether. Just before I called out, the pulse was as strong as ever I felt, as indicative of a strong healthy heart. Dr. Bennett was not examined at the inquest. He tendered himself for examination in my presence. The coroner declined to examine him. Dr. Barton was not examined. I do not recollect that he tendered himself for examination. I did not hear any questions put to Dr. Bennett at the inquest, nor did I hear him answer any.

William Chester : I was resident pupil at Sir Patrick Dun's Hospital from January 1st to June 1st. I remember Lamb being admitted into the hospital on February 12th. Dr. Barton saw him in about twenty minutes after his admission. Dr. Bennett saw him next morning at about a quarter before ten o'clock. Dr. Bennett said it was necessary to remove two or three toes. Lamb appeared to be in good health. I was present when the chloroform was being administered by Dr. Barton. I was holding the foot upon which the operation was about to be executed. I did not see any examination made of the state of the heart, chest, or brain. The administration of the chloroform lasted four or five minutes altogether. I was at the opposite side of the table on which the body was from Dr. Bennett. Lamb had on only his shirt. I did not hear either Pim or Forsythe call out that I recollect. Dr. Barton was the first I heard. He said to Dr. Bennett that Mr. Forsythe said something was going wrong.

Cross-examined : Dr. Bennett first saw Lamb in bed in the ward. He was there about five minutes—long enough to make an examination of the foot. I think Dr. Bennett ordered him to the operation theatre. More than an hour elapsed from the time Dr. Bennett first saw him until he ordered him to the operation theatre. I did not hear a conversation between Lamb and Dr. Bennett. I was moving about the ward. I examined Lamb when he came into hospital on Wednesday. He appeared to be a sound strong man. He fainted when he came in. He recovered the faint and appeared to be strong. I have been three years a student.

Dr. Austin Meldon : I am a member of the College of Surgeons and the College of Physicians. I have been a visiting physician of Jervis Street Hospital since 1867. I have had experience of the administration of chloroform. Under certain circumstances, its administration was dangerous. It depends, in the first place, upon the degree to which it is pressed. The first stage is a state of excitement. If pressed further, the patient talks violently, but sensibility is diminished. In the third stage, the patient is completely insensible; the patient is unconscious, but the muscles are still rigid. In the fourth stage, the muscles are completely relaxed and there is perfect insensibility. I have seen chloroform administered in many cases. In the two first stages there is comparatively little danger. In the third stage there is some danger, but not great. In the fourth stage there is great danger. If you intend to press the chloroform only to the first or second stage, an examination of the pulse is sufficient, together with the general appearance of the patient. For a minor operation it would not be necessary to do more than examine the pulse. It would not be requisite to press the chloroform to the fourth stage for amputation of the toes. An examination of the heart would be necessary if the chloroform had to be pressed to the fourth stage. If it be wished to produce the unconsciousness of the third stage, an examination of the heart is not absolutely necessary. I would myself examine the heart. Some are satisfied with the condition of the pulse. I think it is invariably necessary to ascertain the pulse. If you find anything wrong with the pulse, you then proceed to examine the heart. That is for the purposes of the third stage of chloroform. It would be my duty to examine the pulse before administering chloroform to any degree. It is not the practice in hospitals with which I am acquainted for students, when other surgeons are present, to keep the pulse during the administration of chloroform. I would consider it dangerous to entrust the pulse to a student where the chloroform is to be pressed beyond the second stage. The administrator of the chloroform could not in this case have felt the pulse consistently with what he had to do. Having heard the evidence in this case, I say the chloroform was pressed to the fourth stage. They appear in this case to have passed rapidly from one stage to another. It is always necessary to withdraw the chloroform three or four times owing to the violence. I could not say whether what is described as having been done in this case was proper without knowing the appearance and condition of the patient and the state of his pulse at the time. It would be the duty of a medical man to examine the state of the heart before pressing chloroform to the fourth extent, because the chloroform would be dangerous in the cases of certain disease of the heart. Even the third stage of chloroform would be dangerous in case of one or two diseases of the heart, and if there were advanced disease of the kidneys.

Cross examined : Chloroform is generally and successfully used in

Jervis Street. There has been no death from its use there to my knowledge. Chloroform is a safe anæsthetic. I have heard of, and been Duncan and Flockhart's preparation: I have never used it. Skinner's apparatus is the one we use in Jervis Street. I would say, a robust man of 32 years of age, would be a good subject for the administration of chloroform, and if he had a vigorous pulse, I would not consider it necessary to examine the heart, for the purpose of such an operation as amputating the great toe. It is not the custom in this country to administer chloroform in a wholesale manner, by means of a folded towel, without having regard to the pulse. With the chest stripped down to the pit of the stomach, an experienced eye would have an ample opportunity of observing the respiration.

Mr. Hemphill read from page 54 of Dr. Snow's book on *Chloroform*, stating there was reason to conclude that the heart was diseased in as many cases in which there were no ill effects, as well as where death ensued from the chloroform.

Dr. Meldon: If the man had extensive disease of the heart, the operation in this case would have been attended with danger, without the chloroform. If the man had not serious disease of the heart, neither the operation, nor the chloroform, would be attended with danger. Fatty degeneration of the heart is more common in middle life, than at 32. It was right treatment to give the man a night's rest before operating. If the chloroform is to be pressed beyond the second stage, it would be wrong to entrust the keeping of the pulse to a student of one year's standing. A three years' student, having his finger on the femoral artery, and just pressing it, would be a good judge of the state of the heart. I think that every necessary precaution had been taken, provided the pulse was previously examined. I think from what I have heard in this case, the death resulted from some peculiarity of the man's constitution. I believe there was a peculiarity of constitution, which caused the chloroform to produce paralysis of the heart. A *post mortem* examination would not have discovered the nature of that peculiarity. I do not think this constitutional peculiarity could have been discovered by an examination before the administration of the chloroform.

Dr. John Morgan: I am one of the visiting physicians of Mercers' Hospital. I have devoted special attention to the use of chloroform, and with ether. In my opinion, ether is a safer anæsthetic than chloroform. I believe chloroform is inseparable from danger. It depends upon circumstances, whether an examination of the heart should be made before administering chloroform. In cases of very old, or very young, or very delicate persons; or, persons who have suffered a shock, I think it advisable to examine the heart. There is a difference of opinion about this.

Mr. Crean read passages from witness's work entitled *The Dangers of Chloroform*. The passages were to the effect that the use of chloroform was attended with difficulties and danger.

Examination continued.—Where a man has suffered a shock to the system I do not think it advisable to administer chloroform. I think as a rule I have seen the heart examined before the administration of chloroform, but these were cases of severe operations. I have heard the evidence given to-day. There are three causes of death from chloroform. The first is one which acts directly by some immediate paralyzing influence, as in the case of this man, and which we cannot know of beforehand, because cases of death under the use of chloroform have occurred where the most careful examinations have been previously made and the great precautions taken. And in *post mortem* examination the cause could not be discovered. The second cause is the cessation of the heart's action. The third cause is interference with the respiration.

Cross-examined.—In the book of mine referred to I contrast the influence of chloroform and ether. Assuming everything done in this case that I have heard described, and supposing that Dr. Bennett examined the pulse, I think that every precaution was taken, and that there was no neglect. From what I have heard here to-day I should say Lamb's death proceeded from the first of the three causes I have mentioned.

Dr. O'Leary: I am acquainted with the effects of chloroform. I concur very much with Dr. Meldon's evidence. I saw Lamb about three or four months before he died and on previous occasions, and I saw him dead. I attended him professionally. He was a man of very nervous temperament; he had a slight cough. I have heard the description of the accident to his foot. Supposing I met him for the first time, as Dr. Bennett did, on the 12th of February, and from the evidence I heard to-day, I might not have hesitated to administer chloroform after making some ordinary inquiries; but knowing Lamb as I did I would not have considered him a fit subject for chloroform. If Dr. Bennett sincerely believed it was unnecessary to examine the heart, I do not believe it would have been his duty to have done so.

But according to my own usual practice if I had met with the case I would not have administered chloroform without examining the heart. This, however, is not the universal practice of the profession. This man was with me three or four times within two years before his death. He had functional derangement of the heart. I mean by that he was essentially nervous. Within twelve months before his death he fainted twice. I consider that fainting arose from that functional derangement. At my own hospital, St. Vincent's, we invariably examine the heart before administering chloroform. Even if there were a healthy pulse I would examine the heart. I would give chloroform for the purpose of the amputation of the great toe. The application of ether, where applicable, is preferable to chloroform. I would not use ether on this man's toe unless I knew there was functional derangement. Knowing what I did of this man, I would not have given him chloroform. I believe Lamb's death commenced in the lungs. In a case where a man fainted in the absence of severe hæmorrhage I would think it necessary to examine the heart in reference to the fainting.

Cross-examined.—Lamb had no organic disease of the heart. No valvular disease, no fatty degeneration. His form of functional derangement was not the result of indigestion. I believe there are cases in which chloroform might not be given. I cannot refer at this moment to any authority in print. The proposition that mere functional derangement of the heart would be a reason for a minute examination of the heart before administering chloroform. The witness observed in answer to another question, that his position as a witness was painful, inasmuch as he had been obliged to attend contrary to his own inclination. He further said that the femoral artery would afford a fair test of the state of the circulation.

At this stage the court adjourned to next day.

*** We are compelled to defer the publication of the rest of this report till our next issue. The jury found at once a verdict for the defendants.

[To be continued.]

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

An *Address in Medicine* will be delivered by EDMUND A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

An *Address in Surgery* will be delivered by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, and Surgeon to King's College Hospital.

An *Address in Physiology* will be delivered by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

The business of the Meeting will be transacted in six Sections.

SECTION A. MEDICINE.—*President*: Dr. Sibson, F.R.S., London. *Vice-Presidents*: Dr. Habershon, London; Dr. Eason Wilkison, Manchester. *Secretaries*: Dr. John Murray, 42, Harley Street, London, W.; Dr. Silver, 2, Stafford Street, Bond Street, W.

SECTION B. SURGERY.—*President*: John Hilton, Esq., F.R.S., London. *Vice-Presidents*: W. S. Savory, Esq., F.R.S., London; Dr. George Buchanan, Glasgow. *Secretaries*: Henry Arnott, Esq., 6, Nottingham Place, London, W.; Dr. Alexander Ogston, Aberdeen.

SECTION C. OBSTETRIC MEDICINE.—*President*: Dr. Braxton Hicks, F.R.S., London. *Vice-Presidents*: Dr. G. H. Kidd, Dublin; Dr. Leishman, Glasgow. *Secretaries*: Dr. J. H. Aveling, 1, Upper Wimpole Street, London, W.; Dr. A. B. Steele, Liverpool.

SECTION D. PUBLIC MEDICINE.—*President*: Dr. Lyon Playfair, C.B., M.P., F.R.S., London. *Vice-Presidents*: G. W. Hastings, Esq.; T. J. Dyke, Esq., Merthyr Tydfil. *Secretaries*: Dr. Corfield, 10, Bolton Row, Mayfair, W.; Dr. Baylis, Birkenhead.

SECTION E. PSYCHOLOGY.—*President*: Dr. Harrington Tuke, London. *Vice-Presidents*: Dr. Radcliffe, London; Dr. Thurnam, Devizes. *Secretaries*: Dr. Blandford, 71, Grosvenor Street, London, W.; Dr. S. W. D. Williams, Hayward's Heath, Sussex.

SECTION F. PHYSIOLOGY.—*President*: Professor Humphry, M.D., F.R.S., Cambridge. *Vice-Presidents*: Dr. Rutherford, London; Dr. Ransom, F.R.S., Nottingham. *Secretaries*: Dr. W. M. Ord, 11, Brook Street, London; Dr. McKendrick, Edinburgh.

The General Meetings will be held, and the Addresses in Medicine, Surgery, and Physiology delivered, in the Large Hall of King's College. The Sections will meet in rooms of the College appropriated for the purpose.

The Annual Museum will be arranged in the Library of the College.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.*

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION in the Hall of Lincoln's Inn.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.*

RECEPTION-ROOM.—A room in the College will be open daily for the issue of tickets admitting to the meeting and to all stated receptions, and for supplying all necessary information.

Gentlemen are requested to register their names and addresses in the Reception-Room immediately after their arrival.

Provision will be made for the receipt and postage of letters, and for the care of parcels, etc. A reading and writing room will be provided.

* Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.

Dr. A. HENRY, 16, Brunswick Square, W.C.

Dr. S. WILKS, F.R.S., 77, Grosvenor Street, W.

GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.

ERNEST HART, Esq., 59, Queen Anne Street, W.

EXCURSIONS.—Saturday, August 9th.

Brighton.—Arrangements are in progress for affording to members the opportunity of visiting the Aquarium at Brighton, together with other objects of interest in that town. The London, Brighton, and South Coast Railway Company have granted permission to members to travel at reduced rates on that day by any train. The Curator of the Aquarium, Mr. Saville Kent, has kindly promised to attend and explain the nature and habits of the inhabitants of the various tanks. Free admission to the Aquarium has been kindly accorded to all members by the proprietors. The Free Library, and Museum, containing many rare and interesting objects; the Pavilion, the New Pier, the County Hospital, etc., will also be open to visitors. A *table d'hôte* dinner will take place at the Grand Hotel. Further particulars will be given next week.

An excursion to Bushy Park and Hampton Court is under consideration. Dr. J. Langdon Down has kindly offered to entertain members at his asylum at Hampton Wick.

* Each member is invited to bring one lady with him to the *soirées* at the Mansion House and at University College.

† The luncheon will be provided in King's College by the Metropolitan Members, who invite to it all gentlemen attending the meeting.

Lambeth Palace, the seat of the Archbishop of Canterbury, has also been placed at the disposal of the Committee. Full particulars of the hours for visiting it will be duly announced.

Windsor.—An excursion to Windsor, with the opportunity of viewing numerous portions of the Castle not generally shown to visitors, the armoury, the Chapel Royal, etc., is also arranged; Dr. Fairbank having obtained from Her Majesty unusual facilities for thoroughly exploring the beauties of this interesting spot. After luncheon, an excursion will conduct the excursionists to Taplow, where barges will await them at Maidenhead bridge to take them up to Cliveden, the seat of the Marquis of Westminster, along one of the prettiest portions of the Thames. After visiting the house and grounds, which have been kindly placed at their disposal, the excursionists will return to Maidenhead, and partake of a dinner to which Her Majesty the Queen has been graciously pleased to contribute a buck.

* * It is especially requested that all gentlemen who intend to take part in the excursions will send in their names on or before Wednesday, August 6th, to Dr. ARTHUR W. EDIS, Honorary Secretary of the Excursion Committee, at the Reception Room, King's College.

Royal Arsenal, Woolwich. Members will be admitted to the Royal Arsenal and Works at Woolwich by permission of General Adaye, throughout the week, on presenting their cards of membership. A special party will be formed on Friday afternoon, August 8th, to visit the Arsenal, when operations of interest will be shown. Gentlemen desirous of joining the party are requested to inscribe their names at the Reception-Room not later than 12 noon on Wednesday.

PLACES OPEN TO MEMBERS. By kind permission, the following places will be open to members attending the annual meeting.

The rooms of the Royal Medical and Chirurgical Society, Berners Street.

The rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square.

The library of the Obstetrical Society of London, Regent Street.

The Picture Galleries of Stafford House, and those of Grosvenor House.

National Gallery. Admission to the National Gallery will be granted on the days on which it is ordinarily closed.

British Museum. By permission of J. Winter Jones, Esq., Principal Librarian, facilities for visiting the galleries, libraries, and MS. departments will be afforded to members daily during the week. Special parties will be formed on Friday and Saturday afternoons, August 8th and 9th, to visit the Museum, when objects of special interest will be shown. Gentlemen desirous of joining these parties are requested to inscribe their names in the Reception-Room not later than 12 noon on Wednesday.

The United University Club in Jermyn Street, will accord the privileges of membership during the week to one hundred University graduates, being members of the Association attending the meeting. Gentlemen desirous of availing themselves of this privilege, are requested to forward their names to Ernest Hart, Esq., 59, Queen Anne Street.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

It is intended that the surgical instruments, etc., shall be *bond fide* novelties, or improvements on those in common use. The Committee will be greatly obliged to exhibitors if they will send in their contributions as early as practicable.

Pathological Department.—The pathological part of the Museum will be arranged in the following departments—*a.* Diseases of brain, injuries to head, etc.; *b.* Diseases of heart and blood-vessels; *c.* Diseases of lungs; *d.* Diseases of abdominal and pelvic viscera; *e.* Malignant diseases; *f.* Diseases of eye and ear; *g.* Diseases of skin; *h.* Syphilis; *i.* Fractures and dislocations; *k.* Congenital deformities; *l.* Diseases of the lower animals; *m.* Miscellaneous.

Exhibition of Patients.—It is intended to arrange for the exhibition of living subjects of disease at special hours. Those intending to bring forward such, must give notice at least a fortnight before the meeting,

and state the time at which it will be most convenient to them to attend. A written description of the case must also be sent. Notice of the hours fixed for each demonstration of this kind will be printed in the catalogue.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibitions of complete series of instruments, as electro-therapeutic apparatus, and instruments for physical diagnosis. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc. A department will be provided for the exchange or sale of duplicate photographs, casts, etc.

Catalogue.—A catalogue will be printed. The Committee earnestly request those who intend to exhibit to bear in mind that it is impossible that descriptions, etc., can be included in the catalogue *unless sent in before Tuesday, July 29th*. During the week preceding the meeting all articles should be sent direct to the *Library, King's College*, and addressed to the care of the *Curator of the Museum of the British Medical Association*.

Papers.—The following papers and contributions have been promised.

Papers.—The following papers have been promised.

Francis E. Anstie, M.D. Alcohol in Pyrexia.

T. Clifford Allbutt, M.D. The After-history of Cases of Railway Accident.

H. Charlton Bastian, M.D., F.R.S. On the Modes of Causation of Epilepsy and allied Convulsive Affections at different Periods of Life.

James Ross, M.D. The Theory of Counterirritation.

Thomas J. MacLagan, M.D. The Germ-theory of Disease applied to the Explanation of the Phenomena of Idiopathic Fever.

William Sedgwick, Esq. The Absence of Purging in Cholera.

T. Grainger Stewart, M.D. On Chronic Bright's Disease.

Christopher Heath, Esq. On Colotomy.

G. W. Callender, Esq., F.R.S. On the Isolation and Treatment of Wounds.

Jonathan Hutchinson, Esq. Some Notes on the Effects of Iodide of Potassium.

William S. Savory, Esq., F.R.S. On the Treatment of Strictures of the Urethra.

Arthur E. Durham, Esq. The Removal of Bronchoceles by Operation.

Berkeley Hill, Esq. A New Urethrotome for incising very Narrow Strictures.

T. Holmes, Esq. On the Diseases which simulate Aneurism.

George Critchett, Esq. The Treatment of some of the Superficial Affections of the Eye.

T. Pridgin Teale, Esq. On the Restoration of Perinæum and Sphincter Ani ruptured during Labour.

J. T. Clover, Esq. Induction of Sleep during Surgical Operations.

William MacCormac, Esq. Some Remarks on Onychia Maligna.

Spencer Wells, Esq. On the Excision of the Enlarged Spleen.

C. E. FitzGerald, M.B. A Series of Ophthalmoscopic Drawings with Explanatory Notes.

Lawson Tait, Esq. 1. On the Anatomy and Treatment of Dermoid Cysts of the Ovary and Peritoneum. 2. On Methylene Ether as an Anæsthetic.

John C. Murray, M.D. Urinary Calculi: their Preventive and Solvent Treatment.

Thomas W. Hime, M.B. Intrauterine Therapeutics.

Ewing Whittle, M.D. The Anticipation of Post Partum Hæmorrhage.

John Bassett, Esq. The Prevention of Uterine Hæmorrhage.

A. B. Steele, L.K.Q.C.P. Case of Apoplexy and Hemiplegia in the Puerperal Period, terminating in Recovery.

J. A. Wanklyn, Esq. 1. The Action and Relative Value of Disinfectants. 2. The Chemical History of Excreted Urea. 3. The Ammonia process of Water-analysis for Medical Officers of Health.

T. W. Grimshaw, M.D., and D. Toler Maunsell, M.B. State Medicine and Public Health in Ireland.

J. W. Moore, M.D. 1. Influence of Mean Temperature on the Prevalence of Small-Pox. 2. Crystallisation of Nitrate of Urea from Urine.

Charles Elam, M.D. On Disturbed Mental Phenomena falling short of Insanity.

J. G. Davey, M.D. The Delusions of the Insane: their real value as a Means of Diagnosis.

J. Langdon Down, M.D. On some of the Causes of Imbecility and Idiocy.

Francis E. Anstie, M.D. Some of the Relations of Nerve-pain with Mental Derangement.

T. Buzzard, M.D. On Co-ordinated Convulsions from Mental Shock.

David Nicolson, M.B. On the Occurrence of Insanity among Criminals.

W. H. O. Sankey, M.D. Is there such a Disease as Acute Primary Mania?

H. Sutherland, M.D. Climacteric Insanity in the Male.

David Yellowlees, M.D. Insanity and Intemperance.

Herbert Page, M.B. A Case of Traumatic Pneumothorax, illustrating the use of the Aspirator.

W. F. Teevan, Esq. The Treatment of Retention and Extravasation of Urine.

Sir Duncan Gibb, Bart., M.D. Cyanopouon Laryngis; or Thyroiditis with Blue Suppuration.

Edward Woakes, M.D. Case of Double Ventral Hernia: one strangulated on admission, the second becoming so five days after operation on the first. Second Operation: Recovery.

F. Waterhouse, Esq. Case of Conical Cornea with Staphyloma.

J. Batty Tuke, M.D., and J. G. M'Kendrick, M.D. The Morbid Changes following Experimental Injuries to the Brain.

Thomas Savage, M.D. Some Points on the Treatment of Flexions of the Uterus.

E. A. Schäfer, Esq. Exhibition of Preparations of Muscular Fibre.

G. Rainey, Esq. Currents occurring in Fluids kept in Closed Vessels, and their bearing upon Endosmosis, Diffusion, and Cyclosis.

A. Ransome, M.D. Demonstration of Apparatus for Measuring the Chest.

John Harley, M.D. Physiological Effects of *Æthusa Cynapium*.

John G. M'Kendrick, M.D. 1. Report on Actions of Certain Drugs. 2. Researches of Mr. Dewar and Dr. M'Kendrick on the Physiological Action of Light. 3. Effect of Light on the Iris of the Common Cat. 4. Demonstration of Helmholtz's Views on the Mechanism of the Bones of the Ear.

W. K. Parker, Esq., F.R.S. The Ossicula Auditûs in the Mammalia and their Representatives in the Ovipara.

W. M. Ord, M.B. Slips of the Tongue.

T. Spencer Cobbold, M.D., F.R.S. Observations on Hæmatozoa, illustrated by Specimens. 2. Treatment of Tapeworm, with Cases. 3. The Treatment of Ascarides, with Cases.

E. J. Tilt, M.D. The Prevention of Uterine Inflammation.

A. Wiltshire, M.D. New Obstetric Instruments.

Protheroe Smith, M.D. The Treatment of Displacements of Internal Organs and of their Functional Diseases by means of External Appliances.

James Finlayson, M.D. The Alleged Dangers of Dentition, and the Practice of Lancing the Gums.

J. H. Aveling, M.D. A Loop-saw, or Substitute for the Ecraseur.

J. Hughlings Jackson, M.D. Hemiplegia from Blocking of Cerebral Arteries.

Henry W. Rumsey, M.D. The State Medicine Qualification.

George Harley, M.D., F.R.S. The Formation of Stone, and its Medical Treatment.

William Adams, Esq. On the Pathology of the Cases of so-called Spinal Concussion following Railway and other Accidents.

Francis Mason, Esq. Remarks on a Case of Melanotic Tumour developed in a Congenital Mole.

William Cadge, Esq. Median Lithotomy.

Edward Lund, Esq. Fallacies and Failures in Antiseptic Surgery.

W. Laidlaw Purvis, M.D. 1. A New Method of Diagnosis of the Refraction of the Human Eye. 2. The Passage of the White Corpuscles through the Capillaries.

J. Hughes Bennett, M.D., F.R.S. Report of the Committee on the Antagonism of Drugs.

T. Lauder Brunton, M.D. The Action of Purgative Medicines.

U. Pritchard, M.D. Exhibitions of Sections of the Cochlea.

W. J. Mickle, M.D. On Morphia in some Cases of Insanity.

C. A. Hemingway, Esq. 1. On a New Method of Arresting Post Partum Hæmorrhage. 2. On a New Appliance for the Treatment of Fractured Ribs.

T. D. Griffiths, M.B. The Causes and Pathology of the various Acquired Malpositions of the Uterus.

Victor de Méric, Esq. On Peculiar Modes of Transmission of Syphilis in Married Life.

James Thompson, M.D. 1. The Use and Abuse of Nux Vomica and its Alkaloids. 2. Remarks on a Method of Administering Leamington Spa Water.

D. Maclean, M.D. Diseases of the Chest in Children: their Treatment by Blisters.

John Wallace, M.D. 1. Case of Stricture of the Female Urethra. 2. Case of Acute Metritis occurring in the Seventh Month of Pregnancy during Rheumatic Fever. 3. Exhibition of an improved Cephalotribe after the Edinburgh Model; and of Stethoscopes for Vaginal and Abdominal Uterine Stethoscopy.

A. E. McRae, M.D. The Electro-Magnetic Current in Labour.

D. Lloyd Roberts, M.D. Short notes of a Case of Imperforate Hymen with Retained Menstrual Fluid.

John Murray, M.D. (Inspector-General). The Communicability of Cholera.

Edward Waters, M.D. The Propagation of Typhus Abdominalis.

J. W. Tripe, M.D. The Sanitary Statistics of the different Metropolitan Districts for the years 1861-70; especially with regard to Density of Population and Relative Wealth of the Residents.

Hugh Miller, M.D. Tedious Labour from Debility, and its Treatment.

Edward J. Syson, L.R.C., P.Ed. The Duties of a Medical Officer of Health.

Dyce Duckworth, M.D. 1. The Causes and Treatment of Certain Forms of Sleeplessness. 2. A New Method of Determining the Presence of, and Recovery from, true Ring-worm.

J. F. Payne, M.B. The Histology of the Omentum.

Charles Stewart, Esq., F.L.S. The Structure of the Hectocotylus of a small Cephalopod.

Robert J. Lee, M.D. General and Microscopical Examination of the Decidua, Chorion, etc., in a recent Specimen of a Gravid Uterus which contained a Perfect Ovum between the fifth and sixth weeks of Development.

John St. S. Wilders, Esq. 1. The Treatment of Gleet by the Insufflation of Astringent Powders. 2. Remarks on two Cases of Syphilitic Aphasia.

C. R. Drysdale, M.D. 1. The Views of Niemeyer and others on Phthisis Pulmonalis. 2. On Syphilitic Iritis.

W. R. E. Smart, C.B., M.D., R.N. Notes towards a History of the Medical Department of the Navy.

Morell Mackenzie, M.D. The Treatment of certain forms of Bronchocele by Injections of Iodine.

E. Mackey, M.B. Meningitis in Children.

George Paton, M.D. The Action and Sounds of the Heart.

W. Carr, M.D. 1. Cases illustrating the Endemic and Non-infectious Character of Diphtheria. 2. The Use and Abuse of Purgatives.

R. Norris, M.D. Demonstrations on the Formation of Rouleaux of Red Corpuscles of the Blood, and of the Passage of Leucocytes through the Walls of the Blood-vessels.

James Edmunds, M.D. The Physiological Influence of Alcohol.

E. Lund, Esq. On a Mode of Using a Three-pad Tourniquet in the Treatment of Aneurism.

H. M. Madge, M.D. On Transfusion of Blood.

J. Vose Solomon, Esq. A Disease of the Eyelid not described by authors.

John Ringland, M.D. Transfusion in Extreme Uterine Hæmorrhage.

Robert Boyd, M.D. Observations concerning Medical Relief and Pauper Lunatics, based on Personal Experience.

A. Rasch, M.D. 1. On the Diagnosis of Early Pregnancy. 2. On Retained Placenta after Abortion, with a New Instrument.

R. N. Ingle, Esq. Two Cases of Hysteria with Remarkable Complications: Successful Treatment by Chloroform.

H. Heygate Phillips, M.B. The Influence of Impure Water in the Diffusion of Cholera.

V. Jagielski, M.D. The Physiological Effects of Kreuz- and Ferdinands-brunnen of Marienbad.

Thomas Chambers, M.R.C.P. A Case of Vegetating Epithelioma of the Body of the Uterus, treated by Dilatation, the Curette, and the Local Application of Tincture of Iodine.

A. Ransome, M.D. The Constrictor Action of the Intercostal Muscles.

W. M. Ord, M.B. Slips of the Tongue.

Oscar Liebreich, M.D. (Berlin). On the Constitution and Action of Croton-Chloral-Hydrate.

Dr. Spiegelberg (Breslau). On the Mechanism of Labour with Contracted Pelvis.

M. Marey (Paris). Experimental Observations on the Dynamics of the Heart.

O. Larcher, M.D. (Paris). On some Diseases of the Female Organs of Birds.

Dr. Foster (New York). On the Practice of Animal Vaccination in New York.

S. Lodge, Esq. On some important Cases in Surgery and their Treatment by the Antiseptic Method.

Henry Power, Esq., and T. L. Brunton, M.D. On the Physiological Action of Diuretics.

S. M. Bradley, Esq. On Warts.

G. Cowell, Esq. Astigmatism of the Cornea after Extraction of Cataract.

C. B. Taylor, M.D. 1. Cases of Extraction of Cataract by Periphoral Section of the Iris without invading the Pupil. 2. Cases of Conical Cornea treated by Ablation of the Summit of the Cone. 3. Cases of Amaurosis successfully treated by the Hypodermic Injection of Strychnia.

Noel Gueneau de Mussy, M.D. (Paris). On Enlargement of the Bronchial Glands.

Ernest Hart, Esq. Experimental Inquiry on the Relation of Lesions of the Semicircular Canals to Movements of Rotation.

NOTICES OF MOTION FOR ALTERATIONS OF LAWS.

1. The President of the Council will move the following alterations in the Laws.

Rule 7. To omit the word "and" in the second line, and insert after "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872".

Rule 8. To omit the word "fortnight", and insert instead the words "five weeks"; also in the same rule, to insert the word "twenty" instead of "ten".

Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-elect, President of Council, Treasurer, the Vice-Presidents, and one Secretary from each Branch. 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.

"Mode of Election.—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons."

2. Mr. R. H. B. Nicholson, of Hull, gives notice that he will move, at the annual meeting in August, that Law 23 be omitted; viz., "The Committee of Council shall annually prepare a statement of accounts up to the last day of each year, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year. The accounts shall be previously audited every year by two auditors, appointed at the preceding annual meeting, and not holding any other office in the general Association." And that the following new Law be substituted for it:—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to the 31st day of December of each year, and such account shall include a statement of assets and liabilities, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year."

Dr. Steele gives notice that, at the Annual Meeting of the Association, to be held in London in August next, he will move—"That the Committee of Council be requested to draw up a complete code of laws and bye-laws for the government of the Association, based on the existing laws, with such suggested alterations and additions as may appear desirable, and to submit the same for consideration to the next general or annual meeting of the Association."

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of the above Branch will be held in the Imperial Hotel, Aberdeen, on Saturday, July 26th, 1873, at 1.30 P.M.

It is intended to have an exhibition of books, instruments, drugs, etc., which have appeared within the past year; and members desirous of exhibiting such, are requested to communicate with the Secretary, or with Dr. Findlay, 47, Schoolhill, Aberdeen.

Dinner in the Imperial Hotel at 3 o'clock P.M.

Further particulars will be intimated by circular.

ALEX. OGSTON, M.D., *Honorary Secretary.*

Aberdeen, July 9th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Great Western Hotel, Birmingham, on June 24th. Present: FURNEAUX JORDAN, Esq., President, and about eighty members and visitors.

Vote of Thanks.—A cordial vote of thanks was tendered to Mr. Ebbage, the retiring President, for his courtesy and attention to the business of the Branch during his year of office.

Report of Council.—Mr. BARTLETT (one of the Honorary Secretaries) read the report of the Council, of which the following paragraphs are extracts.

"Your Council is again able to report the continued prosperity and usefulness of the Birmingham and Midland Counties Branch of the British Medical Association. The number of members is 815. During the past year 44 new members have been elected; 19 members have either resigned, left the neighbourhood, or been erased for non-payment; and 7 members have died. Of these, Mr. H. D. Carden, of Worcester, was one of our most distinguished members. During the session 1864-65 he filled the office of President of this Branch. He was for many years eminent as a consultant in Worcestershire, and he was known throughout the world for a form of flap amputation which bears his name; Dr. Thomas Thompson, of Leamington; and Mr. Kite, of West Bromwich, were active members of the Branch, the latter having for many years served on the Council. The names of Mr. Shirley Belcher, of Burton, Dr. Norris, of Brierley Hill, and Dr. Drever, of Birmingham, will be familiar to many of our members.

"Six general meetings of the Branch have been held during the year. These have all been devoted to scientific or practical professional work. During the past year, no important questions of medical politics have been brought under the notice of the members of the Branch. The attendance at the meetings has been large, and the interest of the papers read has often called forth animated discussion.

[The report then gave a list of the papers read.]

"Your Council records with satisfaction the continued activity of the pathological and clinical section.

"Your Council reports with much pleasure the formation of a microscopical section in connection with the Branch.

"Your Council reports with regret the resignation, through ill-health, of the office of President-elect of the Branch by Dr. Alexander Fleming. Your Council trusts that his speedy restoration may enable Dr. Fleming shortly to again take an active part in the proceedings of the Branch. Your Council congratulates the members on finding a worthy and able successor in Mr. Furneaux Jordan.

"While last year your Council was looking forward with pleasant anticipations to the annual meeting of the British Medical Association in Birmingham, and was, with the assistance of many members of the Branch, much occupied in making the necessary arrangements; it is able this year to congratulate the members on a brilliant meeting, which has reflected no small lustre on the Branch, and which, it believes, has given an impetus to the progress of the Association, as well as added dignity and importance to the profession in this neighbourhood. Your Council desires to thank the members of the Branch for their munificent liberality, which enabled the executive officers to arrange for the entertainment of the Association in a manner worthy of Birmingham and of the medical profession in the district. Your Council feels, too, that the warm thanks of the Branch are due to their eminent member, Mr. Alfred Baker, the President of the Association, and Dr. Bell Fletcher, the Chairman of the Executive Committee, for their great energy, ability, and hospitality in the conduct of the meeting, and to the gentlemen who so ably and indefatigably worked on the various subcommittees, and especially to the Secretaries of these committees, upon whom much of the work necessarily fell. Your Council also records with gratification the liberality of the Governors of King Edward's School in granting the use of their noble building for the meetings of the Association and for the annual museum. Your Council feels it but just to record the great success of the annual museum, and to recognise the laborious exertions of the museum subcommittee and of the museum secretaries, Mr. C. J. Bracey and Mr. Robert Jolly. Your Council also desires to express its appreciation of the energy and hospitality of Dr. Nason, of Stratford, Mr. Ebbage, of Leamington, Dr. Tibbits, of Warwick, Mr. Prosser, of Bromsgrove, and Mr. Garman and Mr. F. Underhill in arranging and undertaking the conduct of the excursions in connection with the annual meeting. It feels sure that the enjoyment of the visitors to Birmingham was much increased by these pleasant and interesting excursions, and by the hospitality which was shown to the members who joined in them. Your Council also deems it right to mention with approval the exertions of Mr. Lawson Tait, the secretary to the printing and publishing committee, in the preparation and superintendence of the daily journal,

published during the annual meeting. Your Council desire to express its satisfaction with the literary and scientific merits of the Association Journal, which have obtained for the organ of the Association a leading position in the medical press.

"In conclusion, your Council desire to express a well-founded hope that the earnest co-operation of its members, which has raised the Branch to its present honourable and influential position, will be exerted to maintain and, if possible, to increase its prosperity."

Mr. WATKIN WILLIAMS (Treasurer) read the Treasurer's report.

The reports were adopted, and ordered to be entered on the minutes.

Mr. VINCENT JACKSON (one of the Honorary Secretaries) read the report of the Pathological and Clinical Section, which was adopted.

Vote of Thanks were then passed to the officers of the Pathological and Clinical and the Microscopical Section, to the retiring Council, and the representatives of the Branch in the General Council of the Association, to the Treasurer, Mr. Watkin Williams, and to the Honorary Secretaries, Mr. Bartlett and Dr. Balthazar Foster.

Subscriptions.—The Council were requested to take into consideration the subject of amalgamating the payments to the Branch and the two sections.

Officers and Council.—The following gentlemen were elected.

President elect: W. C. Garman, Esq., Wednesbury. *Secretaries:* T. H. Bartlett, Esq., and Balthazar Foster, M.D. *Treasurer:* T. Watkin Williams, Esq. *Council:*—Country: G. Fowler Bodington, M.R.C.P., Kingswinford; J. Gaunt, Esq., Alvechurch; A. J. Harrison, M.B., Walsall; Vincent Jackson, Esq., Wolverhampton; F. E. Manby, Esq., Wolverhampton; C. E. Newnham, Esq., Wolverhampton; F. Turton, Esq., Wolverhampton; Thomas Underhill, M.D., West Bromwich. *Town:* Alfred Baker, Esq.; Bell Fletcher, M.D.; R. Jolly, M.D.; E. Malins, M.D.; J. Russell, M.D.; J. Sawyer, M.B.; J. Vose Solomon, Esq.; J. F. West, Esq. *Representatives in the General Council of the Association:* T. Ebbage, Esq.; Balthazar Foster, M.D.; Sampson Gamgee, Esq.; W. C. Garman, Esq.; J. Hickenbotham, M.D.; Vincent Jackson, Esq.; Furneaux Jordan, Esq.; F. E. Manby, Esq.; E. Mackey, M.B.; J. Sawyer, M.B.; J. Vose Solomon, Esq.; Thomas Underhill, M.D.; W. F. Wade, M.B.; J. F. West, Esq.; and T. Watkin Williams, Esq. *Auditors of the Branch:* J. Russell, M.D.; A. Oakes, Esq.

President's Address.—Mr. JORDAN delivered an able and interesting address, in which various points in surgery were dealt with, and many original views were enunciated.

A cordial vote of thanks was passed to the President, Furneaux Jordan, Esq., for his courtesy and ability in the chair, and for the able and interesting address.

Dinner.—The members afterwards dined together to the number of fifty-five; Mr. Furneaux Jordan occupying the chair, and the President-elect, Mr. W. C. Garman, of Wednesbury, the vice-chair.

CUMBERLAND AND WESTMORLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the above Branch was held at the Bush Hotel, Carlisle, on Wednesday, June 25th, 1873. There were present fifteen members and two visitors. The chair was taken by the retiring President, Dr. CLOUSTON.

Report of Council.—The SECRETARY then read the report of the Council. The number of members at present on the list is 64, being six lower than last year. Seven new members have been elected during the year. The Council stated that they had forwarded petitions to Parliament in favour of the Medical Act (1858) Amendment Bill providing for direct representation of the profession in the General Medical Council, and also against certain objectionable clauses in the Public Health Bill, which provide for the rendering of certain gratuitous services by Poor-law medical officers and medical officers of health. The balance-sheet was of a very favourable character, showing a balance in hand of £12:10:8. The report of the Council was unanimously agreed to.

The retiring President then vacated the chair and introduced the President for the year, Dr. Tiffen.

The Office-bearers for the year were then elected by ballot, as follows:—*President elect:* Thomas Green, M.B., Kendal. *Members of Council:* W. T. Greaves, Esq., Penrith; M. W. Taylor, M.D., Penrith; W. Reeves, M.D., Carlisle; T. F. I'Anson, M.D., Whitehaven; H. Hodgson, M.D., Cockermouth; R. Maclaren, M.D., Carlisle. Dr. Henry Barnes was unanimously re-elected *Secretary and Treasurer*. The following were elected *Representatives on the General Council:* M. W. Taylor, M.D., Penrith; R. Tiffen, M.D., Wigan; J. Crerar, M.R.C.P.Ed., Maryport. Dr. Reeves was re-elected representative on the Parliamentary Bills Committee.

An alteration in Rule v, of which notice had been given, was then considered and negatived on a division by 11 to 2.

President's Address.—The PRESIDENT delivered his inaugural address. In forcible terms, Dr. Tiffen urged upon the profession of the counties of Cumberland and Westmorland the advantages of effectively supporting the British Medical Association, as well as the local branch; and he afterwards proceeded, at considerable length, to discuss the questions of "gratuitous medical service," and the application of the "provident" principle in the administration of medical charities, which he had previously intimated he would submit for the consideration of the Branch at this meeting. In the course of his observations, the President said he thought no one could fail to see that there was a great and growing tendency, on the part of the public, to exact more and more, in the way of gratuitous labour, from the medical profession, and that, in his opinion, the time was fast approaching when it would be found necessary, in the interests of the community at large, to make some effort to check this disposition. He attributed the fact of its existence at all to the profession itself, which, he thought, held mistaken and exaggerated views of its duty to the public in connection with public medical charities, and expressed his belief that many of the abuses of these charities, and much of the increased pauperism of the country, arose from the liberality and freedom with which medical men gave their services. He further advocated the adoption of the "provident" principle, and the formation of dispensary districts under regulations somewhat similar to those carried out in other parts of the country, as a means of remedying many of the evils complained of. In conclusion, he submitted the following resolutions to the meeting:—1, that gratuitous medical service is under all circumstances objectionable in principle; 2, that much benefit is likely to arise to the industrious poor, the medical profession, and the community at large from the general introduction of the provident principle into the administration of medical charity. An animated discussion followed the address, and a desire expressed that it should be printed and circulated among the members of the Branch. Opinions were nearly unanimous in favour of adopting the resolution respecting the application of the "provident" principle to medical charities, only one gentleman voting against it. The resolution respecting "gratuitous medical service," however, was held by some of the speakers to be rather too sweeping; and an amendment against its adoption was carried by a majority of one.

A vote of thanks was unanimously accorded to Dr. Tiffen for his address.

Papers.—1. Dr. CARLYLE read a paper on a Case of Embolism, and exhibited specimens. 2. Dr. MACLAREN showed the cast of a Diseased Kidney.

Dinner.—The members and friends, to the number of eighteen, afterwards dined together, Dr. Tiffen occupying the chair, and Dr. Clouston the vice-chair.

SOUTH-WESTERN BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at Callington, on Thursday, July 3rd. The President-elect and Mr. W. Brown entertained the members most hospitably to luncheon. The meeting was afterwards held at Golding's Hotel. The President, Dr. THOMPSON (of Bideford), took the chair, and briefly introduced the President-elect, J. KEMPTHORNE, Esq., who then took the chair, and read an address on Medical Logic.

Votes of Thanks.—Dr. THOMPSON proposed, and Mr. J. GOOD seconded, a vote of thanks to the President, for his address.

Next Annual Meeting.—Torquay was fixed on as the place of meeting for 1874, and Dr. S. Thomson was nominated as President-elect.

Secretary.—Mr. J. Woodman, of Exeter, was unanimously elected secretary. A vote of thanks was passed to Mr. L. Turvill, who had acted with him as provisional secretary.

Branch Council.—Dr. Radclyffe Hall, Dr. Nankivell, Dr. Huxley, W. Pollard, Esq., and C. Pridham, Esq., of Paignton, were elected members of the Branch Council in lieu of those retiring.

Representatives in the General Council.—The following six members were elected to represent the Branch in the General Council of the Association: J. Bankart, M.D. (Exeter); W. Brown, Esq. (Callington); T. Good, Esq. (Launceston); H. Greenway, Esq. (Plymouth); R. Kerswell, Esq. (St. Germans); C. B. Nankivell, M.D. (Torquay).

A Vote of Thanks was then passed to the retiring President, Dr. Thompson, for the able and hospitable manner in which he acted during his year of office.

Papers, etc.—1. Dr. LITTLETON, of Plymouth, read a paper on Typhoid Fever, and described a report he made on an attack of fever in the St. Germans district. Dr. Thompson, Dr. Hudson, Mr. Woodman, etc., joined in the discussion.

2. Mr. W. BROWN (of Callington), read a paper on Unrecorded

Cases of Death by Chloroform, and the necessity of a room at mines where cases of accident could be placed at once, instead of being taken miles to their homes. Mr. Tosswill and others gave their experience of the administration of chloroform.

3. Mr. L. TOSSWILL, M.B., of Exeter, exhibited a new and simple form of Stomach-pump, which had been successfully used. It consists of a tube, with an elastic gum-bottle (as it were) in the centre, to exhaust the air at first; but its principle is the syphon action, and it depends on the elevation or depression of the external end as to whether the fluid flows in or out of the stomach. This was generally thought to be a simple contrivance, and being much cheaper, likely to supersede the present expensive stomach-pump. It is made by Weiss & Son.

4. Mr. J. WOODMAN, of Exeter, read a paper, and produced photographs of a case of monstrosity, which occurred at Marazion, in the practice of Mr. Congdon. The peculiarity of the case was the complete development of the lower half of the body, although no liver, stomach, lungs, heart, or anything above the four lower ribs, were developed. The foetal circulation appeared to go to and from the kidneys.

Dinner.—The members and visitors, to the number of thirty, afterwards dined at Golding's Hotel.

NORTH WALES BRANCH: ANNUAL MEETING.

THE twenty-fourth annual meeting of this Branch was held on Tuesday, the 8th instant, at the Belvoir Hotel, Rhyl, under the presidency of R. DAVIES, Esq., Llanfairtalhairn. There were also twenty-eight members present and four visitors. Before proceeding to business, Dr. Harvey Williams (Rhyl) invited all the members to luncheon at his house. After partaking of his hospitality, they returned to the hotel.

Retiring President.—Mr. ROBERTS (Ruabon) expressed his gratitude for the uniform kindness and sympathy extended to him during his year of office, and vacated the Chair to R. DAVIES, Esq., the President for the ensuing year.

President's Address.—The PRESIDENT delivered an eloquent address, at the commencement of which he said he was somewhat perplexed in selecting a suitable subject on which to engage their attention for a short time. Living, as he did, in a very populous and hilly district, he had generally preferred the charms of the fireside, arm-chair, and quiet rest, rather than prosecute his medical studies and researches after the labours of the day were over; and although he had resided at Llanfairtalhairn for twenty-four years, he had nothing peculiar to that district to communicate to them. Many changes, however, had taken place since he first commenced practice in the treatment of different diseases, and it was almost impossible to judge how far the alteration in the treatment had been caused by a change in the nature of disease itself, or how much might be traceable to the general improvement in pathological science, aided by the microscope and chemistry. The question, however, was of far too difficult a nature for him to enter into, and he would content himself with contrasting the different modes of treatment in vogue at the present day for certain diseases with the methods employed when he was a medical student some thirty years ago.

Vote of Thanks to the President for his Address.—A cordial vote of thanks was accorded to the President for his excellent and practical address.

Report of Council.—The Secretary, Mr. KENT JONES, then read the Report of Council. As every one must be familiar with the principal subjects which have attracted the attention of the profession since the last annual meeting, the Council think it best not to occupy your valuable time with a long report. The Public Health Act and the Adulteration of Food and Drugs Bill of last session are undoubtedly measures of vast importance. They are fraught with consequences so weighty to the profession and the public, that it is well to pause and consider how and by whom the provisions and appointments contained in them should be carried out, so as to cause the minimum of distrust and the greatest amount of confidence. The Council will not venture to express any opinion, but they court and desire full discussion. The presentation of the portrait of Thomas Taylor Griffith, Esq., of Wrexham, will take place to-day. The Council feel sure that the members will cordially unite in requesting him to accept it as a token of the esteem and regard in which he is held by them. As one of the oldest members of the British Medical Association, and as the first president of this Branch, which he has always supported with his ripe experience, the Council trust that Mr. Griffith will enjoy, in the eventide of an honourable and successful professional career, continued good health and happiness. The BRITISH MEDICAL JOURNAL continues to be conducted with Mr. Ernest Hart's usual ability and tact; and to him and the staff associated with him, the Council would express their unqualified satisfaction. Your Council trust that a good number of the members of this Branch will attend the forthcoming annual meeting in London, which holds out attractions, both professionally and socially, not to be

surpassed by any that has preceded it in the history of the Association. The Branch keeps steadily increasing in numbers and usefulness. There are now eighty-four members, and other gentlemen are expected to join shortly. The Treasurer gives a favourable account of the funds entrusted to him.

The Report of Council was unanimously adopted.

President-elect for 1874, and Place of Annual Meeting for that Year.—It was moved by W. WILLIAMS, M.D. (Mold), and seconded by G. TURNER JONES, Esq. (Denbigh), and carried—"That Thomas Evans Jones, Esq. (Llanrwst), be the President-elect for 1874, and that Bettws y Coed be the place for holding the next annual meeting."

Council of the Branch.—It was moved by E. T. HUGHES, M.D. (Colwyn, late of Mold), and unanimously agreed to—"That the following members constitute the Council of this Branch for next year, viz.:—A. E. Turnour, M.D., Denbigh; Ll. Lodge, Esq., St. Asaph; Robert Griffith, Esq., Abergele; Price Lloyd Davies, Esq., Abergele; Lewis Jones, Esq., Menai Bridge; and T. Davies, Esq., Colwyn.

Representatives in the General Council.—The following members were elected to represent the Branch in the General Council, viz.:—Thomas Taylor Griffith, Esq., F.R.C.S., Wrexham; Edward Williams, M.D., Wrexham; and Thomas Eytton Jones, Esq., Wrexham.

Representative to the Parliamentary Committee.—Thomas Eytton Jones, Esq. (Wrexham), was unanimously re-elected upon the Parliamentary Committee of the Association.

Next Intermediate Meeting.—Upon the invitation of the PRESIDENT, it was agreed to hold the next intermediate meeting at his house at Llanfairtalhairn, and accept his proffered hospitality; the time to be left to him and Secretary to decide.

Secretary and Treasurer.—The Secretary, D. Kent Jones, Esq. (Beaumaris), and Treasurer, G. Turner Jones, Esq. (Denbigh) were unanimously re-elected.

New Members.—The following gentlemen were duly proposed, seconded, and elected members of this Branch and of the British Medical Association, viz.:—Albert Eytton Lloyd, Esq., Rhyl; John Roberts, M.D., Chester; and Robert William Evans, L.R.C.P. Edin., Wrexham.

Presentation of Testimonial to T. T. Griffith, Esq., of Wrexham.—Dr. LLEWELYN WILLIAMS (Wrexham), as the Hon. Sec. of the Portrait Committee, stated that the presentation of the testimonial to Mr. Griffith would take place. The work had been executed by Mr. Edwards, of Wrexham.—Dr. HUGHES, in presenting the testimonial—a portrait of Mr. Griffith—said that it was a token not only of the esteem in which Mr. Griffith was held by the members of that Branch, but as a mark of the high estimation in which he was held by every member of the medical profession who was fortunate enough to have the honour of his acquaintance. Not only had Mr. Griffith been the prime mover and supporter of the North Wales Branch of the Association, but they had rarely missed his presence at their annual gatherings. In conclusion, he trusted that Mrs. Griffith would cherish the photographic portrait which he then had the honour of presenting to him (Mr. Griffith), on behalf of the members of the North Wales Branch of the British Medical Association.—Mr. T. T. Griffith, in replying, said that he could look back for sixty years in his professional career and heartily thank the Giver of all good gifts for having granted him health and strength and professional prosperity, and also for granting him the respect and esteem of the honourable members of the medical profession. For their personal kindness to himself and to his wife he could only tender them personally his heartfelt thanks. To the twenty-four years during which he had regularly attended the meeting of that Branch he should ever look back with pride and pleasure, and no vain regrets.

Papers and Communications.—The following were read.

1. Case of Severe Injury to the Hand, with Specimen. By A. E. Turnour, M.D., Denbigh.
 2. On Bromide of Potassium in Infantile Convulsions. By T. T. Griffith, Esq., Wrexham.
 3. Cases of Epilepsy in Asylum Practice, and Growth of Bone upon the Brain, with Specimens. By G. Turner Jones, Esq., Denbigh.
 4. Case of Emphysema. By W. Williams, M.D., Mold.
 5. Case of Laceration and Loss of Half of Scrotum from Fall on a Hayfork, showing remarkable Tolerance of Injury. By J. H. Wolstenholme, Esq., Rhyl.
 6. On the Treatment of Stricture of the Urethra by Mr. B. Holt's Method. By T. Davies, Esq., Colwyn.
 7. Specimen of Erosion of the Skull from Tertiary Syphilis. By E. Shelton Jones, Esq., Denbigh.
 8. On the Public Health Act. By T. Eytton Jones, Esq., Wrexham.
- Dinner.*—All the members, with four or five guests, partook of an excellent dinner, and an exceedingly pleasant evening brought to an agreeable termination a most successful meeting of the Branch.

LANCASHIRE AND CHESHIRE BRANCH.

In the Report of the Council Meeting of this Branch in last week's JOURNAL, the name of Dr. W. Roberts of Manchester should have been inserted as one of the representatives in the General Council. His name was not in the copy forwarded to us for publication.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

JUNE 4TH, 1873.

P. D. HANDYSIDE, M.D., President, in the Chair.

Tumour of the Orbit.—Dr. ARGYLL ROBERTSON showed a rounded lobulated tumour about the size of a long egg, which he had removed from the orbit of a healthy female, aged 50. It had existed for some years. The eye was not involved in the tumour, though the nerve was stretched and the ball protruded. The bulk of it seemed to be a spindle-celled sarcoma, but it contained nests of cells like those found in epithelial cancer.

Tumour of the Orbit.—Mr. JOSEPH BELL described a case of tumour of the orbit on which he had recently operated. It involved the outer canthus, and a portion of both lids was adherent to the periosteum of the orbit, and evidently had deep attachments. Three previous attempts at removal had been made. The tumour was continuous with the lacrimal gland, which was cancerous. The periosteum of the orbit was scraped off, and the conjunctiva of the globe on the outside also removed. The deficiency in the lid was remedied by a flap from the cheek.

Intussusception.—Dr. AFFLECK read an account of two cases of intussusception in children. 1. A child, aged seven months, generally healthy, had diarrhoea, vomiting, severe retching, and pain, which resisted ordinary remedies. On the fourth day, blood passed *per anum*. Large enemata were at once rejected. No hernia was present. Inflation of the bowel by bellows was tried without success. Fluid mercury was given by the mouth, but the patient died on the fifth day. On *post mortem* examination, an invagination of the ileum into the caecum was found in the right iliac fossa. The bowel above was greatly distended; below it was pale and empty. 2. The second case was that of a child, aged five months, previously healthy. In the course of a diarrhoea, a copious evacuation was followed by a sudden cry, vomiting, retching, and exhaustion; after which no faeces passed, only blood. Nothing was felt in the rectum. There was no hernia. The abdomen was soft. Enemata were at once expelled, but strong inflation with the bellows after two or three minutes suddenly overcame the resistance, and the abdomen became tympanitic. Vomiting ceased; a warm bath and castor-oil were followed by a free evacuation; and the patient next day was quite well. The author insisted on the necessity for the interference being early, if it is to be useful at all.—After remarks from Drs. CUNYNGHAME and MURRAY, Dr. SANDERS drew a distinction between the two forms which were found in young children: in the one, the ileum was passed through the ilio-caecal valve into the colon; in the other, the caecum itself was invaginated into the colon. In the second form, he believed early inflation had a good chance; in the first, little could be done.—Drs. GORDON and CHIENE had seen cases in young children after death, where the invagination could have been easily remedied by operation.—Dr. SANDERS explained that these were very common phenomena in children who died of diarrhoea, but had no effect in causing death—merely preceded it.—Dr. MATTHEWS DUNCAN made some remarks on the relation of inversion of the uterus to intussusception.

Umbilical Hernia.—Dr. T. ANNANDALE gave a verbal account of a case in which he had recently treated an umbilical hernia recently strangulated in an old gentleman, by making an incision in the middle line between the ensiform cartilage and the umbilicus, from which he pulled the intestine out of the hernia, instead of in the usual way cutting on the hernia and pushing it on. The operation was followed by a free evacuation, but the patient died somewhat suddenly next day.—Mr. JOSEPH BELL made some observations on the case, and recorded one in which he had operated with success on a very large umbilical hernia, which had burst through the sloughing skin which had covered it; and alluded to another case recorded at length in this JOURNAL (1873, vol. i, p. 193), in which he had examined the various hernial outlets from within the abdomen.—Dr. CHIENE criticised and objected to Mr. Annandale's operation.

JUNE 18TH, 1873.

P. D. HANDYSIDE, M.D., President, in the Chair.

Microscopic Specimens.—Dr. MATTHEWS DUNCAN gave a short account of some beautiful microscopic specimens kindly brought to the Society by Dr. Slavjansky of St. Petersburg, illustrating adenoma polyposum hemorrhagicum uteri, and also epithelial cancer of the uterus. The differences in the arrangement of the nest of epithelial cells in the connective tissue was very well shown.

Excision of the Head of the Femur.—Mr. ANNANDALE showed two children in whom he had excised the head of the femur for disease of hip-joint, twelve and ten months ago respectively. In both, the movements of the joint were free, and one walked with considerable ease. He mentioned that he had done the operation sixteen times, and only three deaths had resulted at dates some months after the operation.

Suppurative Nephritis.—Dr. T. G. STEWART showed the parts concerned in a case of suppurative nephritis and perinephritic abscess with local peritonitis, which had died soon after admission. He alluded to another case in which Dr. Gillespie had cut down on the abscess from the back with the very best results. The patient recovered.

Abnormal Rib.—The PRESIDENT showed the upper thoracic wall of a case in which the fourth rib on the left side was split and widened very much just over the region of the apex-beat, so as to appear, on first sight, as if its lower section was the fifth rib.

Atropia-Poisoning and Delirium Tremens.—Dr. ANGUS MACDONALD read an account of a case of atropia-poisoning coincident with delirium tremens. The patient, a young gentleman, was said to have taken a fit. He was found unconscious, with fully dilated pupils, which did not respond at all to light. There was no paralysis. The delirium seemed alcoholic in character. The tongue was not bitten; and though the patient was not restless, there had been no real fit. Cold was applied to the head, and croton oil given. Dr. Sanders saw the patient, recognised the alcoholic element, and suggested the possibility of belladonna-poisoning, but feared meningeal mischief. It was found that the patient had been ordered one ounce of the liquor atropiæ sulphatis, to be used for a conjunctivitis, three months before. Consciousness gradually returned, but with it symptoms of delirium tremens, from which in a few days he made a good recovery. The case is worthy of notice from the rarity of such a coincidence, and also as giving information as to the minimum fatal dose of atropia, which has been apparently much exaggerated. Taylor records a case in which two grains proved fatal, but some authorities speak of one-fortieth or one-twentieth of a grain as being a dangerous dose.—Dr. T. R. FRASER said that, while very small doses, such as one-fiftieth to one-twentieth of a grain, really did produce alarming symptoms, it was known that much larger quantities were not lethal; and from his experiments on animals, he believed that a comparatively large dose could be borne.—Dr. ARGYLL ROBERTSON alluded to the symptoms often seen after the use of eye-water too frequently in young children. He did not know of any fatal case. He believed they acted, not by being absorbed by the conjunctiva, but by passing into mouth either through puncta, or by the angle of mouth itself.

Chronic Tetanus Treated by Excision of Cicatrix.—Mr. ANNANDALE read a short account of a case of chronic tetanus cured by the excision of a cicatrix of a wound. A boy, aged 16, wounded his foot. On the ninth day afterwards, trismus came on; and he came into hospital on the sixteenth day after the wound, on the seventh of the trismus. There was no laryngeal symptom nor opisthotonos. The patient swallowed well. His bowels were freely opened by croton oil, and for three days he was kept under the influence of small doses of morphia. For two days more he had ninety grains of chloral daily. On the twelfth day of the tetanus, slight contraction of the muscles of the limb begun. On the next day, the cicatrix and a piece of nerve which appeared congested were cut out, and all medical treatment stopped. There was no improvement for two days; but on the third day, or sixteenth of the disease, he began to improve, and went out soon quite well.—Mr. JOSEPH BELL highly approved of the treatment adopted, but doubted whether it would have been of much use had the case been one of acute severe tetanus with opisthotonos. His experience was that cases of chronic tetanus—i.e., those in which severe symptoms did not come on in the first five or six days—generally recovered spontaneously.—Dr. CHIENE agreed with Mr. Bell in the main, but believed that in this case the operation had been of signal benefit.—Dr. FRASER made some observations on the central changes set up by the peripheral irritation, which may go on even after removal of that irritation. He had seen this case, and thought the operation had been useful.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, MAY 14TH, 1873.

SAMUEL GORDON, M.B., in the Chair.

Functional Mitral Murmur.—Mr. CHRISTOPHER J. NIXON detailed several cases illustrating the existence of mitral murmur, independent of valvular lesion. In three out of five cases of functional mitral murmur, which had recently come under the author's notice, the nature of the murmur was finally determined by the negative results on *post mortem* examination; and in the remaining two cases, the murmur was intermitting in character. The difficulty attending differential diagnosis was great, from the similarity in character of a functional and an organic bruit; and even the seat of functional murmur was not as yet a settled point. Thus Hope and Beau held, that it was developed at the aortic orifice; Hughes, that it arose in the pulmonary artery; Parrot and Hunt, that it arose in the right auriculo-ventricular orifice; while Gardiner, Bristowe, Hayden, Da Costa, and others, maintained that the site of functional apex murmur was in the mitral orifice. Drs. Stokes and Walshe, indeed, had placed on record cases where mitral murmur coexisted with dilatation and hypertrophy of the left ventricle. In explanation of the cause of functional murmur, we should either believe, with Bamberger, that the murmur was due solely to sonorous vibrations of the auriculo-ventricular valves, produced by atony, dependent on fatty degeneration of the musculi papillares, or hold that it was due to regurgitation of blood through a functionally imperfect valve. Assuming then, with Bristowe and the majority of writers, that the murmur was the symbol of regurgitation, it was still impossible to offer any single explanation which would apply to all causes, as to the cause of the murmur. He (Mr. Nixon) would, with diffidence, suggest that, in most cases, functional mitral murmur was the result of an irregularity, or rather, a want of correspondence in the action of the sets of fibres of the ventricle, which obliterate its cavity, and those which close its valve; that this altered function was entirely due to some defect in the vital power, or condition of the heart itself, leading either to atony of the musculi papillares, or to derangement in the rhythm of their movement. The points of differential diagnosis were, the changeable characters of the murmur, and its alteration by position, its varying existence, and its varying intensity, a variation in the volume of the radial pulse, the almost complete absence of pulmonary distress, or of doubling or accenting of the second sound, and the position of the greatest intensity of the murmur, over the body of the left ventricle (Da Costa). The author was of opinion, that inorganic mitral murmur was of much greater frequency, than was commonly taught or believed, and that the old doctrine, that murmurs are the landmarks of valvular disease, needed much qualification, especially when applied to those developed at the apex of the heart.—The CHAIRMAN expressed his opinion that functional mitral murmurs were usually connected with some nervous lesion. In support of this view, he instanced the case of a growing lad, who was the subject of hay-asthma, from year to year. During the attacks, and not otherwise, a loud, rough, rasping, regurgitant murmur, was always audible in the situation of the mitral valve.—Dr. HAYDEN said that patients suffering from a mitral murmur of any kind would, a few years ago, have been refused as ineligible lives. But he had been led to consider non-valvular mitral murmur of systolic rhythm, and he had read a paper on the subject before the British Medical Association, in 1867. His view of these cases was, that the murmur was due to the yielding of a portion of the wall of the left ventricle, in consequence of which, the papillary muscles were altered in their relation to the valves. As regarded differential diagnosis, there was in the murmur itself a distinguishing quality, in addition to the signs mentioned by Mr. Nixon. It was an exceedingly soft blowing murmur, accompanying or succeeding, but not superseding, the first sound of the heart.—Dr. H. KENNEDY thought several causes were combined in the production of functional cardiac murmurs, one of the principal being a certain state of the blood. The position of the patients altered the character of soft, blowing murmurs; they were either lost altogether, or rendered much weaker when the patient assumed the upright position. Murmurs in fever surely depended on alterations in the blood.

On the Influence of Digitalis on the Weak Heart of Typhus Fever.—Dr. GRIMSHAW, in answer to an appeal made last January, by Dr. James Little, that the effect and value of digitalis in acute asthenic disease, should be put to the test by hospital physicians, had used the drug rather extensively in the treatment of severe typhus fever during the past four months. It might now be taken as an established fact, that digitalis acted as a stimulant to the circulation, restoring tone to the muscular fibres of the heart and blood-vessels. Loss of tension was

the great character of the pulse in many cases of typhus, and this disease was consequently the one most adapted for experiments with digitalis. Having described at some length the differences in the sphygmographic tracings of the pulse in health and in fever, Dr. Grimshaw detailed thirteen cases of severe typhus, in which he had used digitalis in large quantities, generally without any other medicine or stimulant. Two cases terminated fatally; but of these one was admitted to Hospital already in *articulo mortis*. Apart from statistical results, which would be unreliable as drawn from such a limited number of cases, the author had come to the following conclusions, namely, that digitalis does not shorten the duration of the fever, or influence its characteristic range of temperature (a fact pointed out by M. Desnos); that it prevents or lessens delirium, and improves the tension of the pulse, which falls somewhat in frequency under the use of the drug; that a sudden fall in the pulse-rate and temperature (while digitalis is being administered), is an indication of danger, and calls for the withholding of the drug; that suitable doses are from half an ounce to an ounce and a half of the infusion every second or third hour; and that stimulants should be given in addition, if the digitalis had not produced beneficial effects on the pulse (after twenty-four hours).—A discussion ensued, in which Drs. Hayden, A. Smith, the Chairman, Drs. Foot, H. Kennedy, Hawtrey Benson, and C. F. Moore, took part. The session then closed.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, APRIL 19TH, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Tubercular Disease of the Thyroid Gland.—Dr. QUINLAN showed an enlarged thyroid gland, with a portion of the larynx and trachea, of a man who came into hospital on March 31st, complaining of great weakness and loss of speech, and sank five days after admission. The tumour was symmetrical, weighing with the immediately adjacent parts one hundred and seventy-nine drachms. On section, it was found of bony hardness, and it possessed the microscopical characters of tubercle.

Thoracic Aneurism.—Dr. T. EVELYN LITTLE brought forward a specimen of aneurism of the arch of the aorta, taken from the body of a woman, aged 35, of intemperate habits. It was almost as large as an adult head, and sprang from the ascending arch of the aorta, extending across the root of the left lung into the anterior and upper parts of the left thorax. The first four ribs were extensively eroded, and the anterior wall of the sac was formed by the pectoral muscles.

Fibrous Tumour of the Uterus.—Dr. ATTILL presented a fibrous polypus, weighing half-a-pound, its greatest circumference seven inches, which he had removed under ether from the uterus of a patient, aged 48.

Senile Rickets.—Dr. R. W. SMITH laid upon the table the bones of a woman, aged 45, who was the subject of atrophy and softening of the skeleton. During the last five years of her life, she was bedridden, gradually becoming more feeble, and dwindling in stature until she became only one-half of her original height, her limbs coiling up into every possible shape. The total weight of the skeleton (with the cranium), was only 2½ lbs., or but one-fourth part of the weight of a child at birth. All the bones were light, soft, fragile, and extremely atrophied—being fractured in all directions. The base of the skull was throughout cribriform, and all traces of bone were evidently disappearing from her body, when death occurred. The interior of the bones contained a semifluid grumous matter, like that observed in the second stage of infantile rickets. Dr. Smith looked upon the case as one of rickets, and was glad to find that Trousseau had expressed his opinion that osteomalacia and rickets were the same disease. As to the cause of the disappearance of earthy matter from the system in this affection, Otto, Marchand, Drivon, Souliguet, and others, had found a large amount of lactic acid and lactates in the skeletons of the patients. The phosphatic salts were doubtless decomposed and removed by this acid. The same mode of treatment was useful in both osteomalacia and rickets, a fact which also went to prove the identity of these diseases.

OBITUARY.

TOBIAS BROWNE, M.R.C.S., Camberwell.

MR. TOBIAS BROWNE was born in Camberwell in 1793, and received his medical education at the then united hospitals of Guy's and St. Thomas's, where he was dresser to Sir Astley Cooper. He passed his examination at the College of Surgeons in 1814, and that at the Hall in 1816. At

eighteen years of age, he assisted his father as medical officer for Camberwell, an arduous duty in those days, when such a practice embraced the far distant extremities of that extensive parish. He continued to labour with diligence and assiduity in the profession he loved so well, and shortly took his stand as one of the leading practitioners in the south of London. His modest and retiring disposition prevented his taking an active part in any matters not immediately affecting his professional duties. His kindly manners and benevolent sympathy secured for him the love and high regard of all who knew him. Mr. Brown was long a member of the Court of the Apothecaries' Company, of which body he was master in 1868-9. He was thoroughly appreciated by the members of the highest grades of the profession, whose confidence and friendship he enjoyed in a high degree. He died on June 29th, as he had lived, in peace and good will towards all.

BENJAMIN J. CRISP, M.R.C.S., HARLESTON, NORFOLK.

MR. CRISP was born at Southwold, in Suffolk, in 1792. He received his professional education at Guy's and St. Thomas's Hospitals, and obtained the diploma of the Royal College of Surgeons in 1811. He practised for nearly eighteen years at Brixworth, in Northamptonshire, and in 1830 he removed to Harleston, where he practised until he retired from his profession, in 1854. He continued to reside in Harleston until his death, on May 14th. He was many years a guardian of his parish, and was deservedly loved by the poor. He was a man of active habits, a most cheerful and intelligent companion, and possessed the affectionate regard of his friends.

JAMES MILL, ESQ., SURGEON, THURSO, CAITHNESS.

MR. JAMES MILL of Thurso studied at the University of Edinburgh, and, when only 19, became a Licentiate of the Royal College of Surgeons of that city. During his period of study, he was apprentice to Dr. Goodsir of Anstruther, father of the late Professor Goodsir of Edinburgh. In 1827, he went to Trick, where for twenty years he practised his profession with great success. In 1848, he received a requisition from the inhabitants of Thurso to become their medical man, which he accepted, and for the last twenty-five years he worked among them with ardour and zeal. He was Surgeon to the Halkirk Poorhouse, as also to three neighbouring parishes. His district extended over upwards of seventy miles. He was elected Chief Magistrate of Thurso in 1852. He retired from this office in 1860; but in 1865 he was re-elected, and for some years he acted as Sheriff-deputy. Last year the public presented him with a handsome carriage, timepiece, and silver tea-service.

For the last six months his health has been failing. He died on June 27th, at the age of 65, deeply regretted. He received a public funeral, the largest ever seen in Caithness. The coffin was borne shoulder high by the Rifle Volunteers of Thurso, to whom the deceased was Surgeon.

THE HYGIENIC TRACT SOCIETY.—Under this title, a Society has been started, having for its object the printing and distribution of tracts and leaflets on sanitary subjects, written by qualified men. Its aim is that of stemming the stream of patients ever flowing into our hospitals, infirmaries, dispensaries, and asylums. Its intended result is, learning "better to appreciate the beautiful world in which we live, avoiding many of the sufferings to which we are subject, enjoying many blessings of which we are not worthy, and escaping many temptations we cannot wholly resist" (Lubbock's *Pre-historic Times*, p. 489). The proposed agency is by gratuitous distribution by mayors, guardians, inspectors, and the clergy. For the furtherance of this scheme, suggestions or assistance of any kind will be gladly received by Robert B. Blackader, 36, Trinity Square, Southwark.

HARMLESS LUXURIES.—It is being treated as a hardship that in some workhouses recently, medical officers have declined to certify that beer is necessary for able-bodied paupers employed in workhouses, and thus the working inmates, it is complained, are deprived of "their harmless luxury". We are glad to read the comment on this of the *Philadelphia Medical Times*, that "paupers in this country are not accustomed, except by special order of the physician, to such 'harmless luxuries'". The use of beer for a great household of paupers is not an economical, and can hardly be classed as a harmless habit, if it foster that taste for alcoholic stimulants which is the curse of our working classes.

A LECTURE

ON THE

INFLUENCE OF DISTENSION OF THE ABDOMEN
ON THE FUNCTIONS OF THE HEART
AND LUNGS.*Delivered at St. Mary's Hospital, Wednesday, July 16th, 1873.*By FRANCIS SIBSON, M.D., F.R.S.,
Consulting Physician to the Hospital, etc.

GENTLEMEN, I need not say to you, with whom I have so often worked with pleasure in these wards, what very great delight it is to me to come for one hour amongst you. My subject, as you will have seen from the announcement, is the influence of distension of the abdomen on the functions of the heart and lungs.

Since the chest is divided from the abdomen by the diaphragm, which forms the floor of one cavity and the roof of the other, the ascent or descent of that movable partition while it enlarges one cavity encroaches upon the other. When the chest enlarges, it enlarges in two directions; one outwards over its whole circumference by the expansion of the walls of the chest, the other downwards by the descent of the diaphragm. When the abdomen is enlarged, it is enlarged also in two directions; one outwards and downwards with the extension of the walls of the abdomen, the other upwards by the elevation of the diaphragm. When the abdomen is extremely distended, the whole cavity becomes oval in form, or shaped like a balloon, as you may see in this diagram; the outer part of it presses outwards, and the upper part of it presses upwards. The cage of the chest is raised by this upward movement. The whole of this wide cone formed by the upper part of the large oval abdomen, acting upon the lower ribs, forces them asunder to the right and to the left, and lifts up the whole front of the cage of the chest. The more important effect, however, of this distension is to lift up the heart at the centre of the chest, and the right and left lung on each side of it. When these organs are raised, as the cage of the chest in front of those organs is raised also, the apparent elevation of the heart is much less than the real elevation.

Distension of the abdomen may be caused by the distension of the stomach, the colon, and the small intestines, either singly or in conjunction; by the presence in the cavity of the abdomen of gas and of fluid; by the enlargement of the liver; and by tumours and cysts.

Swelling of the stomach and bowels with gas is caused not by the secretion of the gas from the living structures, but by its formation from the food taken into the stomach. This diagram, taken from a poor woman who literally died of starvation owing to cancer in the oesophagus, presents a perfect clinical proof of what I have said. You will observe, that there is neither gas nor food in the whole digestive canal. The stomach is like an intestine. The great intestine is smaller than a small one. The food that is in the stomach, and the food that has passed from the stomach into the intestines, are the cause and source of the gas that they contain.

The heart, as you may see in these diagrams, rests upon the stomach. When the stomach is greatly swollen, the heart and the lungs, if healthy, suffer but slight inconvenience when rest is preserved; but moderate exertion, and especially quick walking, or the ascent of a hill, will often bring great distress in the region of the heart, and even actual anginal pain passing down the left arm. When, as is frequently the case, the stomach is swollen in patients affected with Bright's disease, or with affections of the aorta or of the heart, the patient has great distress of breathing even when raised in bed, but especially if he lie down or exert himself. In all these cases (diagrams) there was great distension of the stomach, and they show the serious and too often fatal contest that takes place between the enlarged organs of the chest striving to get downwards, and the distended and enlarged organs of the abdomen striving to get upwards. The functions of both the higher and lower sets of organs—the thoracic and the abdominal—are seriously interfered with; but those of the organs of the chest are more seriously and more often fatally deranged than those of the abdomen. The heart and lungs are both removed upwards from the more ample space of the middle region of the chest into the contracted area formed by the diminishing cone of the chest. The heart suffers from its inability to expand downwards, and yet as it cannot send its blood through the compressed lungs, the right cavities of the heart become gorged with blood, as you may see in these drawings. Although in all

of them the stomach and intestines are large and push the heart upwards, that organ is compelled to receive into it the blood that is sent from the whole system, which blood once received into the organ cannot be sent onwards through the lungs, the lungs having an additional obstacle to their expansion and to their reception of blood by being compressed upwards, owing to the elevation of the diaphragm.

In this case (diagram) we have, perhaps, as complete an illustration of the contest as any that I can give you—the contest between the organs of the chest and the organs of the abdomen. You will observe that the aorta, which is affected with atheroma, is very greatly dilated and greatly lengthened; it has come down so low that the lower end of it is on a level with the lower end of the sternum. The consequence is, that the left ventricle and the right ventricle are pushed solidly downwards by the lengthened aorta, and the interior of the heart is itself compressed downwards by this very agency. Of course this displaces the stomach downwards. But here we have a fresh contest from below. The stomach is distended unduly with gas; so is the transverse colon; and so are the small intestines. The liver itself is gorged with blood, owing to the impossibility on its part of sending the blood forward to the right side of the heart; and, to crown all, in this case, we have effusion into the right side of the chest, displacing the heart to the side, and interfering with its work. Can we wonder that, under this accumulation of difficulties, this man died?

Here is another similar case. The man had aortic regurgitation. He was a labourer, aged 30, with a large athletic frame and an ample chest. He complained of shortness of breath, and of pain in the chest after a meal. This man would sometimes change rapidly from a state of comfort to one of extreme distress. Thus, on the 13th of July, when in these wards, he said that he never felt better in his life; and, on the 14th, all was changed, and a frequent cough, increased beating of the heart, and difficulty of breathing, rendered it impossible for him to sleep or to remain in the recumbent posture. This attack was associated with, and apparently caused by, great fulness of the stomach from eating.

Here is the case of another patient, a carpenter, with aortic disease. He suffered five years before admission from pain in his chest, especially after eating, and, on exertion, he felt as if "something were scratching him at the back of the breastbone." When in the hospital he still suffered pain in the lower part of the chest after eating, if he walked about, but not if he sat still. Here are other drawings, in which you will see an enlarged heart—enlarged owing to mitral and other diseases—and enlarged lungs caused by the enlarged heart. In one instance, the enlargement of the lungs was supplemented by extensive pulmonary apoplexy; and, in another, the heart was adherent and the right lung was contracted owing to bygone pleurisy; while in this case, the lungs were enlarged to a very great extent by emphysema. In all these cases the stomach, and to a less degree the intestines, lifted the heart and the lungs upwards, compressed the whole of the organs of the chest within a narrow compass, and interfered with their functions. In truth, we may see that the final close to the existence of all these patients was hastened by the distension of the stomach.

Each organ holds within itself a reserved force many times greater than the amount of force that is brought into play in the ordinary and quiet demands of life; but, in proportion as those demands are increased, more and more of the reserved powers are brought into use. The lungs—I have ascertained this in my own person—possess sixteen times as much breathing power to be used during violent exertion as they employ when the body is at rest. Thus, the patient affected with aortic disease, to whom I referred, felt no discomfort in the heart after food if he sat still, for then the heart had sufficient force to do its work; but when he walked after food he felt pain in the heart, for that organ had no reserve force to resort to, and so, by making violent and undue exertion, like a wrenched muscle, it excited pain within itself—in short, angina pectoris.

In considering the treatment of this distension of the stomach that thus confines the action of the heart and lungs, I need not detain you with the well known medicines often so serviceable on such occasions. Some of these, such as the warm and cordial tinctures, camphor, and, perhaps, chloric ether, are agreeable; some, if efficient, are repulsive, such as turpentine, assafoetida, and, perhaps, creasote; while others are neutral, such as that valuable remedy guaiacum. I have, before me, the case of a gardener who had mitral disease; he had, however, a complication of maladies—syphilis, subacute rheumatism, and ague. He complained of fluttering of the heart and great distension of the stomach. He was relieved by the use of turpentine and guaiacum.

Charcoal is of little or no use in these cases. Dried charcoal, owing to the immense distribution of its surface, absorbs a large amount of gas; but wet charcoal loses its subdivision. Suspend a piece of dry charcoal in the stomach, and of course it will absorb the gas. The very act of

swallowing causes it to become wet; when it drops down into the stomach, it becomes more wet still, and it is clearly out of the laws of possibility for that charcoal there to absorb one cubic inch of the immense mass of gas that is in the stomach.

I wish, however, rather to bring before you the other and non-medical means that may be employed for the relief of the distension of the stomach with gas. This gas, as I have said, is secreted, not by the structure of the stomach, but by the food. If you cut off the supply of food, sooner or later, when that already in the stomach has passed away, relief will be obtained. But we cannot cut off the supply of food; therefore we must select such kinds of food as give the greatest amount of nourishment, and tend to set free the least amount of gas; for, although every kind of food will produce gas when the powers of digestion are weak, yet some kinds will do it much more freely than others. My rule is simply this: Take no bread, but eat biscuits instead. Take no solid vegetables, but use lemon-juice freely. Squeeze some of it over all your food. Shun soups, cucumbers, and fruit. Prefer meat, fish, fowl or game, tender, but perfectly fresh, lightly cooked and juicy—not hard and dry; or take it thoroughly soft and fragrant, as sent up by the hand of the artist. Take no rich sauces, or indeed, any other sauce, than wholesome fresh lemon-juice or mushroom ketchup; no twice cooked, or salted, or seasoned, or dried meat. Let everything be fresh and savoury. Under this simple rule of substituting biscuit for bread and fresh lemon-juice for vegetables, relief will often be obtained from distressing symptoms indicating danger. Let the food be agreeable to the eye, fragrant to the nostril, and savoury to the palate; and, invited by those senses, the influences of the nervous system will bring those juices into the mouth and stomach that are required for the digestion of the food—juices that are attracted if the food is attractive, repelled if the food is repulsive.

The rules, however, that I have given are but a portion of the proper treatment. Each case stands upon its own grounds, and must be treated according to its own demands. In treating each case, the laws of nature must be strictly enforced. Departure from those laws has brought on the illness; and in a renewed obedience to those laws, we shall usually find the best road to restoration of health. The right treatment of disease is neither expectant nor heroic, but is a treatment founded on knowledge, a watchful interest in the patient, moderation, and good sense.

One patient had been quite well until the previous April, when, one night, after a late supper, he woke up fighting for breath and life. He raised a thin and frothy phlegm, which was stained the next day with blood. He had suffered from no such attack for a month; but he could not lie down; he was short of breath, and felt, as he said, inflated—blown out—sometimes almost ready to burst. His heart was very large, its action being powerful. There was a doubling of the first sound over the ventricles, and feeble first sound, and loud second sound over the aorta. Effusion was present in the right side of the chest. There was a mere trace of albumen in the urine, but I found in it one large waxy cast. The kidneys were the true seat of the disease. Under the influence of the restricted diet I have described, and the general treatment, he lost the distension of the stomach; he could lie down on one pillow; he had no return of the sense of suffocation; and the fluid in the right side of the chest disappeared. The condition of the heart and that of the kidneys were not materially altered.

Here is another case of a patient (represented in this little diagram) who complained of "trouble" over the region of the heart. His abdomen was swollen; the stomach displaced the lower boundary of the heart upwards, so that it was situated in the fourth space. Subsequently, under a restricted diet, the upper boundary of the stomach and the lower boundary of the heart fell almost to the extent of an inch. The heart having gained an increase of space, lost its "trouble"; and, though he was ill in other respects, the distension of the stomach disappeared.

Another diagram that I have here shows a more marked difference in the position of the heart during the second, as compared with the first, observation made eleven days previously. This patient complained that he had pulsation through the body, and that the heart stopped for two or three beats. This state was worse after dinner, and was accompanied by fulness in the head. The irregular action of the heart disappeared with the descent of that organ that followed upon the diminution of the size of the stomach.

The last case to which I shall refer gave me at first some anxiety from its obscurity. This patient was a fine-looking man, with a large but not overgrown frame. He was of good colour and complexion. He complained of great shortness of breath, and he had a dropsical swelling of the right lower limb. The only unhealthy condition that I could discover in his internal organs was a distension of the stomach from gas. I will allow that I felt as if there must be some other cause,

but I could find none. He took a dry diet; and although, a week later, the stomach was less distended, yet his right leg was still swollen, and his breathing short. He persevered, and gradually lost the shortness of breath and the swelling in the right leg, and he regained his usual good health.

Distension of the colon is illustrated in these diagrams. You will observe that, in these instances, the transverse colon is no longer transverse. In these they all form a loop from above downwards, the tip of the loop being midway between the navel and the pubes. You will also see that the ascending colon increases greatly in length, starting from its head in the crest of the ilium. You may remark, on looking at these two diagrams, that inasmuch as the top of the ascending colon immediately abuts upon the lower surface of the liver, the elongation of the ascending colon directly elevates the liver. So, also, with regard to this double flexure of the transverse colon. In one instance, you see the loop is single, and in another the loop is double. You will see that the descending colon is not in any of these cases, except perhaps in one very greatly distended; yet there is in all of them great distension. In this diagram, representing a back view, the descending colon is distended quite as much as the ascending and transverse are in any of the others. In another instance, you see that the liver on the right side, and the stomach and spleen on the left, are both lifted up, as it were, upon the top of the lengthened colon. You may remark in these cases that the liver rises very high; in one instance, quite into the lower end of the fourth space; and in another, as high as the third space. And you may observe how much higher the upper boundary of the right wing of the diaphragm, which is lifted up by the liver, is than the upper boundary of the left wing of the diaphragm, which is lifted up by the stomach. The result is that, in these cases we have the heart pushed over to the left side, owing to the elevation of the liver, which tends to displace the heart to the left; and while the right lung is compressed from below upwards, the left lung is encroached upon by the heart, which is pushed aside by the liver.

You will at once see, from the study of these diagrams, how seriously distension of the colon must affect the organs of the chest, not only the lungs, but also the heart, by displacing that organ to the left; whereas, in the case of the stomach, its displacement tended rather to the right.

The next set of cases that I shall bring before you are those in which the stomach, the colon, and the small intestines are all distended. In this diagram, distension of the stomach is not extreme, but there is extreme distension of the ascending, the transverse, and, I believe, the descending colon, and extreme distension of the whole of the small intestines owing to peritonitis. You will observe that this diagram shows, better than any other, the oval shape that the distended abdomen assumes. Contrast it with this one, which shows the shape of health, like a reversed sugar-loaf rounded at the top, while the other is a true type of complete abdominal distension, being a perfect oval. In this other case, where the abdomen is perfectly flaccid, you have neither the reversed sugar-cane shape of health, nor the oval of distension, but a double concavity. The centre of the abdomen is narrower than either the top or the lower part. We see here, in another diagram, the effect of immense distension upon the walls of the chest. See how these cartilages are pushed aside to the left, and those to the right, so that there is an addition of nearly one-third to the width from side to side. Again, you may perceive that the cage of the chest is lifted up by this great oval mass below pressing upon it from below, and this will account for the remarkable fact that, although we have the heart and lungs so elevated by the diaphragm thus pushed up, yet the lower boundary of the heart is very little above the lower boundary of the sternum; the lower boundary of the lungs is very little above the position in which we often find it in a perfectly healthy body. If you look at the aorta you will see how completely that artery has been driven over to the right side. If you compare the breadth of the heart from side to side, with the length of the heart and the great vessels from below upwards, you will see that the whole organ is, in point of fact, compressed upwards. In health, as you may see in several of these instances, the apex of the heart is lower than the lower boundary of the heart behind the lower end of the sternum. In this instance, the apex of the heart has been lifted upwards and is a third of an inch higher than the lower boundary of the heart at the end of the sternum.

We find in these cases—that the heart and the lungs are put to an immense disadvantage—that the lungs are compressed and the reserved air driven out of them—that the heart is compressed and the blood driven out of it—that the ventricles are diminished in size and are incapable of receiving so much blood as they did before—that there is an obstacle to their action, and that they are incapable of sending out the blood that they have already received with the ease that they did before. Again, if you look at the walls of the chest and the diaphragm, you see what an obstacle is put to the very limbs,

by which, as it were, the lungs expand and the heart is moved. The cartilages and ribs are pushed aside and lifted upwards. The cage of the chest has reached the limit of its powers by the elevation given to it, and permanently given to it by the distension of the abdomen. Again, look at the diaphragm, lifted up by this immense distension. How can it act downwards? If the diaphragm is affected with peritonitis, the inflammation paralyses the inflamed muscle. The whole contest is then narrowed to the smallest bounds; and the whole work of respiration must be done by the few ribs remaining unassailed at the top of the chest. In cases of peritonitis, respiration is what is very well called high. The whole of the breathing is performed by the laboured lifting up of the upper cartilages, the upper ribs and the clavicles. All the muscles that act—the sterno-cleido, the scaleni, the levators of the ribs and the scapulae, are hard at work, and, in spite of that, you see visibly in the face that the patient is undergoing chronic asphyxia, and must soon die unless his breathing is relieved.

Here is another case:—a repetition of the other, but a little less extreme. It shows in what I would call a rather beautiful and orderly manner, a series of tiers, one above another, the top one made by the distended stomach, the second by the circular curve of the transverse colon, and the third by the small intestines. Here is also another case, showing tier above tier in the same way, the intestines below, the transverse colon in the middle, the stomach above, and above that the heart. Here is also another, shewing the intestines below, the transverse colon at the middle and the stomach at the top, all pushing up the heart and lungs and interfering with their work. I could show to you other cases; but these are sufficient.

The tendency of this great distension of the stomach and intestines is to push the heart directly upwards, to flatten the heart from below, and to displace it somewhat to the right side. You see in this diagram that the aorta, instead of being shielded by the sternum, lies almost entirely to the right of that bone. The pulmonary artery, on the contrary, instead of lying entirely behind the spaces, is almost entirely behind the sternum. A similar condition obtains in this other case. You see that the apex has been raised. It is nearly half an inch higher than the lower boundary of the centre of the heart, although, naturally, it ought to be half an inch lower than that lower boundary. The position of the apex is the test of the extent to which the heart has been compressed upwards.

There are two means by which the treatment of great distension of the stomach may be met, independently of drugs; and I would say to you that when distension is extreme, drugs are worse than useless. They add, by their offensiveness, to the misery of the patient. These two modes are the insertion of the oesophageal tube into the stomach through the mouth, and the insertion into the stomach of the fine point for injecting morphia under the skin. I have the particulars of a case that occurred in this hospital—that of a man who had the most serious threatening of death in consequence of great distension of the stomach. The circumference of his chest was thirty-nine inches. We introduced the oesophageal tube, and a large quantity of gas escaped. The circumference of the chest was reduced from thirty-nine inches to thirty-seven, and for a time the man experienced perfect relief. Before this was done, he had great distress; after it, he was at ease. The relief lasted for some days. He had kidney-disease and various other serious affections; and after a time he died.

Another case, that I saw with the late Dr. Williams of Swansea, was more fortunate. The patient had acute rheumatism of a low type. The stomach was extremely distended, and respiration was interfered with in consequence. Dr. Williams introduced the tube; a large quantity of gas escaped; the powers of respiration were restored, and gradually the patient recovered completely, lived for many years afterwards, and is, I believe, now alive. With regard to the other method—the insertion into the stomach of the fine point for injecting morphia under the skin—I have never had the opportunity of employing it; but I have been always ready to use it if required; and I believe, though I cannot put my hand on a case, that it has already been practised with advantage and success.

I now come to the question of the distension with gas owing to rupture of the intestine, one of the most formidable incidents that can occur. There are two classes of cases. In one class the distension takes place slowly, widening out the abdomen in an oval form; while in the other class the distension takes place rapidly; and inasmuch as the muscular walls of the abdomen are the sentinels of the cavity, they do not yield, and the abdomen does not assume the oval form that it does in cases of inflammation of the intestines and stomach, with distension of those parts. The result is that the whole of the distending force is expended upwards, and the liver and stomach are elevated to an extreme degree. You may see that the top of the liver and the top of the stomach are seated just below the third cartilage, and the lower

boundary of the right lung immediately behind the fourth cartilage. All the organs are pushed up into the highest part of the chest; and, as the chest is a cone narrowing from below upwards, they are pushed up into the narrowest part of the house that they inhabit. You will also see that, on the whole, the right side is more affected than the left; and thus the liver, being a large and massive organ, is pushed upwards to a greater extent than the stomach. Thus in these two diagrams the right lung is much more highly raised than the left, and the apex of the heart is much less raised in proportion than the centre of the heart at its lower boundary.

I next come to distension of the abdomen from the effusion of fluid into the cavity. I am not rich in specimens of this kind of abdominal distension, but here is a very good example, admirably drawn by our old friend the artist, Mr. Fairland. You may see here that the whole of the interstices of the abdomen—especially the backward interstices—are filled up with fluid. You may mark the intestines and the stomach floating forwards, and the liver sinking backwards. You may see how the liver, instead of, when the stomach and intestines are distended, being pushed up so as almost to thrust itself and intrude upon the heart, drops away from the diaphragm, and leaves the fluid to make the elevation. You may mark how the whole abdomen assumes an oval form. The result is that the heart is pushed up, that the right lung is pushed up, and that the left lung is pushed up, all at about an equal pace, and you have, as the effect of all this, compression of those organs, and difficulty on their part to do their work. If those organs are at rest, and if there be neither heart disease nor lung disease, nor Bright's disease, then the patient may be able to lie down, and to go through his days and nights in bed, without shortness of breath. As a rule, however, patients who have a large amount of fluid in the abdomen are compelled to sit up. And this gives you a brief explanation of the inability to breathe in a recumbent posture in many of these cases. When the patient lies down, the fluid bears at once upon the diaphragm and presses it upwards. The right lung, the left lung, and the heart are compressed, and all the difficulties of respiration are most seriously increased; but when the patient sits up, then the fluid drops downwards to the lower part of the abdomen; the pressure is removed from the diaphragm and from the heart and lungs, and respiration can go freely on.

In cases, however, where you have disease of the heart, disease of the lungs, or disease of the kidneys, unfortunately the very cases in which fluid is often thrown out into the abdomen, and the very cases in which there is distension of the stomach and intestines, the mischief done is very great, and the relief to be afforded by any slight treatment is trivial.

I have one case in which the effect of the removal of a very little fluid lets in a flood of light upon the terrible influence of distension. It is the case of a man who was in the Albert Ward. He was a labourer, aged 23. He came in with aortic and mitral regurgitation, great enlargement of the heart, and distension of the abdomen. He complained of pain about the heart and great difficulty of breathing. The urine was scanty, amounting to only twenty ounces in the twenty-four hours; and the quantity was not increased by the treatment adopted. The abdomen was greatly distended, its circumference measuring forty-one inches; and this distension was chiefly due to swelling of the stomach and intestines with gas. The quantity of fluid was not great, but it was determined to remove as much as possible. An incision was made in the skin four inches below the navel; and, to avoid the intestines, which were perilously near the surface of the abdomen, the point of the trocar was not pushed backwards, but obliquely downwards. At first, only a teaspoonful of serum flowed; but we had been prepared for this; and inserted a female catheter through the cannula, and so pressed gently backward the wall of intestine that was dropping upon the end of the cannula so as to stop it up. Seventy-five ounces flowed pretty quickly away through the female catheter. The measurement of the abdomen fell from forty-one to thirty-eight and a half inches. The man passed twenty-four ounces of urine that night. The next day, he could breathe with perfect ease, and he felt in comfort. The quantity passed in the twenty-four hours increased from twenty ounces to seventy-four on the second day, eighty-six on the third, and ninety on the fourth. The treatment in all other respects was absolutely unaltered. The improvement continued for a time; but at the end of three weeks the urine lessened, and the fluid in the abdomen increased. One hundred and fifty ounces were withdrawn; but, although this produced relief and some increase of urine, the patient became gradually worse, and died about five weeks afterwards. In this case, the distension of the abdomen acted, as it were, as a ligature, and prevented the secretion of urine. As soon as this ligature was removed by the withdrawal of a moderate amount of fluid, the quantity of urine increased.

I find that my time has expired; and you know my old maxim about

not transgressing the allotted period. The other subjects that I had intended to bring before you were, ascites associated with cirrhosis of the liver, when its effect on the functions of the heart and lungs is comparatively trivial; ascites associated with disease of the heart, when its effect is more serious; ascites associated with Bright's disease, when its effect is more serious still, and more difficult for the physician to combat; and the influence of enlargement of the liver upon the functions of the heart and the lungs. Pure enlargement of the liver produces very little mischief to the heart and lungs, and for this reason: if there be no distension of the intestines, the liver, owing to its bulk, drops downwards upon the intestines and compresses them; it, therefore, does not push upwards and compress the heart and lungs. But, if there be enlarged intestines and a distended stomach, and fluid in the abdomen, pressing the liver upwards, then, if the liver be also large, you get, besides that accumulated series of causes of distension of the abdomen, this additional one. In these diagrams you have a fivefold series—the first made by the liver, the second by the stomach, the third by the transverse colon, the fourth by the small intestines, and the fifth by the fluid. But, if the right upper lobe of the liver be enlarged by an abscess, or a hydatid cyst, or a large cancerous mass, then the liver, ascending into the right side of the chest, forces the heart over into the left side, and compresses the right lung directly and the left lung laterally through the medium of the heart.

Gentlemen, I need not tell you that I have touched upon a subject, to illustrate which would require a series of practical lectures, but I shall be well rewarded if I have awakened in any of your ingenuous minds the desire to study, in the mortuary and in the wards, the various causes of distension of the abdomen, and the various and often serious and even fatal results that this distension may induce on the functions of the heart and lungs. The clinical study of disease is inexhaustible. It requires knowledge, patience, skill, an increasing interest in the welfare of the patient, an increasing interest in the study of his disease, as you watch it. Clinical study is ever living, ever fresh. It brings that true power that depends on true knowledge and wisdom, to him who has diligently pursued it, and who still pursues it to the end of his career.

SMALL-POX AND VACCINATION.—Dr. E. H. James, reporting on the prevalence of, and the active measures taken by the Board of Health to arrest the small-pox in New York, states that during the winter of 1871-2 there were more than 300,000 vaccinations and revaccinations by the Health Department alone, to say nothing of the number in private practice and at the dispensaries. "It requires no argument at this late day to prove the efficacy of vaccination in the prevention of small-pox, otherwise repeated instances could be given of the only person in a crowded tenement house who refused vaccination becoming the victim of the disease, while all of the others escaped."

LADY MEDICAL STUDENTS.—The *Times* has the following:—Miss Jex Blake and others, although defeated by the recent decision in the Court of Session, are not yet discouraged. Edinburgh being no longer open in order to qualify for the medical profession, they have resolved to see what the Senatus Academicus of the University of St. Andrew's can do for them. In appeals addressed to that body, they request sanction for the admission of women as students of medicine in the University, and submit the following grounds among others on which they rest the application. In reason 8, they say, "The most general objection to the admission of women to an University lies in the supposed difficulty of educating them jointly with male students of medicine." This argument, they remark, may be applicable to every University in the kingdom, with the exception of St. Andrew's, where there are no male students of medicine. In reason 10, they say, "If a supplementary charter should be needed, this could be obtained without delay." They further intimate they are "willing to be responsible for all contingent expenses." Reason 12 is, "We are in a position to state that at least fifteen ladies would at once avail themselves of the permission, if given, to matriculate at the University of St. Andrew's." Reason 13, "We may further state that we, with the assistance of the committee formed in our favour, are prepared at once to hire or build suitable premises for a medical school, and are also in a position to arrange for a complete course of lectures on all the required subjects of medical education which are not taught at St. Andrew's, if the University authorities will sanction such an arrangement, and will subsequently admit us to examination and graduation." It is rumoured that the application is favourably viewed by the majority of the members of the Senatus.

LECTURES

ON

THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,

Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

VARIETIES IN THE MUSCLES OF THE LOWER LIMB.

LECTURE III.—*Concluded.*

THE MUSCLES ON THE FRONT OF THE LEG AND FOOT.

THE extensor muscles on the dorsal aspect of the leg, corresponding in their disposition with those on the dorsal aspect of the forearm, are divided into three parts. Of these two, the tibial or tibialis anticus, and the fibular, or peronei, are marginal and are inserted into the tarsus, while the third or intermediate—the extensor longus digitorum—extends to the toes. The marginal parts, like those on the dorsal or extensor aspects in other regions, overlap the sides of the limb, and, passing upon the flexor aspect of the tarsus, acquire a flexor action of the foot upon the leg. In the extent to which they do this there is not much variety. The irregularities are rather shown in the more or less imperfect manner in which each is separated from the intermediate, or extensor digitorum, part of the series. That is to say, subdivision into tarsal, or marginal, and digital, or median, muscles, not unfrequently fails of its normal completeness, in consequence of the tarsal muscles not being fully segmented from the digital muscles.

Thus, the tibialis anticus is commonly inserted into the first metatarsal bone, as well as into the internal cuneiform bone; and the two portions thus induced are often separate for some extent. Further, the want of limitation of this muscle to the tarsus is sometimes, in addition, indicated by the extension of a slip from it, where it comes into close contact, or conjunction, with the extensor brevis, and the slip, passing to the first phalanx of the hallux, is an imitation of the extensor primi internodii pollicis. This slip sometimes blends with the extensor hallucis, instead of joining the extensor brevis, and reaches the terminal phalanx of the hallux.

The same muscle, tibialis anticus, sometimes exhibits further evidence of imperfect concentration by sending slips, on the one side, to the plantar fascia, which may seem to increase its action as a flexor;* and, on the other side, into the anterior annular ligament or the dorsal fascia, which increase its action as an extensor. Or a distinct muscle may be segmented from it, arising from the tibia and passing to the annular ligament or the dorsal fascia. It has acquired the names of "tensor fasciæ dorsalis" and "tibio-fascialis anticus"; and it resembles the disposition of part of the tibialis anticus in the hippopotamus.† An additional outward extension of the tibialis anticus was presented by a slip which Macalister found passing to the side of the astragalus and the os calcis.

With regard to the peroneal, or outer marginal sector, I have not seen the notice of any case in which the peroneus longus failed to take its remarkable and very general‡ mammalian course to the base of the first metatarsal bone; but it has been found to detach slips to the other metatarsals on its way to the first. Thus, in a case of talipes varus, Macalister traced it into the third and fifth metatarsals, as well as into the first; and Wood traced a part of it into the cuboid. These additional attachments to the other metatarsals are not uncommon as regular conditions in other mammals. In a dog I found them attached to the bases of all the metatarsals, and in the pig to two. The muscle is rarely connected by fleshy slips with the other peronei. Meckel§ found a separate or intermediate muscle segmented from between the long and the short peronei and joining the long muscle beneath the

* Wood (*Proceedings of the Royal Society*, 1865, p. 389) remarks that a sesamoid bone is often found in the tendon of the tibialis anticus, playing over a bursa on the internal cuneiform bone; and in one instance a strong slip of tendon passed from it to join and strengthen the inner division of the plantar fascia, being ultimately attached to the bone of the great toe.

† The most remarkable example of flexor action in the tibialis anticus is furnished by the two-toed sloth, in which the tendon of the muscle is continued into that of the flexor digitorum (*Journal of Anatomy*, iv, 66).

‡ See my *Observations in Myology*, p. 182.

§ In *Pteropus* I could not trace it beyond the second metatarsal bone (*Journal of Anatomy*, iii, 317).

§ *Archiv*, v, 117.

fifth metatarsal bone. Often the tendon, as it passes beneath the foot, gives origin to the short flexor of the little toe and to the interosseus nearest to it.

The other parts of the peroneal division—the peroneus brevis and tertius—are more often and more extensively blended with the middle division, or extensor digitorum, than is the case with the muscle—the tibialis anticus—which forms the tibial sector. The peroneus tertius, indeed, may be regarded as an intermediate muscle segmented from between the peroneus brevis and the extensor digitorum. Often, in as many as ten per cent., it is not segmented at all—that is to say, it is absent; and, often, it is imperfectly segmented from the extensor digitorum. Thus it may appear as a mere offset or slip from that muscle; so that it was described by Cowper as a part of the extensor digitorum to which five tendons were thus assigned. Henle, however, observes that an areolar line of demarcation between the two may usually be discerned. The union between the two is also often retained by the peroneus tertius sending a slip to the division of the extensor digitorum which passes to the fifth toe, or to the aponeurosis over this extensor tendon, or to the extensor tendons of the fourth and the fifth toes. Sometimes, also, the peroneus tertius has been found connected with the adjacent dorsal interosseus. It may also present other irregularities, being inserted into the fourth metatarsal bone as well as into the fifth, or, chiefly, into the fourth, with only a slip to the fifth, or by two tendons into the fifth; or the muscle may consist only of a mere fibrous band detached from the extensor digitorum; or, as observed by Moser, it may send a separate slip on to the first phalanx of the little toe.

The varieties in the peroneus brevis resemble closely those of the peroneus tertius, the most frequent being its connection by means of a tendinous slip, which has been called “peroneus quinti”, with the extensor tendon of the fifth toe, or with the aponeurosis covering that tendon. In some instances this peroneus quinti is nearly or quite a separate muscle; and in some it joins the interosseous muscle instead of the extensor tendon. In two cases mentioned by Wood, the peroneus brevis passed to the distal part of the upper surface of the fifth metatarsal; and in both these the peroneus tertius was absent. The same arrangement was found in other cases; but it is not distinctly stated that the peroneus tertius was absent in these. The tendon of the peroneus brevis has been double, the two parts having the usual insertion, and, in addition, extending to the base of the fourth metatarsal bone; and it has, in some instances, sent a slip to the peroneus tertius. In some it sent a slip, accompanying the peroneus longus, as far as the cuboid bone, into which it was inserted; and Otto mentions an instance in which it was arrested just below the ankle, and was inserted into the os calcis; the peroneus tertius was absent. Wood observed it to send a slip to the abductor of the little toe; and the same anatomist, as well as Hallett, saw a fusiform muscular belly developed in the tendon, forming a peroneus quintus detached from the peroneus brevis to the extensor tendon. I should have observed that the peroneus quintus which, as I have just said, is the name given to the offset from the peroneus brevis, is often associated with the similar offset from the peroneus tertius to the extensor digitorum; so that in such cases the last muscle derives two adjuncts from the peroneal sector.

Additional peronei are also not very uncommon, and take various directions. Sometimes they arise between the peroneus brevis and tertius, and pass to the base of the fourth, or of the fifth, metatarsal bone, or to the extensor tendon; or they arise behind the peroneus brevis, low down, and pass with it to the base of the fifth metatarsal bone, or to the cuboid bone, or to the side of the os calcis, or to the side of the ankle-joint. Wood found the additional muscle, in one instance, arising from the lower third of the fibula, and passing to the anterior annular ligament and the fascia on the dorsum of the foot, thus repeating, from the fibular side of the leg, segments similar to those which I have mentioned as occasionally passing from the tibialis anticus upon the dorsal aspect of the foot.

The irregularities in these divisions of the peroneal sector are of much interest. First, the number and frequency of the irregularities (associated in them, as it so commonly is in other muscles, with instability or liability to disappearance) contrast markedly with the little variability, which is observed in the undivided tibialis anticus, and also in their undivided serial homologue, the extensor carpi ulnaris. They remind us, however, of the variability of the radial sector in the forearm, which is divided into the supinator longus and the radial extensors. Secondly, the two leading irregularities—the blending with the extensor tendons and the absence of the peroneus tertius—are the result of a failure in the developmental processes to carry out two specially human features, two processes of segmentation: viz., the segmentation of the tarsal muscles from the digital muscles, and the segmentation of a particular tarsal muscle, to ensure the proper elevation of the fibular side of the foot and

the planting of the sole flat upon the ground. I call these two specially human features, because in animals below Man the peronei are seldom devoted exclusively to the tarsus, being generally blended with the extensor tendons; and the peroneus tertius, when present, or its representative, is not inserted, even partially, into the tarsus, but is usually continued altogether into the extensor tendons of the toes. The irregularities in these muscles in Man are therefore distinct results of a failure in individual instances to rise above the lower animal form, and to acquire the complete human type. They moreover show the peronei to be derivatives from the extensor mass, for they are all, or nearly all, the result of imperfect segmentation from that mass; and they all, or nearly all, present a condition intermediate between the fully specialised condition of the digital and tarsal muscles of the well formed human foot, and the less specialised condition of the same muscles in the animal foot, in which, as I have already said, the tarsal muscles are imperfectly separated from the extensors of the toes.

The close resemblance of the varieties in the peroneus tertius to those in the peroneus brevis, added to the place of insertion of the tendons of the two muscles, shows that they are parts of one muscle, the difference or separation being caused by the one passing behind the ankle, and so acquiring a flexor action; while the other remains in front, and retains its extensor action.

It is further interesting to observe that the irregularities in the extensor carpi ulnaris, which is the serial homologue of the peronei, and which corresponds most closely with the peroneus tertius, resemble, as far as they go, the irregularities of that muscle, and, therefore, those of the peroneus brevis. I have already said, however, that they are much less numerous than those of the peronei. Like them, they result chiefly, if not exclusively, from imperfection of segmentation from the extensors of the digits. Thus a slip is often found passing from the extensor carpi ulnaris to the extensor tendon of the fifth finger or to its sheath, which I need scarcely say corresponds precisely both with the peroneus quinti from the peroneus brevis, and with the similar slip so often sent from the peroneus tertius. The tendon of the extensor carpi ulnaris, now and then sends a slip to the middle of the shaft of the fifth metacarpal bone, or one to the abductor minimi digiti. I do not find any tendency in the varieties of this muscle in Man to imitate the course of the peroneus longus part of its serial homologue in the foot; although a slight inclination in that direction is shown in some Mammals (Manis, Otter, and Raccoon) by the insertion of its tendon upon the ulnar and palmar, rather than upon the dorsal aspect, of the fifth metacarpal bone.

The most interesting variety in the extensor sublimis digitorum pedis is that by which it retains connection with the metatarsal bones, by sending, as it occasionally does, a tendon to the base of the fourth metatarsal bone, in addition to its frequent relation to the fifth metatarsal bone, through the medium of its junction with the peroneus tertius. Slips are not unfrequently detached to one or the other, or to both these metatarsal bones, by the tendons of the extensor digitorum on their way to the toes; and they afford an illustration of imperfect concentration of the muscle upon its special work of extending the toes, and furnish examples of the manifestation in the digital muscles of that imperfect separation of the digital from the tarsal series of muscles, which we have found to be the prevalent failing in the tarsal extensor muscles. This imperfect separation of the two groups, tarsal and digital, in the foot, is more frequent than the corresponding irregularity in the hand. This probably is explained by the circumstance that a large part of the fibular sector passes behind the ankle, so acquiring a flexor action, and detracting seriously from the extensor agencies which operate on the foot, and which have to be supplemented from the extensor of the toes; whereas in the hand, the whole of the corresponding or ulnar sector is employed, as extensor carpi ulnaris, in operating directly upon the wrist. Indeed, the only semblance that I have found in the hand of such a diversion to the carpus of a portion of the digital extensor, is the instance given by Wood* of a small fusiform muscle detached from the extensor digitorum, and ending in a tendon, which was implanted upon the fascia covering the first interosseous muscle. The connection of the extensor digitorum pedis with the metatarsis is, so far as I know, confined to the metatarsals on the fibular side of the foot; and this accords with the fact that it is on this side that the marginal portion of the dorsal or extensor mass, forming the peroneus longus and brevis, acquires a specially flexor action, and leaves the elevation of this side of the foot to be provided for out of the more middle portion of the dorsal mass, by the special segmentation of a peroneus tertius, or by slips from the extensor digitorum.

Examples of imperfect segmentation of the extensor digitorum from the other adjacent muscles are presented by an occasional slip to the

* *Proceedings of the Royal Society*, 1868, p. 508.

extensor hallucis, or to the extensor brevis digitorum, or by a slip to the first phalanx of the hallux which accompanies the hallucal division of the extensor brevis. Examples of want of concentration are, in addition, furnished by instances in which each of the several tendons is derived from a separate belly, or in which that to the fifth toe is so; or that tendon may be separate from the extensor digitorum in its whole length, or for a greater distance than usual; or it may be combined with the peroneus tertius. Sometimes one of the tendons is double, and one division is perhaps implanted into the base of the first phalanx of its toe, while the remaining part passes on, as usual, to the terminal phalanx.

In many of the quadrupeds, where the extension of the ankle must be combined with increased flexion of the knee, the extensor digitorum is made subservient to this by mounting in front of the knee and acquiring a strong origin from the fore part of the condyles of the femur; so that a tension, which operates upon the foot, is given to it by bending the knee. I have not found a notice of any variety in the human subject approaching to this conformation.

As the pollex is supplied with extensors by the obliquely directed fibres of the deep stratum of the forearm lying on the ulnar side of the radial extensors, between them and the extensor indicis and other deep extensors of the fingers which may be present, so the hallux is supplied, as regards its terminal phalanx, by the obliquely directed fibres from the deep stratum of the leg lying between the tibiales anticus and the deep extensors of the toes. The latter are, however, concentrated upon the dorsum of the foot; and the extensor of the first phalanx of the hallux is derived in conjunction with them from the os calcis. The regular supply to the two phalanges thus respectively provided from the leg and from the foot, is less frequently departed from than is the regularity in supply to the phalanges in the pollex. This difference in the two cases accords with the observation I have before made in these lectures, with regard to the influence exerted by utility in modifying variety. For the movement of the first phalanx of the pollex is slight and unimportant, and its extensor is often absent; whereas that of the first phalanx of the hallux is free and important; and I have not met with an instance in which it was unprovided with an extensor. Indeed, it often has two; and the varieties in the extensors of the hallux are chiefly on the side of excess. Thus, the extensor hallucis is often divided; and, in such case, the second, which is the smaller and deeper portion, and lies usually on the fibular side, passes to the first phalanx. Perhaps it is blended, in its course, with the division of the extensor profundus to this phalanx; or it may split and send a tendon to each phalanx. More rarely it passes to the metatarsal bone. In this last mentioned disposition the extensor hallucis affords an illustration of that imperfect segmentation of the digital from the tarsal muscles to which I referred in speaking of the extensor digitorum, and which we found to be often illustrated by the division of that muscle which passes to the fifth toe.

Frequently there is a separate muscle, an extensor primi internodii hallucis, which may arise from the tibia, below the tibialis anticus, internally to the extensor hallucis, or from the interosseus ligament, beneath the extensor hallucis, or in close connection with it, so as to form almost a part of it, and is inserted into the first phalanx; and it may blend with the division of the extensor profundus which passes to the same phalanx. In one instance this extensor primi internodii was represented by a mere fibrous band, which passed from the anterior annular ligament to the first phalanx, and which resembled the anomalous band sometimes found passing from the radius to the first phalanx of the pollex.

The extensor profundus, or brevis, digitorum is a portion segmented from the deep layer of the supinato-extensor mass; and it is quite separated from the superficial layer, except on the dorsum of the toes. Here the tendons of the two layers are blended in the common extensor aponeurosis. The connection of the two muscles above that part is rarely retained as an irregularity, though, as I mentioned when speaking of the extensor sublimis, a slip has been observed passing from it to the profundus. The latter muscle more often retains a connection with the interossei, slips having been found passing from it to them in several instances. Its division to the several digits is sometimes irregular. In the Bushwoman, dissected by Flower and Murie, the muscle was in three portions. One of these passed to the proximal phalanx of the hallux; and the other two to the extensor sheath of the fourth toe. In other instances there have been two tendons to one toe, of which one, in about half the number, passed to the first phalanx. The division to the fourth toe has been found wanting in some of the cases in which the tendon to that toe was supplied by the peronei; and the division to the hallux has been quite separate from the rest of the muscle, and in one instance it was wanting.

With regard to the interossei: they, in the primitive state, are fibres

extending between the digital rays,* or passing from the metacarpal or metatarsal bones upon the digits; and they are more or less blended with the flexor and extensor muscles. For the purpose of effecting the required lateral movements of the digits in the best manner, they are, in the hand, so arranged that the *divaricators* from a line drawn through the *third or middle* finger, which are four in number, occupy the dorsal parts of the four metacarpal interspaces, and each retains connections with the sides of both the metacarpal bones, bounding the several interspaces: whereas the *adductors* to the middle finger occupy the palmar parts of the interspaces, and are limited to the sides of the several metacarpals corresponding with the sides of the fingers into the phalanges and extensor tendons of which they are inserted. Thus, they are limited to the ulnar side of the metacarpal bone of the forefinger and to the radial sides of the metacarpal bones of the ring and the little fingers. In the foot, in consequence of the immobility of the hallux in comparison with the mobility of the pollex,† the arrangement is somewhat different. Here, the *divaricators* from a line drawn through the *second* toe, instead of through the third, occupy the dorsal parts of the four metatarsal interspaces and retain connections with sides of both the metatarsal bones bounding the several interspaces; whereas the *adductors* to that line occupy the plantar parts of the interspaces, and are limited to the sides of the several metatarsals corresponding to the sides the digits with which they are connected; that is, they are limited to the tibial sides of the three outer digits.

The difference, it will be perceived, really consists in the manner in which the second metacarpal and metatarsal interspaces are occupied by their respective interossei. In the hand that one of the two interossei occupying this interspace which passes to the side of the third finger is dorsal, and derives origin from both the metacarpals; while the muscle which passes upon the second, or index, finger is palmar, and its origin is confined to the second metacarpal bone. In the foot, on the contrary, the one of the interossei occupying this space which passes to the side of the third toe is plantar, and its origin is confined to the metatarsal bone of the third toe; while the muscle which passes to the side of the second toe is dorsal, and derives origin from both the adjacent metatarsals. The gain derived by the disposition, in the hand, is an increase to the power of adduction of the third digit; whereas in the foot it is an increase to the power of abduction of the second digit. The difference, in all probability, has relation, as I have just observed, to the freedom of the movements of the pollex as compared with that of the hallux; and this is confirmed by the observation that the movable hallux of the ape is associated with a disposition of the interossei similar to that in the hand of that animal and of Man.

Not very many varieties of the interossei muscles have been recorded, probably because they are not often carefully dissected, and hence slight abnormalities in them are likely to be overlooked. One of the most interesting in connection with the remarks just made upon the difference of their disposition in the hand and the foot, is the occasional origin described and figured by Wood‡ of the palmar, or abductor interosseus of the index finger from the third metacarpal bone as well as from the second, and its consequent perforation by the arterial branch of communication from the dorsum to the palm. To this extent a tendency to the pedal type was manifested; but in each of the instances of the occurrence, the other and more important manual feature of the interspace was retained in the fact that this adductor of the index finger was covered, dorsally, by the adductor interosseus of the third finger, which still derived its origin from the second metacarpal bone as well as from the third. A corresponding occurrence of the manual type in the foot is also noted by the same author, in the fact that the first plantar interossei—the adductor—that is, of the third toe, occasionally derives its origin from the second metatarsal as well as from the third, and so presents an approach not only to the corresponding muscle of the human hand, but to the homologous muscle of the Ape's lower limb. Any special inferences, however, that might follow from this particular form of the abnormality of the interossei in this interspace of the hand and foot, are weakened by the fact that a similar abnormality has been observed in the case of the other palmar interossei;§ and more accurate research would probably show it to be not uncommon.

Now and then the palmar interossei are double in one or more of the interspaces; a muscle arising from the metacarpal or metatarsal bone on either side of the interspace, and passing to the digit of the same side, after the manner of the interossei in some of the lower animals. The dorsal interossei in such cases preserve their usual characters. More rarely the dorsal interossei are, in like manner, double in a single interspace. Occasionally the fibres pass from the metacarpal bone of the thumb to that of the index finger, reminding us of the intermetacar-

* BRITISH MEDICAL JOURNAL, July 27th, 1872, p. 86.

† Proceedings of the Royal Society, June 15th, 1865, p. 391.

‡ Perrin, Medical Times and Gazette, December 7th, 1872.

† Ibid.

pal and intermetatarsal muscles in the sprawling feet of the Cryptobranch; and occasionally the fibres are connected with the other muscles upon the dorsal or plantar aspect of the foot, or upon the palmar aspect of the hand. The most frequent form of variety is apparently presented by the *interosseus primus volaris* of Henle, which arises from the palmar surface of the first metacarpal bone, and occasionally also from the second, and passes into the dorsal aponeurosis of the thumb.

In the mention which has been frequently made, during the course of these lectures, of the relation between non-variability and utility, and of the circumstance that those muscles are most liable to variety which have the least clearly defined and the least important resultant of their action, I have by no means wished to express any view as to the connexion between the stability or non-variability of a muscle and its utility, or to prejudice any of the questions that may arise out of this subject. I have merely pointed out the fact that the muscles which are most easily spared are the most variable and the most frequently absent; and, further, that the varieties which do occur in muscles are, for the most part, of such a kind as are calculated very little to impair their utility. How this comes to be so is, of course, a part of the great question how that structure which is fittest for its purpose in each region of the animal body comes to be there present—a question to which future researches into the laws of development may furnish some key, but to which, at present, one scarcely sees the direction where an answer is to be sought.

Other questions arise. Seeing that instability and variety are most to be observed in those muscles, on the one hand, which, like the *palmaris longus*, are of the least importance, and in those, on the other hand, which, like the *peroneus tertius* and the *extensor primi inter-dinii pollicis*, are peculiar, or nearly so, to man, may we regard them as evidences of a transitional or unsettled condition of the structures in which they occur? Does, that is to say, variability in a muscle indicate that the muscle is in the process of being stamped in, or of being expunged from, the economy of the particular animal? or does it simply mean that the muscle in question is of sufficient value to have attained a place and to maintain its ground, but is not sufficiently essential to the well working of the body to render itself a fully fixed feature in the developmental processes?

Associated with this question is the further one, whether varieties are more or less frequent in these later times of the now existing human and animal forms, and in the more advanced or more civilised, and, on the whole, better developed members of the human family. The little information at present furnished by the dissections of different races of men and different animals of the same species is insufficient for the formation of a clear opinion upon this point. As far as the information goes, it would perhaps, on the whole, incline us to think that these points do not exert any decided influence upon varieties. I do not think, therefore, that we can base upon varieties any strong argument in favour of progressive change, though they may give evidence of a capability for change and of adaptability to new conditions. Indeed, I do not see my way beyond the limited view that those structures in a given animal condition which are most useful to the body, are most stable; and that, on the whole, those which are least useful, are most unstable, and most liable to variation. I do not think we can infer that any muscles are loosening their hold and disappearing, or that any are becoming more fixed; though we might suppose that, under altered conditions of usefulness, these changes would take place, and that they would most easily take place in the muscles in which a want of developmental persistency is most indicated by their frequent variety.

With regard to the hereditary transmission of muscular varieties, we have not at present any information. It is probable that, like other individual peculiarities, they are transmitted, but that, by reason of intermixture in breeding and of the developmental tendencies to reassert themselves and maintain the better standard of form, they become lost, or rather that any accumulation or excess of them is thus prevented.

An interesting question also suggests itself as to the relation which exists between irregularities in nerves and those of muscles. Upon this point, I have been able to obtain very little information, and what I have obtained does not lead to much result. Commonly, the nerve-supply to the abnormally disposed or supernumerary muscle is not named in the account given of it. That the nerve to a supernumerary muscle is not always derived from the same source as that of the immediately contiguous muscle, from which it may be supposed to be segmented, is shown by the instance of the *anconeus internus* mentioned in the last lecture as deriving its supply from the ulnar nerve, and that of the additional anterior belly of the *digastric* muscle mentioned in my first lecture as deriving its supply from the *mylo-hyoid* nerve. Indeed, our knowledge of nerve-supply to muscles leads to the inference that

convenience of distribution is the influence which would chiefly determine the source in any particular form of irregularity. Neither does it appear from Mr. Quain's very valuable and beautifully illustrated *Commentaries on the Arteries*, in which muscular varieties are occasionally described, that any particular relation is to be traced between them and varieties in the arterial trunks.

There are many other points in connexion with this subject upon which I ought to dilate, but time forbids; and it only remains for me to thank you, Mr. President and gentlemen, for the patience with which you have listened to these too dreary details.

THERAPEUTIC MEMORANDA.

TEETHING CHILDREN.

THE treatment of diarrhoea in teething children is apt to be looked at from a one sided point of view—the quickest way to arrest it. We have diarrhoea—1, from dental irritation; 2, from indigestion caused by over and under feeding; 3, from atmospheric changes. Then, too, the diarrhoea may be of a simple, inflammatory, choleraic, or dysenteric character; each variety demanding a different plan of treatment.

Astringents, as a rule, are to be condemned. The diarrhoea will continue in spite of them, unless other precautions are taken. If the motions contain mucus and are slimy, and there is a trace of blood and redness about the anus, chalk mixture and kino will be of no service, nor will bismuth, acids, or oxide of zinc. The diet is primarily at fault in these cases, and undigested food has passed into the bowels. Warmth and complete rest, with a dose of castor-oil in such cases, is the most appropriate treatment, though the gums may require puncturing, and a grain each of hydrargyrum cum creta and Dover's powder may be necessary. Occasionally a quarter grain of calomel, with a grain of Dover's powder, will be found of great value. Among hospital patients a large number of cases of diarrhoea are attributable to over-suckling, and suckling by mothers in delicate health. The return of the catamenia is no hindrance to their nursing, or even menorrhagia in a mild or severe form. Remove all children suffering from diarrhoea from the breast, and let them have cow's milk diluted with lime water, previously warmed and given in a well rinsed bottle, and you will cure the diarrhoea.

Many children are reared entirely on Swiss milk, and this will now and then agree far better than cow's milk. Sometimes milk, in any form and however pure, will keep up the diarrhoea, and then cold barley water, or cold water thickened with isinglass will be necessary, or thin water arrowroot, to which a few drops of brandy may be added should the child be exhausted. Sometimes a powder containing two or three grains of rhubarb and carbonate of soda will neutralise the acidity which has resulted from the fermentative products of digestion, and set the little patients right with magical quickness. If the evacuations are free from mucus and blood, and there is no pain, a mild mixture of sulphate of magnesia and tincture of rhubarb may be prescribed in some cases with advantage. A drop of ipecacuanha wine in plain water, or mucilage and water, has been recommended, and it will often succeed.

Children are liable to diarrhoea at this season of the year from heat, and the excitement of travelling, and change from healthy country places or the sea-side to the contaminated air of London.

W. H. DAY, M.D.

SMALL PAINFUL TUMOUR CONNECTED WITH THE INTERNAL SAPHENOUS NERVE.

A. N., aged 35, came as an out-patient to Guy's Hospital, July 12th, 1873. She complained of a small, painful swelling, situated about four inches above the inner ankle, and half an inch behind the inner margin of the tibia. This, she stated, had been first noticed at least nine years previously, and had at intervals caused her a good deal of pain. During the last two years she had often suffered intensely from throbbing, burning, and darting pains, at the site of the swelling; and it was on this account that she sought advice. The tumour was sensitive to gentle pressure, but might be firmly squeezed laterally between the finger and thumb without causing pain. When, however, it was directly pressed upon, a sensation was excited along the inner margin of the foot. It was removed by the dresser, without the aid of chloroform. The tumour was about the size of a large pea, white, firm, and opaque, with a depression on one side like a hilum, to which a small filament remained attached. Under the microscope this filament was found to consist of nerve tissue. The tumour itself was composed of fibrous tissue arranged in variously distorted coils and loops, and the vessels pervading it were seen to be surrounded by concentrically arranged fibres.

R. CLEMENT LUCAS, M.B. Lond., F.R.C.S.

ON THE ETIOLOGY OF ALBUMINURIA,

AS DEDUCED FROM AN ANALYSIS OF 200 CONSECUTIVE CASES.

BY GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital: Professor of Medicine in King's College, London.

[THE following paper, which was read and discussed at a recent meeting of the Royal Medical and Chirurgical Society, having been returned to the author by the Council of that Society, is now communicated to the readers of the BRITISH MEDICAL JOURNAL.]

About ten years ago, I made an analysis of nearly three hundred cases of albuminuria which had come under my own observation, and whose histories I had recorded with more or less detail and completeness. From the time that I began to study carefully the subject of Bright's disease, I have made special inquiries in each case as to the probable cause of the malady; and in my tabular analysis of cases, one column is set apart for the etiology of the disease.

Some recent discussions on the influence of alcohol in exciting disease of the kidney led me to refer to my analysis of cases for evidence bearing upon the question in dispute. About nine-tenths of the cases analysed are of the class of hospital and dispensary patients; most of the histories having been taken when time was plentiful, and private patients comparatively scarce.

In some few cases the clinical history is incomplete, and the etiological column is a blank. Omitting only these imperfectly recorded cases, I have extracted and tabulated the probable cause of albuminuria in two hundred successive cases, and I propose now to place the results as briefly as possible before the Society. In the following table, the probable cause of albuminuria in two hundred cases is set forth.

TABLE I.

Showing the probable Cause of Albuminuria in 200 consecutive cases.

No.	Cause.	Total.	Percentage.
1	Scarlet fever	24	12.
2	Intemperance.....	28	14.
3	Intemperance and gout.....	12	6.
4	Intemperance and cold	12	6.
5	Cold and wet.....	23	11.5
6	Cold	13	6.5
7	Cold and fatigue	2	1.
8	Gout	8	4.
9	Typhus fever	8	4.
10	Typhoid fever	2	1.
11	Erysipelas	2	1.
12	Pyæmia	2	1.
13	Measles	2	1.
14	Rheumatic fever	2	1.
15	Purpura	2	1.
16	Cholera	5	2.5
17	Hooping-cough	1	.5
18	Diabetes	1	.5
19	Syphilis	2	3.
20	Intemperance and syphilis	4	2.
21	Phthisis	4	2.
22	Venereal excesses	1	.5
23	Poverty and hard work.....	5	2.5
24	Emphysema and bronchitis	7	3.5
25	Morbus cordis	7	3.5
26	Scrofulous disease of bones and joints	5	2.5
27	Scrofulous abscess.....	1	.5
28	Pneumonia	1	.5
29	Lead and intemperance	2	1.
30	Lead	2	1.
31	Tropical climate.....	1	.5
32	Hydrophobia	1	.5
33	Mental anxiety	3	1.5
34	Pregnancy	5	2.5
		200	100.

It will be seen, by reference to the table, that the influences which are apparently causative of albuminuria are numerous and very diverse.

The various etiological influences, single and combined, come under no fewer than thirty-four heads. But it is remarkable that the majority of cases may be included under a very small number of heads. Scarlet-fever, intemperance, cold, wet, and gout—these influences, either single or combined, account for 120 cases out of the 200, or 60 per cent. This is shown in Table II.

TABLE II.

The probable Cause of Albuminuria in 120 out of 200 cases.

Cause.	Total.	Percentage.
Scarlet fever.....	24	12.
Intemperance.....	28	14.
Intemperance and gout.....	12	6.
Intemperance and cold.....	12	6.
Gout.....	8	4.
Cold and wet.....	23	11.5
Cold.....	13	6.5
	120	60.

The next table shows that intemperance, either alone or combined with other influences, was the probable cause of albuminuria in 58 out of 200 cases, or 29 per cent.

TABLE III.

The number of cases in which Intemperance alone, or combined with other influences, was associated with Albuminuria.

Cause.	Total.	Percentage.
Intemperance alone	28	14.
„ with gout	12	6.
„ with cold	12	6.
„ with syphilis.....	4	2.
„ with lead	2	1.
	<hr/> 58	<hr/> 29.

I have not included in the above table eight cases in which gout was associated with albuminuria, for the reason that, although gout was probably, in some of the cases, the result of intemperance, intemperance is not specially mentioned in the history of these eight cases.

The next table shows that cold, either alone or combined with other influences, was the exciting cause of albuminuria in 50 out of 200 cases, or 25 per cent.

TABLE IV.

Cause.	Total.	Percentage.
Cold alone.....	13	6.5
Cold and wet.....	23	11.5
Cold and intemperance.....	12	6.
Cold and fatigue	2	1.
	<hr/> 50	<hr/> 25.

It appears, then, that albuminuria was associated with scarlet-fever in 12 per cent. of the 200 cases; with exposure to cold and wet in 25 per cent.; and with intemperance, that is *alcoholic* excess, in 29 per cent. The following table (Table V) shows the proportion per cent. of deaths, recoveries, and of persistent albuminuria, in cases associated (1) with scarlet-fever, (2) with exposure to cold and wet, and (3) with habits of intemperance.

TABLE V.

	Scarlet-fever.	Cold and Wet.	Intemperance.
Deaths	45.83	27.5	67.23
Recoveries	50.	38.88	10.36
Persistent }	4.16	33.33	22.41
Albuminuria			
	99.99	99.71	100.

It will be seen that, in cases of albuminuria associated with intemperance, the proportion of deaths is much larger, and of recoveries smaller, than when the disease is a result of scarlet-fever or of exposure to cold and wet.

With reference to this table, it should be observed that it does not represent the relative proportion of deaths and recoveries in cases of acute Bright's disease which have been subjected to appropriate treatment from the commencement of the malady. In a large proportion of these cases, the disease had been neglected, and consequently had passed into a chronic and incurable stage before the patients sought admission into the hospital. Of the 58 intemperate patients, 11 were women (3 of whom were prostitutes), and 47 were men. In 5 cases out of the 47 men, there is no note of the occupation. The next table (Table VI) gives the occupations of the remaining 42 intemperate men who were admitted for albuminuria.

TABLE VI.

No.	Occupation.	No.	No.	Occupation.	No.
1.	Waiters	5	18.	Bargeman	1
2.	Compositors	3	19.	Bookbinder	1
3.	Labourers	3	20.	Tailor	1
4.	Carpenters	2	21.	Coach-builder	1
5.	Cabmen	2	22.	Militia Officer	1
6.	House Painters	2	23.	Tobacconist	1
7.	Silversmith	1	24.	Thames Policeman	1
8.	Butcher	1	25.	Grocer	1
9.	Tailor	1	26.	Scene-painter	1
10.	Millwright	1	27.	Ostler	1
11.	Porter	1	28.	Blacksmith	1
12.	Hatter	1	29.	Scale-maker	1
13.	Tradesman	1	30.	Groom	1
14.	Clerk	1	31.	Bricklayer	1
15.	Waterman	1			
16.	Coachman	1			
17.	Paper-stainer	1			
			Total		42

Dr. Dickinson, in a paper recently communicated to this Society, assumes that all men not engaged in the liquor traffic, and not known to be drunkards, may be placed in a "non-alcoholic" class. Now it appears from the preceding table (Table VI) that, while the list is headed by five waiters, the remaining thirty-seven men, of acknowledged intemperate habits, were engaged in no less than thirty different pursuits, not one of them connected with the manufacture or sale of liquor. In his book on *Albuminuria*, Dr. Dickinson employs an argument to disprove the alleged morbid influence of alcohol which appears somewhat inconsistent with the above-mentioned assumption. He says (p. 236): "Among hospital patients in England, there are but few male adults who cannot be convicted of a somewhat liberal use of beer or gin; while in Scotland, whiskey drinkers are relatively as numerous. There is probably no disease which is common in London or Edinburgh a majority of the men who suffer from which could not be convicted of intemperance in the matter of alcoholic liquors. But to suppose that every disease which affects a person of such habits results from the action of the liquor, is equivalent to believing that drunkenness confers a protection from all diseases except such as are consequent upon itself."

Such a supposition would certainly be very unreasonable, but not more so than the assumption that men of the class of hospital patients who are not engaged in the liquor traffic and not notorious drunkards, may, as a rule, be placed in a non-alcoholic class; and then, from a comparison of the amount of renal disease found after death in the two classes of traders and non-traders in liquor, to argue that alcoholic excess has but little influence in the causation of Bright's disease. Formerly, Dr. Dickinson's argument was that the habit of intemperance is so general among male hospital patients, that its influence cannot be estimated; now, on the contrary, the dealers in liquor are supposed to have almost a monopoly of intemperance. There is but one trustworthy means of ascertaining the habits of our patients, and the influence of their habits in the causation of disease, and that is by making a careful inquiry not only of the patients themselves, but also of their friends and associates. Such an inquiry I have made in all the cases of Bright's disease that have come under my observation for many years past.

Without doubt, much care is required in judging of the morbid effect of any widely diffused habit or influence, but we are not therefore to abandon the attempt to estimate it, or to assume that it is *nil*. A very large proportion of men in hospitals, suffering from a variety of diseases, have been exposed to cold and wet; but we do not therefore conclude that such exposure has little or no influence in exciting disease of the kidney, or that its influence cannot be approximately estimated.

The notorious excess of Bright's disease amongst males, as compared with females, is probably explained by the fact that, as a rule, men are more intemperate and more exposed to cold and wet than women. Out of my 200 cases, 152 or 76 per cent. were males; 48 or 24 per cent. were females. Amongst the 58 sufferers from albuminuria who were of intemperate habits, 47 or 81.03 per cent. were males, while 11 or 18.97 per cent. were females. Again, of the 36 who had been exposed to cold and wet, 28 or 77.77 per cent. were males, and 8 or 22.23 per cent. were females. The intimate physiological relationship between the skin and the kidneys suffices to explain the influence of cold and wet, and the consequent repression of the cutaneous secretion in exciting disease of the kidney. And there is little difficulty in understanding that renal disease may be set up by the continual elimination of an excess of alcohol with the products of alcoholic excess through the kidneys. We hold to this doctrine notwithstanding the conflicting re-

sults of experiments for determining the amount of alcohol excreted by the kidneys. The powerful diuretic action of alcoholic liquors is notorious, and not only have we daily opportunities of witnessing the influence of alcohol in exciting disease of the kidney, and in aggravating renal disease which has resulted from other causes, but the cases are not few in which complete abstinence from alcohol has been followed by the cessation of albuminuria, which had, with good reason, been attributed to alcoholic excess.

A reference to the various causes of albuminuria will show that all cases may be arranged in two classes: 1. Cases in which there is some abnormal quality of blood, the results of the introduction of a morbid agent from without, or of some product generated within the system, or of the loss of some normal constituent. Long continued suppuration, for instance, must impoverish the blood by a copious drain of albumen; while deficiency of wholesome food has a more direct impoverishing influence. By far the greater number of cases of albuminuria are included in this class, and are grouped together under the name of Bright's disease. 2. There are cases in which albuminuria arises from passive congestion of the kidney consequent on a mechanical hindrance of the return of blood. In this class of cases are included—albuminuria, the result of heart-disease, of emphysema with bronchitis, of a copious dropsical effusion into the peritoneum, and some cases occurring in the advanced stage of pregnancy when the enlarged and heavy uterus presses on the vena cava, and causes passive congestion of the kidneys.

I have notes of several hundred cases of albuminuria, which have come under my observation during the last fifteen years; about nine-tenths of these cases have been private patients. I have not yet found time to analyse these records, but I am confident that one result of such an analysis would be to show that, while alcoholic excess would preponderate less than amongst the class of hospital patients, excessive eating and drinking, and certain forms of dyspepsia unassociated with intemperance, are amongst the more frequent causes of albuminuria and degeneration of the kidney in all classes of society. It seems reasonable to assume that the products of ill-digested food may, during the process of being eliminated by the kidneys, cause irritation, disease, and ultimately complete disorganisation of the gland. Cases having this etiological origin occur not rarely in persons of strictly temperate habits, but they are more numerous among those whose digestive power have been impaired by an excessive consumption of alcohol or tobacco. During the last ten years, too, I have seen a considerable number of cases of albuminuria associated with diphtheria, which found no place in my earlier etiological records.

I have also met with cases of albuminuria associated with a history of ague in this country, and others with that of tropical malarious remittent and intermittent fevers. In some few cases of relapsing fever I have found the urine albuminous, and I learn from Dr. Donnet's able report on an epidemic of yellow fever at the Royal Naval Hospital at Port Royal, Jamaica (*Statistical Report on the Health of the Navy for the Year 1867*. Appendix II, p. 41), that albuminuria is an almost constant feature of that formidable disease. The result of careful clinical research has hitherto been to add continually to the long list of causes of albuminuria—a list which probably even now is not quite complete.

POSTSCRIPT.—Since the preceding paper was written I have met with three cases of temporary albuminuria, the results of prolonged bathing in cold water.

ON A NEW KIND OF TRUSS PAD,

DESIGNED TO MINIMISE THE PRESSURE WITHOUT DIMINISHING THE RETENTIVE POWER OF THE TRUSS.

By C. HOLTHOUSE, ESQ.,

Surgeon to the Westminster Hospital, etc.

In construction this pad resembles a Cole's or a Teale's, so far as its elasticity is due to a spiral spring; but it differs from both of these in its action; for whereas in both the surface which is applied to the skin is firm and convex, and undergoes no alteration of form under any circumstances, the surface of the pad in question becomes changed, under the impulsion of a rupture, from a convex or flat to a concave form. To ensure this result it is necessary that the strength of the pad spring should be a very little inferior in power to the body spring, so that when the patient coughs and the hernia is thrust outwards, the pad, instead of rising *en masse* or at some part of its border, yields to the impulse of the rupture at its centre only, while its circumference is kept firmly in its situation by the stronger resistance of the body spring.

A longer paper on this subject was written, twelve months ago, for

the annual meeting of the Association at Birmingham; but there was no meeting of the Surgical Section on the day it was to have been read, and by some oversight it was never published in the JOURNAL.

The pad will be exhibited in the Annual Museum of the Association next week.

SURGICAL MEMORANDA.

SKIN-GRAFTING.

MR. MACLEOD, in his report of Mr. J. Bell's method of skin-grafting, treats it as if it were a new method. If he will refer to page 17 of the second edition of my little work on *Skin-grafting* (Churchill and Co.), he will see that I have from the first advocated the same plan of taking and subdividing the skin. But I have never found it necessary to use the antiseptic gauze, or to change the dressing under spray. These things are very well in hospitals, where labour and expense need not be considered; but in workhouse infirmaries they would become prohibitory. I find that my grafts invariably do well, and I treat them as follows. I place each in a slight incision, waiting until bleeding has stopped; then lay over each a small piece of Lister's carbolised non-adhesive lac plaster; then cover the whole wound with finely picked oakum and bandage, so as to keep an even pressure over the ulcer. (Sometimes I fix the pieces of lac plaster by a strip of ordinary adhesive plaster.) The oakum I find a cheap (it costs nothing in a workhouse) and efficient disinfectant, as it absorbs all the putrid discharges. This I leave on for two days; and then remove the oakum, replace it with fresh oakum, and rebandage as before. On the fourth day, I remove all the plaster, etc., and treat the ulcer with a simple carbolio or zinc lotion.

JOHN WOODMAN, F.R.C.S. (by Exam.),

Consulting Surgeon, Exeter Dispensary; Medical Officer,
City Workhouse; etc.

Exeter, July 26th, 1873.

THE ARTIFICIAL PRODUCTION OF TUBERCLE.*

IN the *Saint Bartholomew's Hospital Reports* for 1871 are described the results of two series of experiments performed by myself. Guinea-pigs were vaccinated, and in some instances a disease resembling tubercle was produced. In the article I stated that no inference whatever was to be drawn from these experiments with regard to the production of disease by vaccine inoculation in man. All in the profession—no one more than myself—admire the patient, earnest, and laborious manner in which Dr. Burdon Sanderson (not to mention many other distinguished workmen, foreign and English) has pursued his researches. At the same time I would respectfully suggest that we can get at no satisfactory result from experiments without the aid of logic. If we insert a drop of pus, a bit of blotting-paper, or of caoutchouc under the skin of a human being, is tubercle the result? I trow not. Dr. Sanderson himself says that guinea-pigs are scarcely at all liable to natural tubercle. Then where is the analogy in the matter between man and guinea-pigs? Only in the identity of the disease. Perhaps other observers agree with these views. I can only state that I have never before seen them thus objectively put forward.

THOMAS LEEDS,

Lecturer on Physiology, Sheffield School of Medicine.

SELECTIONS FROM JOURNALS.

MIDWIFERY.

EXTRAUTERINE PREGNANCIES AND THEIR TREATMENT BY GASTROTOMY.—Dr. Th. Keller of Strasbourg (*Gazette Hebdomadaire*, No. 29) publishes notes of two cases of extrauterine foetation in which gastrotomy was successfully performed by M. Koerberlé of Strasbourg, and adds to the narrative a general study of extrauterine pregnancy. He admits four forms—ovarian, tubular, interstitial, and abdominal. From the therapeutic point of view, his conclusions are as follows. In the first half of the period of pregnancy, internal abortion should be procured; and for this purpose he specially recommends the capillary injection of toxic substances. After the first half of the evolution of pregnancy, we should wait; and, when the term has been reached, we should perform gastrotomy to extract the living child; and, again, we should perform it when the term is passed and the infant dead. M. Keller has collected nine cases of gastrotomy at term for the extraction of a living child or one recently dead. The mother was saved four times; in five cases, the infant survived; and in one of these cases, the pregnancy being double, the mother and both children were saved.

* A paper advocating these views was read before the Sheffield Medico-Chirurgical Society in the session 1871-72.

SURGERY

TARSALGIA.—Under the title of "Surgical Diseases of Youth," M. Gosselin describes, in his *Clinique Chirurgicale de l'Hôpital de la Charité*, vol. i, several affections which, according to him, develop between the ages of fifteen and twenty-five years. These are (*Dublin Hospital Gazette*, June 2nd): Ingrowing toe-nail; subungual exostosis of the great toe; developmental or epiphysary exostoses; fibroma, or fibrous naso-pharyngeal polypi; epiphysary osteitis (three varieties); and tarsalgia. The latter affection is characterised by a pain in the foot when in the erect position, or after a long walk; by a deviation of the foot backwards, or valgus; and by a contraction of the anterior or external muscles of the leg. M. Gosselin shows that the disease does not depend on a primary contraction of the muscles, as MM. Guérin, Bonnet, Nélaton, and Duchenne (de Boulogne) believed, but upon an osteoarthritis of the medio-tarsus pertaining to the variety of the dry arthritis. The articular alteration is primary, the contraction is only secondary, and disappears, according to the degree of the disease, either during ordinary rest, or anæsthetic sleep. When the tarsalgia lasts a long time, the muscles pass into that state of permanent shortening which constitutes retraction; it also happens that the medio-tarsal articulations, and especially the astragalo-scapoid articulation, become ankylosed by fusion. Suppuration of the bones, however, never takes place, especially if the patient be not scrofulous. Rest, and the application of an immovable bandage, so as to keep the foot quiet for two or three months, often suffice to effect a cure. But, when the peroneal muscles are retracted, division of their tendons, and placing the foot in a good position, are necessary prior to the application of the fixed apparatus. Relapses are liable until adult age is reached.

ANÆSTHETICS.

XX.—ETHER AS AN ANÆSTHETIC.

A CORRESPONDENT writes to us as follows.

I have had the opportunity of examining the question of the use of ether in a practical point of view, not only in the London hospitals, Scotland, and the continent, but in the United States, where, for upwards of two years, I was a resident. Every facility was afforded me of studying the subject of etherisation as practised by the most eminent professors on the other side of the Atlantic; and I availed myself to the full of the advantages thus offered. I have come to the conclusion, after having seen some hundreds of cases, that there is nothing as yet invented, that for safety, certainty, and freedom from unpleasant results, can compare to ether as an anæsthetic when properly administered; and I do not hesitate to say, from what I have seen and read, that the method adopted by the American practitioners is neither practically understood or adopted in this country. Ether, when properly administered may be given to the youngest infant and the oldest adult with impunity.

My method of administering ether is as follows, and any one who will attend to my directions will be amply repaid in satisfactory results. I use a cone of cardboard, large enough to cover the nose and mouth, having a sponge inside fully charged with ether, the whole being covered with a napkin or towel. I think this preferable to a simple towel as it prevents waste. I invariably give my patients laudanum, in doses proportionate to the age, half-an-hour before the administration of the ether. For a child four or five years of age I give two minims; for an adult, the dose varies from fifteen to twenty minims. I commence the administration with the patient in a sitting position, by which means the end is more rapidly attained of complete insensibility. The laudanum not only prepares the system for the rapid and complete evolution of the ether, but also checks the tendency to vomiting and spasmodic action. It is of the greatest importance that the stomach should not be overloaded, and therefore I direct a cup of coffee or tea, with an egg beaten in it, to be taken a couple of hours before inhaling the ether, so as to avoid all solid substances. It is no unusual thing for patients to be kept under the influence of ether for several hours, and the quantity inhaled has frequently been as much as a pint.

In all severe surgical operations it is of the utmost importance that the patient should be kept completely under the influence of the anæsthetic, otherwise spasmodic action of a very troublesome nature is very likely to arise. In the United States, death resulting from the exhibition of ether is unknown; and, considering the enormous number of cases that annually are treated, it is surprising that the system, which has been found so successful by the American operators, should have found so little support in this country.

SURGICAL INSTRUMENTS IN 1873.

REPORT OF THE SURGICAL INSTRUMENTS IN THE
INTERNATIONAL EXHIBITION AT SOUTH
KENSINGTON.

III.

MESSRS. MATTHEWS BROTHERS, of Portugal Street, Lincoln's Inn, exhibit in their case Sir William Fergusson's own collection of lithotripsy instruments, showing their progressive stages, from the large awkward instruments in use in the infancy of the operation, to the light and effective instruments of the present day. The collection more particularly shows the rack-and-pinion arrangement originated by Sir W. Fergusson. Liston's lithotomy-knife is exhibited in the collection, as well as a lithotrite made by the hands of Sir W. Fergusson. In the collection is a pattern of their own, designed by Messrs. Matthews themselves, constructed to possess the greatest possible lightness and

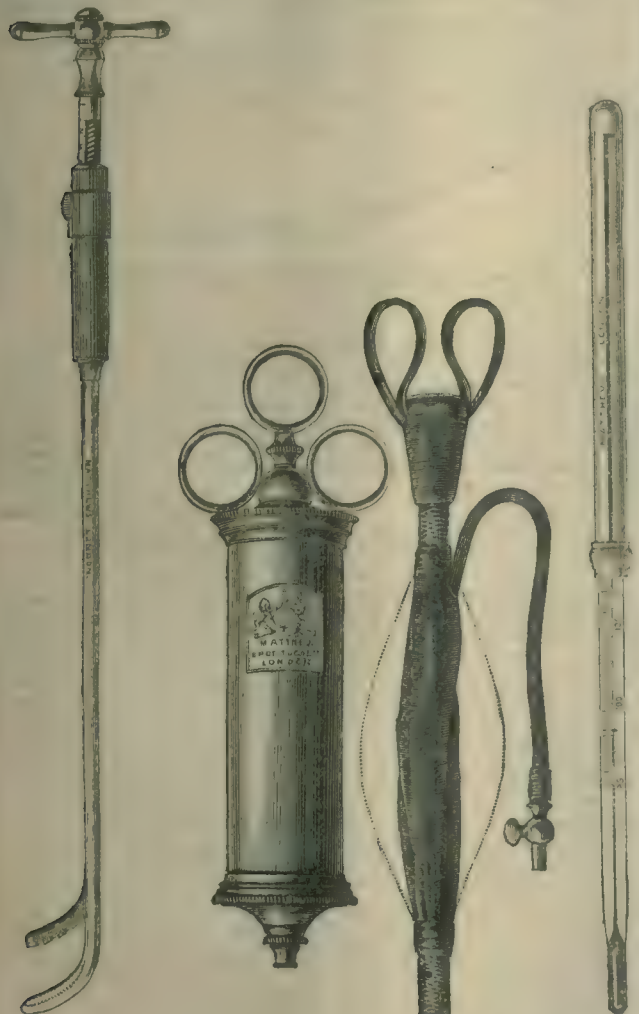


Fig. 1.

Fig. 2.

Fig. 3.

handiness compatible with strength. This firm, we are informed, were the first to make lithotrites of the size of a 4 to a 6 catheter—a feat which obviously illustrates the delicate workmanship and beautiful temper of the steel.

The above cut (Fig. 1) shows the crushing instrument. The principle on which it acts is the same as *Pécrou brist* of Civiale; and it is constructed so as to be very light in the hand, to insure more delicacy

of manipulation; whilst the power of the instrument is in no way affected.

A new lithotomy-tube (Fig. 2), invented by Messrs. Matthews for stopping hæmorrhage by the application of cold and pressure, is shown. It consists of an ordinary lithotomy-tube, round which is fastened an India-rubber bag, to which a tube and stopcock are attached. The bag, before it is filled with water, hangs loosely round the tube, and offers no sort of impediment to its easy introduction. The bag is then filled with iced water by means of the brass syringe, the dilatation of the bag causing a great deal of pressure at the same time; while the urine passes through the centre as in the ordinary tube, which, we think, will be entirely superseded by this admirably simple contrivance.

Lately, Messrs. Matthews have made various improvements in clinical thermometers. As regards accuracy, the instruments are all that can be desired; whilst the arrangement of the case or sheath is ingenious and most convenient. As will be seen by the cut (Fig. 3), the thermometer is adapted to a pencil-case, and slides in or out by pushing a little ring or catch in the same manner as an ordinary pencil. The advantages are obvious, for compactness, readiness of application; and also the facility for lengthening the instrument in the most simple way possible, is of considerable advantage. The slot which runs down the length of the case is made somewhat wider than in the illustration, so that the index may be read whilst the greater part of the instrument is protected by the case, the bulb only being protruded.

Dr. Priestley's craniotomy-forceps are figured above (Fig. 4). They are armed with the pattern teeth invented by Messrs. Matthews, the

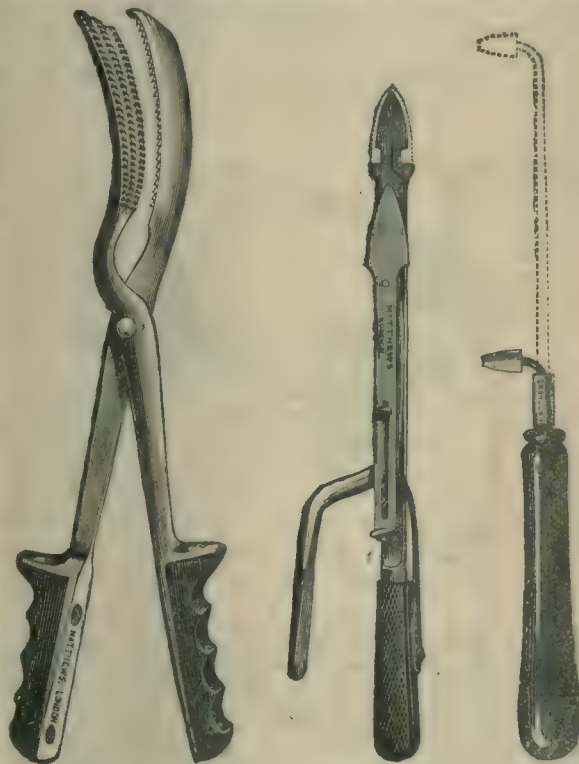


Fig. 4.

Fig. 5.

Fig. 6.

peculiarity of which is, that they slope backwards—a principle which they have for some time applied to sequestrum and artery forceps.

The above cut (Fig. 5) represents a guarded perforator, the invention of this firm, which is a decided improvement in obstetrical instruments. The guard thoroughly protects the point of the perforator during introduction, and is easily slid back with the forefinger before the perforation is effected, and can be removed for the purpose of cleaning. This guard is applicable to other kinds of perforators, such as Simpson's.

A folding cautery (Fig. 6), the blade pushing in the handle for portability, devised by Matthews Brothers for Mr. Henry Smith's clamp-operation, and also Mr. Henry Smith's set of clamps of the latest improvements in construction, are shown. Messrs. Matthews have taken much trouble to make this useful instrument with care and precision,

paying special attention to the instructions of the inventor, who complains that many of the clamps sold under his name are extremely defective in most essential points.

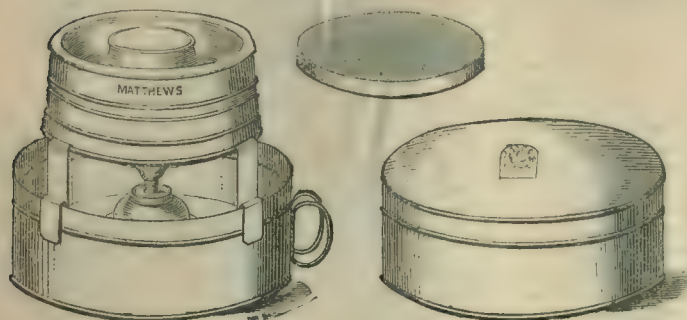


Fig. 7.

The cut (Fig. 7) depicts a most compact little bath, which may be used for calomel and steam, or simply as a hot-air Turkish bath, by removing one top and replacing it by the other. The whole apparatus is contained in a little japanned tin collar-box, and all the advantages of the larger lamp-bath apparatus are here obtained. The patient sits on a chair, covered up by a cloak or blanket in the usual way. The merit of this arrangement also belongs to Matthews Brothers.

Sir William Fergusson's instruments for cleft palate, containing amongst other things, the scissors bent at an angle on the flat surface, the spade-shaped knives, and the reels of a novel description, are exhibited.

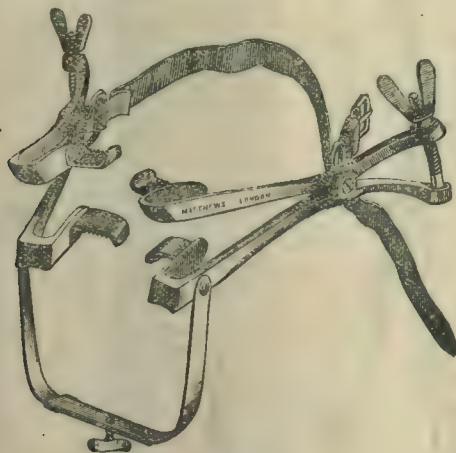


Fig. 8.

Mr. John Wood's gag for operations on the palate and tongue is shown above (Fig. 8). It has been used continually and with the greatest success, sometimes under the most trying circumstances, at King's College Hospital and elsewhere, in operations for cleft palate and for removal of the tongue. It is especially suitable for the latter operation, as the tongue is left quite free, although the mouth is wide open. In cleft palate, it is of the greatest assistance to the operator, as it presents no ridge or obstacle of any kind in the way of the instruments and sutures. It has been found impossible for the patient to dislodge it, and it can be adjusted in spite of any inequalities in the teeth.

Mr. John Wood's little saw is here shown (Fig. 9). By the crank arrangement of the shaft, the hand is kept well out of the way of the soft parts; and the advantages of the shifting back require no special notice from us. The smaller of the two saws has been found all that was necessary for the most formidable operation for the removal of the upper jaw. The saws formerly employed were of different widths; and he was much-annoyed at having to change continually his instruments.

We also notice the various patterns of Mr. Wood's well known trusses, which have been now used for several years, in several thousand cases, with the best possible results; the great advantage being, that the edges of the ring are not weakened by dilatation, the tendency of

the pressure being rather to strengthen them. In several cases in adults, the hernia has been cured by their employment; in one case



Fig. 9.

in particular, a gentleman aged 34, with an inguinal and a femoral rupture on the same side.

We noticed Messrs. Matthews's "reflex action pad" in our columns a few weeks ago. It is at present adapted for umbilical hernia, and consists of two pads, an inner and an outer ring, communicating with each other, and reflecting the action of the abdominal muscles to the support of the hernia.

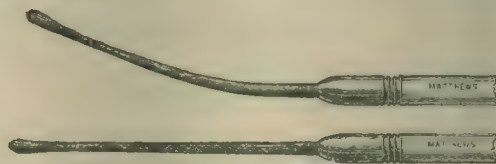


Fig. 10.

We also call attention to the probes of Dr. W. S. Playfair (Fig. 10) for applications to the uterus in cases of chronic uterine catarrh. They consist of a soft metallic extremity 2½ inches in length, and of a satin wood handle 9 inches in length. The metallic portion is engine-turned, so as to prevent the small piece of cotton-wool which is wound round it from being displaced. It is smaller than the ordinary uterine sound; so that, when it is wrapped in wool, it is sufficiently small to pass readily through the os uteri.

COLUMN FOR THE CURIOUS.

EARLY BILLS OF MORTALITY.—A friend has sent me a fac-simile of the *Reading Mercury*, of the first February, 1723-4. It contains the Weekly Bill of Mortality of London from January 21st to 28th, which I copy.

Abortive	2	Liver grown	2
Aged	45	Looseness	7
Apoplexy	2	Measles	6
Asthma	1	Purples	1
Childbed	4	Mortification	1
Chrisoms	2	Palsie	2
Colick	4	Rickets	4
Consumption	60	Rising of the lights	2
Dropsie	25	Small-pox	56
Evil	2	Stillborn	25
Fever	63	Stone	2
Convulsion	308	Stoppage of the stomach	3
Gout	1	Suddenly	1
Grief	2	Teeth	76
Gripping	23	Tissick	8
Headmouldshot	4	Thrush	3
Jaundies	6	Vomiting	1
Imposthume	2	Water in the head	3

Casualties.—Drowned in the River Thames at St. Paul at Shadwell, 3. Found dead at St. Margaret at Westminster, 2. Murdered at St. Olave in Southwark, 1. Overlaid, 3. Christened, 396. Buried, 761. Increased in the burials this week, 85.

Can any of your readers explain what is meant by "chrisoms" and "headmouldshot"; or account for the extraordinary number of deaths from convulsions and teething?

M. A. BAZILLE CORBIN, Guernsey.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 2ND, 1873.

THE ANNUAL MEETING.

THE forty-first annual meeting, which commences next week, will evidently be the largest and in many respects the most important which has yet occurred in the annals of the Association. It will, indeed, we anticipate, be the largest meeting which has been held in the history of the profession in this country. At least, we know of none other in which near a thousand members of the profession have been assembled; and the congress which will be held in London next-week will not fall far short of this number, if present prospects be verified. Upwards of six hundred extra-metropolitan members have announced their intention of honouring the metropolis with their attendance; and, as we number now about nine hundred metropolitan members, and as it generally happens that more visitors arrive than have previously forwarded an intimation of their intention to come, the estimate of a thousand is plainly not far short of the present promise. In other respects also than in numbers, the attendance will be remarkable. It includes a very large proportion of the most eminent practitioners of the three kingdoms—such an array, indeed, of professional character, intelligence, fame, and ability, as has rarely indeed been marshalled under one roof. Our foreign visitors are this year so numerous and so eminently distinguished as to give to the meeting something of the character of an international congress. From Berlin, we shall have Professor Virchow, Baron v. Langenbeck, Professors Bardeleben and Oscar Liebreich; from Paris, Professors Noel Gueneau de Mussy, Gosselin, Marey, Moreau, and Cusco, Drs. Larcher, Krishaber, and Dieulafoy; from Leipsic, Prof. Carus; Professors Lazarewitch (Charkow); Busch (Bonn); Rindfleisch (Heidelberg); Chauveau and Ollier (Lyons); Spiegelberg (Breslau); Metcalfe, Fordyce Barker, Bumstead, Solis Cohen, Wistar, Frank Foster, Hutchinson, as delegates from the American Medical Association; Dr. Tracy from Melbourne; Dr. Vial from Montreal; and many others. From the sister kingdom, we hear of Dr. Denham (President of the Royal College of Surgeons), Mr. Porter (Surgeon to the Queen in Ireland), Mr. Joliffe Tuffnell, Mr. Butcher, Dr. Kidd, Dr. Ringland, Dr. Hayden, Dr. Lombe Atthill, Dr. Mapother, and others not less distinguished; from Scotland, Professors Hughes Bennett, Gairdner, Macleod, Leishman, Wilson, Struthers, Dr. Matthews Duncan, etc.

The list of papers to be read is not far short of a hundred, and is of a very highly interesting character. The discussions on the action of alcohol, on Bright's disease, on anæsthetics, on the origin and communicability of cholera, on a state medicine qualification, on animal vaccination, on the abuse of hos-

pitals, and on a great many other important questions, are likely to be full of interest. Some of our foreign visitors have promised important communications, especially Dr. Noel Gueneau de Mussy on Enlargement of the Bronchial Glands, Dr. Oscar Liebreich on Croton Chloral Hydrate, Dr. Marey on the Dynamic Forces of the Heart, Professor Spiegelberg on Contracted Pelvis, and Dr. Dieulafoy on the Applications of Pneumatic Aspiration to Medicine and to Surgery—a subject of some novelty and of great interest, to which we refer elsewhere. Professor Virchow will, it may be hoped, be induced to deliver an address; and probably other of our visitors will bring with them communications of which they have not yet given notice.

We need not here recapitulate the details of the excursions, or the arrangements for throwing open places of interest to visitors. The public authorities and private gentlemen have shown a liberal courtesy; and the best treasures of our national collections and the finest private galleries will be open to visit, under circumstances of great advantage, which will facilitate their rapid and complete inspection. The public dinner will, it is anticipated, be graced by the presence of Mr. Gladstone and other eminent guests. The Lord Mayor will exercise the proverbial hospitality of our civic authorities; and professional bodies have come forward to welcome the Association with great liberality.

Those extra-metropolitan members who have intimated their intention of attending, and all metropolitan members, will receive by post vouchers, in exchange for which they will receive tickets of admission to the meeting, and for all its privileges, on application at the Reception Hall, King's College, on and after Monday next. The Reception Committee, and especially the Excursions Committee and the Local Secretaries, have had a vast labour thrown upon them in organising the arrangements for so extensive and multifarious a series of meetings and pleasure parties; and we would especially request all members to make an immediate choice of the particular excursions and visits in which they propose to take part, and to communicate the same at the earliest date to the properly appointed persons. In all cases, also, it is necessary that the earliest possible application should be made for dinner-tickets; and that it should be known who propose to attend the Lord Mayor's *soirée* and to bring each a lady.

Most of the leaders of the profession remain in London, although this is the week in which the hard-earned holiday of busy men usually begins. Though some are, for various reasons, unable to remain, few have departed without expressions of their deep regret, and leaving marked tokens of their goodwill. The President of the General Medical Council makes a journey of many hundred miles for the purpose of attending the public dinner; and Mr. Simon equally leaves his much needed rest in order to be present. It is unnecessary to say that private hospitalities are on a very large scale and very numerous: that is the character of our profession. It is, of course, impossible to ensure their equal distribution or their universal acceptance; but on this score there will be no intentional shortcomings, or other than the very extent of the gathering renders inevitable.

The accessory meetings which are grouping themselves around the general meeting have their own character of useful-

ness and importance, especially the conference of the newly elected health-officers, who will for the first time meet together to compare notes with each other and with their brethren of elder date.

The Committee of Council will have a prosperity budget, and there is no apparent cloud on the horizon. The Association, which has now for eight years received considerable annual accessions to its numbers, and which has during these later years learnt the art of retaining its new members, so that it no longer suffers an annual exodus, has this year been strengthened by a larger accession of members than ever before; its finances are more secure and more promising than ever, as a searching examination by public accountants has satisfactorily shown. The JOURNAL we feel proud to know was never more powerful, more popular, or more firmly seated in the affections of the members; and we take this opportunity of thanking some hundreds of members who, referring to a recent leader, have favoured us with communications of sympathy and thanks which we most highly value, and of expressing our acknowledgments to the councils of various branches, which have afforded us by resolution the inexpressible gratification of their moral support and appreciative thanks in a task which is often one of more than sufficient difficulty. The prospect of the meeting is in all respects fair. The difficulty of conducting satisfactorily a large amount of scientific and routine business in so considerable an assembly will no doubt be felt; but the President is a man of tried experience and of singularly kind and yet firm manner; while the business of the sections has been very carefully studied beforehand by the secretaries. Bespeaking then for this occasion the indulgence and the mutual forbearance and kindness of all to smooth any difficulties, and to remove any obstacles which may arise, we hope and anticipate that the great meeting which is approaching will be one of unchequered pleasure and advantage, and mutual goodwill and satisfaction to all; a meeting in every way worthy of the Association and of this great city, and productive of unmixed good to the profession and the public. It is unnecessary to say that a meeting of these dimensions held in the metropolis is held more directly under the public eye than is generally the case; it is particularly desirable, therefore, that the business may be conducted smoothly, and without interruption to its order by the introduction at the general meetings of trivial or irrelevant topics.

THE CONVENTION OF GENEVA.

THE *Pall Mall Gazette* comments upon the announcement which we were able to make lately, that the Shah of Persia has expressed his desire to give diplomatic adhesion to the Convention of Geneva, and is taking the necessary steps to have the protocol signed by his representative. At the close of its article, it makes some suggestions which are founded upon a practical knowledge of the facts, and deserve the attention of our own Red Cross Society. It points out that the Convention of Geneva, without needing to be remodelled—for, as regards essential points, it is excellent as it stands—should be completed by the addition of explanatory articles, failing which very grave misunderstandings may some day arise as to the direct and indirect meaning of certain of its clauses. That such an abuse of the Geneva Cross as is constituted by its being worn by a person not formally authorised to display it, with papers in his possession to establish the fact, should be regarded as a punishable offence, assimilating the offender to persons guilty of some minor form of what Bluntschli and the American articles call "war treachery," is one of the first things necessary. Ignoring the

Geneva Convention at the beginning of the war (though M. Dunant had waited upon the Emperor and Empress to beg that its observance might be enjoined upon the troops and recommended to the civil population), the French, when, M. Dunant repeating his solicitations to the Government of the 4th of September, M. Jules Favre caused the Convention to be printed in the *Moniteur*, at once hastened to turn it in every sort of way to their own individual benefit. White calico bands, with red crosses painted on them, were improvised in every direction; so that often the wearing of such devices meant not that the wearer was engaged in ambulance duty, but only that he did not wish to be hurt, that he wished to pass everywhere scot-free. The red and white cross has been seen hoisted on omnibuses and on hearses; and there have been instances of men stealing horses, and riding away, bearing aloft the international banner in token of the fact that they desired not to be interfered with by the German police. Persons in an occupied town or village, converting their houses into so-called "ambulances," are entitled to have no soldiers quartered upon them. Nothing can be more just. But it was never intended that every other house should be turned into an "ambulance;" nor that, accepting the will for the deed, invading troops should regard as an "ambulance" every house whose owner might choose to exhibit over his door a white rag striped cross-wise with red. Nor was it meant that the authorised wearer of a Geneva band should be allowed to pass from one army to the other, or from the territory occupied by one army to the territory occupied by the other. Yet during the Franco-German war English surgeons and surgical assistants attached to ambulances, bearers of English certificates, passed constantly from the French to the German and from the German to the French side, and if the French interfered with them and stopped their waggons, as sometimes happened, they uttered bitter complaints. There was nothing, however, in the letter of the Convention to prevent the French from treating as spies all strangers appearing in their lines without written permission from the proper French authorities.

Finally, the Germans have a practice, which may be a French practice also, of combining in the same soldier, decorated with a Geneva badge and styled "sick-bearer," the character of combatant and non-combatant. There is no treachery in this; but the thing has a treacherous look, and might easily be misinterpreted, and the misinterpretation might lead to ugly consequences, such as injurious accusations and threats of reprisals. The volunteer members of aid societies are, of course, not in the field with troops actually engaged. The wounded, when, as in a rapid advance, they are not left where they have fallen, are carried to the rear by soldiers specially appointed for the purpose. If during action the services of these soldiers are required in a military capacity, they use their muskets, but do not, or ought not according to their instructions, to wear, while so employed, the red and white cross of neutrality. They simply (to speak from actual observation) put it in their pocket; or, if they follow the rule laid down by General von Goeben in an order reprinted without complaint or comment of any kind by General Faidherbe in his *Campagne de l'Armée du Nord*, throw it into the regimental cart, to resume it at the end of the action, or sooner, together with the character of "sick-bearer." Under fire it obviously matters nothing to the half soldier, half-sick-bearer, nor to any one else, whether he wears the Geneva badge or not. But one can conceive of an enemy thinking it unfair that the combatant ambulance man should shoot away as fast as he likes or as he may be allowed during battle, and the battle once over, should put on his neutrality badge and claim immunity from capture. These and similar apparent difficulties, capable of explanation, capable also of being made subjects of dispute, may be recommended to the attention of M. Dunant, who may yet find many things to add to the Geneva Convention besides the signature of the Shah.

PNEUMATIC ASPIRATION.

UNDER the title of "Pneumatic Aspiration, a medico-chirurgical method of diagnosis and treatment," Dr. Dieulafoy of Paris, one of the ablest and most energetic of the younger school of French physicians,

Medico-ethical Society are strictly adhered to." The principles alluded has introduced a method of exploring and evacuating fluid collections, under a vacuum, which promises to bring about important improvements and ameliorations in the practice of medicine and surgery, and greatly simplify the means of diagnosing some obscure affections, and of treating others of a formidable and dangerous character. His scattered monographs, and the contributory records of the experience of a considerable number of practitioners throughout the world, have done much to explain and to popularise the method which he advocates. It is already very largely and successfully employed in France, America, Germany, and other countries; but it is not yet so well known in this country, although the communication of M. Labbé to the Association last year, and the papers of Mr. Jessop of Leeds and others, published in this JOURNAL and elsewhere, have introduced it to some notice. A complete monograph, which Dr. Dieulafoy has published simultaneously in France and in this country,* affords materials for a wider review of its applications; and it appears opportunely, as the author intends, we observe, to demonstrate some of the applications of the process in the sections of medicine and surgery at the approaching meeting.

This process of treating morbid collections of fluid, of which M. Dieulafoy is the discoverer and introducer, is very simple. The instrument used, called an aspirator, consists of the body of a pneumatic pump attached to a long, slender, hollow needle. The communication between the two is regulated by stop-cocks. The process is to shut the stop-cock, and by raising the piston produce a vacuum in the body of the pump; then to thrust the needle slowly into the part to be diagnosed or treated, turn the stop-cock, when the presence of the vacuum will draw the fluid into the body of the pump. M. Dieulafoy declares that no fluid is too thick to be thus drawn through the fine aspiratory needles, and no part of the body too delicate to be thus operated on. "I have," he says, "thrust these needles into almost every part of the body; into the joints, the liver, the spleen, the bladder, the intestines, the lungs, and the meninges; and I can affirm (and a great number of observers affirm with me) that we have never seen consecutive accidents." The absolute harmlessness of the aspiratory punctures is what M. Dieulafoy repeatedly insists on throughout his book, and he supports his assertion by a great number of facts.

His collection of cases is most interesting; and the benefits resulting from this extremely simple and natural mode of procedure are great and indisputable. He records cases in which aspiration was used in the diagnosis and treatment of hydatid cysts of the liver, retention of urine, poisoning, ovarian cysts, hydrocephalus, spina bifida, strangulated hernia, effusions into the pericardium, pleurisy, hydrarthrosis, effusions into the serous bursæ, hydrocele of the tunica vaginalis, ascites, abscesses, adenitis, and suppurating buboes.

In the treatment of hydatid cysts of the liver, retention of urine, strangulated hernia, hydrarthrosis, and pleurisy, aspiration has proved of great service. M. Dieulafoy gives seven cases of hydatid cysts and one of abscess of the liver cured by aspiration. In retention of urine the success of this mode of treatment is most marked. M. Dieulafoy reports eighteen cases of retention, arising from a variety of causes, hypertrophy of the prostate, stricture, cancer, injury; and of these, thirteen recovered by simply puncturing the distended bladder with the aspiratory needle. In some cases one puncture was sufficient to give relief, and to inaugurate a change in the condition of the patient; in others, repeated punctures at intervals were necessary; and in one case as many as twenty-three punctures were performed without producing any accident. The relief in all cases, even in those which aspiration was unable to cure, was immediate. Twenty-seven cases of strangulated hernia are reported at length. Of these, twenty were cured by aspiration alone; four by the additional aid of kelotomy; and in three, aspiration was insufficient, and the patient died.

Of the complete harmlessness of aspiratory puncture in hydrarthrosis, M. Dieulafoy is quite assured, and in support of this view he brings

forward fifty cases of hydrarthrosis treated and cured by aspiration. The cases of pleurisy, and the method recommended for cleansing the pleura, are instructive. In the treatment of hydrocephalus and ovarian cysts, aspiration has not proved successful. In cases of poisoning it is almost as yet untried. One interesting case is reported by M. Dieulafoy, in which an infant, six hours old, was poisoned by a dessert-spoonful of laudanum, and from whose stomach the poison was extracted, before it had taken fatal effect, by means of the aspirator.

THE Bishop of Lincoln has just sent a donation of £500 to the fund for the erection of a new hospital in that city.

DR. BELL FLETCHER and Dr. Balthazar Foster of Birmingham have been appointed Honorary Consulting Physicians to the West Bromwich District Hospital.

No fewer than eight deaths from sunstroke are reported to have taken place in the North Riding of Yorkshire within the last few days; also two cases which have not proved fatal. Several deaths from this cause have also occurred in Liverpool and other places.

It was reported recently that Dr. Eliza Walker had been appointed resident surgeon at the Bristol Hospital for Sick Women and Children. It is now officially announced that, in consequence of this election of a female doctor, the honorary medical and surgical staff have in a body resigned their appointments as physicians and surgeons. A similar appointment in Birmingham has been well received by the staff, and is, we believe, working satisfactorily.

A KINDLY and well meant notice in the *Times* of Tuesday of the approaching meeting of the Association in London contains some little inaccuracies which it is desirable to amend. The hospitalities of the University Club in Jermyn Street are proffered, at the suggestion of Dr. Lavies, to graduates in medicine visiting the metropolis during the meeting. The list of private hospitalities is of course entirely incomplete, and is far from representing the whole facts. It is unnecessary to say that the paragraph in question did not proceed from any official source.

TRANSFUSION COMMITTEE.

A MEETING of the Transfusion Committee of the Obstetrical Society will be held at the Society's Library, 291, Regent Street, on Thursday, August 7th, at 5 P.M. The Committee invite medical visitors to London, having had experience in cases of transfusion, to attend to give evidence.

ASIATIC CHOLERA IN LONDON.

TWO cases of undoubted Asiatic cholera were reported this week in London to the Medical Officer of the Privy Council, of which one proved fatal. They were imported from Hamburg, and proper precautions have been taken. Full particulars are given in all the daily papers.

UNIVERSAL PHARMACOPEIA.

DR. M. DE CHRISTOFORIS and Dr. Zambelletti of Milan announce that their proposal for the study and initiation of an universal *Pharmacopeia* has been accepted by the Executive Committee of the Viennese Medical Conference, and will be brought into public discussion.

PROVIDENT MEDICAL INSTITUTIONS.

A special general meeting of the Manchester Medico-ethical Association was held on July 21st. It was moved by Dr. Royle, and seconded by Mr. Walls—"That, in the opinion of this meeting, the institution of provident dispensaries, as hitherto proposed, is not calculated to remedy admitted evils, whilst the scheme would hardly be consistent either with the due interests or the proper dignity of the medical profession." Dr. Borchardt moved, and Dr. Armistead seconded as an amendment—"That this meeting is of opinion that the abuses existing in the out and home departments of the medical charities can be remedied by the establishment of provident sick societies in Manchester, provided that in the formation of these societies the principles laid down by the

* Pneumatic Aspiration. A medico-chirurgical method of diagnosis and treatment, by George Dieulafoy, M.D., Paris. Smith, Elder, and Co. London: 1873.

to are the following. *a.* That they should be entirely self-supporting. *b.* That every qualified medical man should have the option of attaching himself to some one society. *c.* That no medical officer should delegate his duties to an unqualified assistant. The amendment was carried by a large majority; and, upon the chairman putting it to the meeting as a substantive motion, it was passed unanimously. The meeting then proceeded to the election of three members to represent the Society upon the Committee of the Medical Charities of Manchester and Salford, and the following gentlemen were elected by ballot, viz., Dr. Royle, Dr. Armistead, and Dr. Hardie.

MR. GLADSTONE.

MR. GLADSTONE has been suffering during the last week or more from a troublesome indisposition common at this season of the year, and from which he has suffered in former years. It is, of course, intensified by the mental labour and fatigue which he is compelled to undergo; and a return to business has induced relapses, which make caution necessary. We are happy to state, however, that the Prime Minister is so far recovered that he has done the medical profession the honour of accepting the invitation to be present at the public dinner of the British Medical Association on Thursday evening next, when it is certain that he will receive a most cordial welcome from the great body of medical men who will there be assembled.

CHOLERA.

THE following is a summary of the latest official reports of the cholera in Europe. In Königsberg, in the middle of July, there were scattered cases in the town and various parts of the provinces. In Warsaw, from May 30th to July 11th, there were in the city 298 cases, and 103 deaths. In Jassy, there were two deaths on July 14th. In Rutschuk, on July 10th, the town free; the disease was present in the neighbouring villages. At Shumla, from July 5th to 7th inclusive, there were 143 cases. At Galatz, from July 12th to 16th, there were 22 deaths. In Crajova and Turna-Severin, there was a good deal of cholera in the middle of July. In Silistria and Widdin there were scattered cases. The disease has broken out in Sofia (Bulgaria), and is extending over the neighbouring district. In Pesth, from July 1st to 8th, there were 70 cases and 46 deaths; from July 9th to 15th, 190 cases and 80 deaths. Cholera is widely prevalent in Hungary. In Italy, in the province of Treviso, from July 1st to 6th, there were 20 new cases, 10 deaths, and 16 cases under treatment on July 6th. In the province of Venice, in the same period, there were 37 new cases and 23 deaths; 35 patients remained under treatment.

ENGLISH NURSES IN AMERICA.

A TRAINING institution similar to the Nightingale Training School for Nurses at St. Thomas's Hospital has been established at the Bellevue Hospital, New York, under the charge of an English lady, Miss Bowden, who has had considerable experience in this country, and has been invited to New York for the purpose of superintending it. The new institution is arranged on a footing of satisfactory liberality and efficiency by an association of American ladies.

A HOSPITAL FOR PAYING PATIENTS IN LISBON.

A HOSPITAL or *maison de santé* (*casa de saude*) was opened in Lisbon on July 1st, for the reception of patients and convalescents who can afford to pay for their treatment and maintenance. The medical officers are, Dr. de Bettencourt Pittá, lecturer on public hygiene and legal medicine in the Lisbon medical school, and physician to the S. José hospital; Dr. Vianna, lecturer on operative surgery, and surgeon to the S. José hospital; Dr. da Silva, lecturer on general pathology, and surgeon to the S. José hospital; and brigade-surgeon Dr. Marques. Surgeon-major Dr. Franco is resident medical officer and superintendent. The hospital is situated in one of the most healthy quarters of Lisbon, and is provided with well ventilated and furnished rooms, baths, gardens, billiards, chess, and other means of amusement for patients unable to go out, etc. The daily charges are as follows: first class, 4,500

reis (about £1), with private room; second class, 3,500 *reis* (15s. 9d.), with private room; third class, 1,500 *reis* (6s. 9d.), in room with one or more beds. These charges include the cost of entrance and removal, rooms, beds, medical treatment and consultations, ordinary surgical appliances and minor surgery, and the application of electricity. The more important surgical operations, and apartments for private servants, or attendance by a special nurse, are paid for separately. Families will be received according to special arrangement. A reduction in the terms is made in the case of persons who desire to remain permanently in the hospital, after having inhabited it for three months uninterruptedly. Any medical man not belonging to the hospital may send his patients to it in order that his prescriptions may be carried out; and any patient may have his or her own medical attendant, if this be preferred to attendance by the officers of the establishment. In either of these cases, the charge must be borne by the patient. In cases of death, the funeral expenses are to be borne by the representatives of the deceased. There are isolated wards for cases of contagious disease; and the administration of the hospital reserves the right of refusing admission to such cases when the special wards are full.

LUNATIC ASYLUMS.

THERE are no public institutions which lie so open to attack as lunatic asylums. They are necessary evils; they interfere with the liberty of the subject; they are costly in erection and maintenance; and they are, as a rule, managed with doors more closely shut than those of other hospitals. There also hangs about them in the mind of the public an air of mystery, and the memory of bygone evils is by no means erased. When all these factors of unpopularity are taken into account, it is not difficult to see why the complaints of those who have been subjected to their discipline are listened to with avidity, and why these complaints are accepted with a greater degree of credence than in strict justice is their due. We have of late years pointed out plainly what we consider the salient points in asylum management, and what are the main errors of our lunacy systems, and consequently feel that we cannot be regarded as prejudiced advocates when commenting on cases of individual injustice. A story has gone the round of the papers setting forth the supposed wrongs inflicted on a patient who was lately an inmate of the new County Asylum at Macclesfield. It appeared first of all in the form of a letter addressed to the Editor of the *Manchester Guardian*, signed "A Firm of Solicitors". The fact that this communication was anonymous does not tend to enhance the quality of credibility; and we have yet to learn that the actual subscription is of a nature to indicate an absence of partisanship. A firm of solicitors, however eminent, does not, as a rule, take extra trouble to weigh equally the points of a case, but in the legitimate exercise of its function represents the views of its clients as strongly as possible. The letter bears to be a statement of what this patient underwent, but is unsubstantiated by any correlative evidence. We have read it carefully and thoughtfully, and think it not difficult to unravel the thread. A lady, who by mental disease supervening on worldly misfortune, was reduced to the unhappy condition of a pauper lunatic, was inveigled into the county asylum. Her transmission there was a necessary measure for her own good and that of the public—for her own good, that she might be cured of the disease, of which she was ultimately cured; and for the good of the public, that she might not, by neglect, become a permanent incubus. To a person accustomed to the position in life which she is said to have occupied, such a step could not be expected to be agreeable, however necessary; and we cannot blame her for protesting against the manner in which her liberty was curtailed. She complains most justly of the inveiglement into the asylum: doubtless it prejudiced her after-impressions; but with this the asylum authorities had nothing to do; on the contrary, it is a plan of action against which the medical superintendent in his reports has strongly animadverted. The complaints as to the squalidness, untidiness, and want of cleanliness of the wards, are simply unfounded. An appeal to a ratepayer of the class to which this patient formerly belonged would amply answer this charge; pro-

bably, however, adding to the difficulties of the Committee of Management, inasmuch as the appointments would be reported as far above what are needed for a pauper asylum. It is unnecessary to enter into all the details of the hardships of this case; we have no hesitation in saying that where they are not misrepresentations they are exaggerations. It must be borne in mind that, whatever this person's previous condition had been, she was when admitted into the asylum a pauper lunatic; and, whilst we feel for her misfortune, we cannot see, even on her own statement, that she has ground for complaint *quod* a pauper lunatic. On the contrary, it appears that, as soon as the officers of the asylum recognised the peculiarities of her case, she was treated with exceptional consideration. This is borne out by the statement of the Committee of Management, and by the report of the Visiting Commissioners in Lunacy, who in their minute of 21st March, 1873, speak most highly of the kindly tone pervading the whole establishment. The real hardships of this case seem to us to weigh on the Superintendent and Committee of the Cheshire Asylum. An anonymous attack on the management has been accepted by a section of the press as a proved fact, and has been commented on in terms beyond the record. It would be well if those journals who adopt the motto *Audi alteram partem* would act up to it, and take into consideration the manifold difficulties and dangers which surround an asylum physician. When abuses are proved the severest penalties should be exacted; but it is Jedburgh justice to publish damnable articles on the simple *ipse dixit* of a recovered lunatic. A medical superintendent lives on his reputation as much as any other practitioner, and it should be the especial care of those journals who undertake to protect medical interests to avoid giving publicity to unsupported accusations which may materially affect it.

SUBSTITUTES FOR TEA.

THE American Agricultural Bureau brings *matè* under attention, and by comparative analysis proves that yupon, *matè*, and tea and coffee all contain the same active principle—thein. *Matè*, says the *Philadelphia Medical Reporter*, is a Peruvian weed, largely indulged in by Indians and half-breeds. It is concocted in a small silver porringer, with a tight lid and a small spout, which spout goes the round of the blackened mouths of the *matè*-sucking circle. It is a great breach of etiquette in Peru to refuse to take *matè* on such conditions. The last proposition is to supplant tea and coffee by "yupon", and the proposition also comes from the National Department of Agriculture. "Yupon" is an Indian word, and the plant itself is the cassine yupon, the *Ilex cassina*, a diuretic, and in large quantities emetic. It was used by the aborigines and also by the "poor white folks" in former days.

QUEKETT MICROSCOPICAL CLUB.

THE eighth annual general meeting was held on July 25th, at University College; Dr. Braithwaite, F.L.S., President, in the chair. The report of the Committee for the past year was read, and testified to the continued prosperity of the Club, which now numbers 570 members. The President delivered the annual address, in the course of which he noticed the progress of microscopical investigation in botany and zoology during the past year. The ballot then took place for the election of officers. Dr. Braithwaite was re-elected President; Dr. Matthews, Messrs. B. T. Lowne, T. W. Burr, and C. F. White, Vice-presidents; and Messrs. Bywater, Crisp, Hailes, Hind, Waller, and T. C. White, were elected to fill the six vacancies on the Committee. Mr. J. E. Ingpen succeeded Mr. T. C. White, who retired from the office of Honorary Secretary (owing to increase of his professional duties) after four years of unremitting and valuable service. The proceedings terminated with the usual *conversazione*.

NAVAL ASSISTANT SURGEONS.

On Wednesday, July 30th, Sir Dominic Corrigan asked the First Lord of the Admiralty whether at present assistant-surgeons in the royal navy, even when not serving on foreign stations, are denied the privilege known to be generally accorded to assistant-surgeons in the army

and to officers generally, of voluntarily retiring from the service; whether there is any limit of time to the refusal of the admiralty to permit such naval medical officers to retire, or whether they are liable to be forced to remain in the service for any number of years at the pleasure of the Admiralty; and, whether there are not at present navy medical officers on the half-pay list whose services could be had to supply the places of assistant-surgeons desiring to retire but refused permission. Mr. Goschen, in reply, said the Admiralty had full power to retain the services of assistant-surgeons in the royal navy, but exercised the power with a certain amount of discretion. When a young man had gone through a certain course of instruction at the Netley Hospital, he could not be permitted to retire until he had rendered an adequate amount of public service.

PROPOSED SANITARY MUSEUM.

M. HENRY DUNANT, originator of the Geneva Convention, is engaged in founding in London a permanent sanitary museum. It will be of as popular a character as possible, and will be connected with an institution in course of formation in London, similar to the Ladies' Red Cross Society in Germany. The museum has obtained the patronage of the Social Science Association, the British Red Cross Association, etc., and M. Dunant hopes that it will find countenance from the members of the British Medical Association.

DR. CHADWICK, OF LEEDS.

THE portrait of Dr. Chadwick, painted by Mr. E. M. Ward, R.A., for the subscribers, sixty-two in number, has been presented to the Board of the Leeds General Infirmary. The gentlemen present during the proceedings were: Mr. R. J. Hudson (the treasurer to the Infirmary), Dr. Chadwick, Dr. Heaton, Dr. James Braithwaite, Mr. T. P. Teale, Mr. C. G. Wheelhouse, Mr. Jessop, Mr. James Stables, Mr. John Lupton, Mr. Thomas Kirkby, Mr. Henry Briscall, Mr. Wm. Ferguson, and Mr. Cooke. Mr. Hudson presided. Dr. Heaton, in presenting the portrait, said Dr. Chadwick's position in his profession was so well-known to them that it would be unbecoming in him (Dr. Heaton) to dwell upon it at that time. They all knew how he had been connected with that institution, and with what zeal, efficiency, ability, and discretion he had acquitted himself; of his recognised position in the north of England as a practitioner; and of his position as a citizen and as a magistrate of the county and of the borough; and in all these respects they had great pleasure and satisfaction in commemorating Dr. Chadwick's association with the infirmary. Dr. Chadwick, in replying, expressed the satisfaction with which he looked back to the part which he took in originating the removal of the infirmary to its present noble premises, and the gratitude with which he received this mark of appreciation of his professional and personal character and services.

THE ALEXANDER PRIZE.

THE Alexander Prize on the "nature of destructive lung diseases, included under the head of pulmonary consumption, as seen among soldiers, and the hygienic conditions under which they occur," has been awarded to Dr. Welch, Assistant Professor of Pathology, Netley; the second place to Surgeon-Major Gore, of the Dublin garrison. It has been intimated to this latter officer by the Director General, that, owing to "the very high estimate formed by the assessors of the merit of his essay," it will be published in the next volume of the Army Medical Reports.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE following is a list of College officers elected by the Committee on Thursday evening, July 31st. *Censors*: William R. Basham, M.D.; George Fincham, M.D.; John W. Ogle, M.D.; Samuel O. Habershon, M.D. *Treasurer*: Frederic John Farrer, M.D. *Registrar*: Henry A. Pitman, M.D. *Harveian Librarian*: William Munk, M.D. *Examiners: Anatomy and Physiology*—J. Burdon Sanderson, M.D.; George Harley, M.D. *Chemistry, Materia Medica, and Practical Pharmacy*—William H. Dickinson, M.D.; T. Stevenson, M.D. *Me-*

dical Anatomy and the Principles and Practice of Medicine—George Johnson, M.D.; Andrew Whyte Barclay, M.D. *Midwifery and the Diseases peculiar to Women*—John Clarke, M.D.; William S. Playfair, M.D. *Surgical Anatomy and the Principles and Practice of Surgery*—George W. Callender, Esq., F.R.C.S.; Jonathan Hutchinson, Esq., F.R.C.S. *Curators of the Museum*: Frederic J. Farre, M.D.; Thomas B. Peacock, M.D.; William Wegg, M.D.; Francis Sibson, M.D. The rest of the business included a communication from the Colonial Office on the subject of leprosy; and instructions in reference to cholera which were prepared by the Council in November, 1871, in accordance with a resolution of the College.

SCOTLAND.

PROFESSOR HUGHES BENNETT.

WE intimated last week that the report which has been widely and positively circulated that Dr. Hughes Bennett is about to retire from the Chair of Physiology in the University of Edinburgh required to be received with reserve. We are happy to learn that Dr. Hughes Bennett's health is much improved, and that there is no question of resigning.

MEDICAL DEGREES.

SIR D. WEDDERBURN gave notice this week in the House of Commons to ask leave to bring in a Bill next session to admit women in Scotland to medical degrees, and with power to confer such degrees.

IRELAND.

DR. CHARLES A. CAMERON has been appointed analyst to the Queen's County at a salary of £50 a-year; also analyst to the counties Wicklow and Carlow, at £25 a-year each.

CHOLERA PRECAUTIONS.

THE Local Government Board having directed that steps should be taken to allocate a place at Dublin for the reception of cholera patients arriving in vessels, a deputation of representatives from the North and South Dublin Unions have selected a site between Ringsend and the Pigeon House. It has been stated that this is the identical place in which the Dublin Artillery Militia were located last year, and, if this be true, it is one of the most stupid blunders ever perpetrated, inasmuch as the soil is dredged from the River Liffey, and composed almost exclusively of human excreta and decayed animal matter. Indeed, whilst the Militia were there for a very short period, the men suffered so much from diarrhoea and dysentery as to oblige their training to be summarily cut short, so insalubrious and objectionable was the spot selected by the military authorities. There can be no opposition to an hospital ship, which gets rid of all objections as regards contagion, &c., and is undoubtedly the best resource for seaport towns.

ARMY MEDICAL WARRANT AND THE IRISH SCHOOLS.

As the army medical service is largely recruited from the Irish schools, it is not to be wondered at that a strong feeling exists amongst their alumni. On the subject of the late Army Medical Warrant, some of the schools have already withdrawn their candidates for the coming examination, and it is pretty generally known that most of the best men decline to compete until the Warrant be withdrawn. Certain mediocre men will no doubt, however, snatch at the opportunity to squeeze through at all hazards, knowing that others who would be sure to beat them will not compete under existing circumstances. This will prove to be but a sorry way to fill up the ranks of such an important service. The professors and teachers of the various schools might, with advantage, come more prominently forward on the present occasion, and hold a meeting at which the state of the case might be clearly explained and discussed. Such would appear to come within the scope of the duty of the representatives of the Irish medical schools, and would no doubt produce a salutary effect.

THE GROWTH OF THE ASSOCIATION.

At a meeting of the Council of the Metropolitan Counties, Branch on Tuesday last, more than seventy new members were elected into the Association; and nearly a hundred candidates will be proposed for election at the meeting of the Committee of Council on Tuesday next. Upwards of 650 new members had previously joined the Association this year; so that the total accession to our numbers this year is more than 800—by far the largest increment which any one year has yet afforded.

THE PARLIAMENTARY BILLS COMMITTEE AND THE RECENT ARMY MEDICAL WARRANT.

On Tuesday Mr. D. Dalrymple asked the Secretary of State for War whether he had been able to give the attentive consideration he promised to the representations made to him by the Parliamentary Bills Committee of the British Medical Association and other bodies on behalf of the army medical officers affected by the recent Army Medical Warrant, and what the result of that consideration was.

Mr. Cardwell.—The subject, which is one of much detail, has undergone careful consideration in the Department, but I have not yet been able so far to consider it as to submit the result to the Treasury, which is a necessary preliminary to the submission of any modifications of the warrant for the sanction of the Queen. No time shall be lost in taking the necessary steps, and an answer shall be returned without any unnecessary delay. * * This intimation is satisfactory in its purport, although the considerable time occupied in preparing the answer is of course much to be regretted.

Mr. Dalrymple has also moved for a "Copy of the Representations addressed to the Secretary of State for War by the Parliamentary Bills Committee of the British Medical Association on the subject of the recent Army Medical Warrant, and the grievances of the Army Medical Officers in respect of the same and the answer thereto."

MEETINGS TO BE HELD IN CONNECTION WITH THE ANNUAL MEETING.

CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

THE following gentlemen have expressed their intention of attending this Conference, which will be held during the meeting of the Association at King's College, on Thursday, at 3.30 p.m. Gentlemen proposing to make communications to the Conference are requested to give intimation of the subject to Mr. Francis Fowke, General Secretary, or to Mr. Ernest Hart, at 37, Great Queen Street, W.C., prior to the meeting, or to the General Secretary's temporary office in King's College during the week of the general meeting.

Henry J. Alford, M.D. (Taunton), T. B. Bott, M.D. (Bury), C. S. Barter, M.D. (Bath), C. O. Baylis (Birkenhead), Harris B. Butterfield (Bradford), W. H. Corfield, M.D. (May Fair, W.), T. J. Dyke (Merthyr Tydvil), George O. Drury (Walsall), Ebenezer Davies (Swansea), Robert Elliot (Carlisle), Heber D. Ellis (Poole), Theodore Gunther, M.D. (Hampton Wick), F. Griffiths, M.D. (Sheffield), William R. Grove (St. Ives), Edward Gaylor, J. Hickinbotham (Birmingham), Alfred Haviland, J. Lang, M.D. (Southport), Charles F. J. Lord (Hampstead), John Morton (Guildford), Alfred Mathias (Bridgnorth), M. J. Mac Cormack (Lambeth), A. Arthur Napper (Chiddingfold), William Prose (Much Wootton), Robert Pollock (Acton), George Ross, M.D. (Bloomsbury), Charles Roberts (Uxbridge), W. M. Renton, Robert S. Stedman (Sharnbrook, Bedford), T. J. Schollick (Guildford), Edw. Seaton, (Nottingham), John W. Tripe, M.D., George Turner, W. Thompson (Peterborough), R. W. Talbot, (Poplar), Henry Terry, Jun. (Northampton), J. Burdwood Watson (Bourne), George Willis, M.D. (Monmouth), Alfred Winfield (Oxford), Thomas Walton (Hull), Charles Webb (Basingstoke), W. T. G. Woodforde, M.D., W. Tyndall Watson, M.D. (Tottenham).

MILITIA SURGEONS.

A MEETING of Militia Surgeons, summoned by Mr. William Stokes, of Dublin, and Mr. J. C. Smyth, of Great Yarmouth, to confer on matters affecting the officers of that service, will be held on Wednesday, August 6th, at 3.30 P.M., by permission of the Reception Committee.

REGISTRATION OF DISEASE.

THE Committee on the Registration of Disease will meet in one of the rooms at King's College on Thursday, August 7th, at 9.30 A.M.

NEW SYDENHAM SOCIETY.—The annual meeting of the New Sydenham Society will be held in King's College, on Friday morning, August 8th, at 9 A.M. Business: Report and Balance-sheet for 1872; Election of Officers for 1873-4; and other matters. The attendance of all members of the Society is requested.

THE ANNUAL DINNER.

AT the public dinner of the Association, which will be held in the Hall of Lincoln's Inn, by permission of the Benchers, on Thursday, August 7th, at 6.30 p.m., under the presidency of Sir William Fergusson, Mr. Gladstone has expressed his intention to accept the invitation which has been forwarded to him. Among other guests will be the Right Hon. Sir Edward Ryan; Sir John Karslake; the President of the Royal Academy; the President of the General Medical Council; the Presidents of the Royal College of Physicians, and of the Royal College of Surgeons; the Master of the Society of Apothecaries; General Acland; Mr. John Simon (Medical Officer of the Local Government Board); Mr. Winter Jones (Principal Librarian of the British Museum); Professor Virchow; Baron Von Langenbeck; Professor Bardeleben, and Professor Oscar Liebreich, of Berlin; Professor Busch, of Bonn; Professor Carus, of Leipzig; Professor Spiegelberg, of Breslau; Professor Lazarewicz, of Charkow; Drs. Noel Gueneau de Mussy, Cosmo, Marey, Moreau, Dieulafoy, Larcher, and Krishaber, of Paris; Professor Chauveau and Ollier of Lyons; Professors Metcalfe, Fordyce Barker, Bumstead, and Solis Cohen, of New York and Philadelphia; Dr. Tracy, of Melbourne; Dr. Viall, of Canada, etc.

It is particularly requested that Members proposing to dine will take their tickets on entering their names at the Reception Hall, in King's College, on and after Monday next. No dinner tickets can be issued after 12 noon on Tuesday.

ACTION ARISING OUT OF A DEATH FROM CHLOROFORM.

WICKLOW ASSIZES.*

(Before Mr. Justice O'Brien and a Special Jury.)

JOHANNA LAMB v. JOHN BARTON AND EDWARD H. BENNETT.

AT the sitting of the Court on July 23,

Mr. Hemphill, Q.C., submitted to his lordship that there was no case upon the evidence to go to the jury. The plaintiff was bound to give substantive evidence of negligence, and he (counsel) submitted there was none.

His lordship: There is evidence that one of the defendants stated at the inquest that he would not swear the man did not die of an overdose of chloroform. I will take a note of your application.

Mr. Hemphill, Q.C., addressed the jury for the defendants. His lordship, he said, had intimated that there might be a question for their consideration. However much they all regretted the death of the young man, yet, upon the plaintiff's own case, there was no evidence of any negligence on the part of either of the defendants. The action was ill advised in its inception and in its conduct; it was based upon exaggeration and inaccuracy. Even in the summons and plaint there was a misstatement of fact; namely, that there was negligence in the operation; the fact being, that no operation at all was performed. There was no ground for the suggestion thrown out, that Dr. Bennett was hurrying away to another patient. There was no hurry; on the contrary, every possible care and attention were bestowed upon the case. In no part of Europe were the medical attendants of hospitals more skilful, careful, and philanthropic, than those. He had always thought that the physicians and surgeons of Dublin were conspicuous for their self-denying philanthropy, for their readiness to devote their time and talents to the faithful discharge of their duties. They were not there to

award compensation to this poor widow for the death of her husband. Accidents happened every day to persons who were not, either upon principles of law or of natural justice, entitled to compensation from others. Nothing but the extremest negligence or want of skill could warrant such an action as this. Dr. Barton was for years in possession of his diploma, and he had been two years resident surgeon of Sir Patrick Dun's Hospital. During that time he had administered chloroform in hundreds of cases, with the best results. If a man not duly qualified undertook to administer medicines, he should be made answerable for the consequences. But this was not such a case. In the presence of Dr. Bennett he could not say of him all that he deserved, but he would say that Dr. Bennett was a gentleman of the highest order and intellect, and the greatest capacity; and the fact that he was one of the visiting physicians of Sir Patrick Dun's Hospital, was a sufficient guarantee for his professional fitness. If the jury were satisfied, as they would be, that the defendants exercised the best skill and judgment, they would be bound to find a verdict for them. Medical men were not expected to guarantee the result of any operation which, in the exercise of their judgment, they were induced to perform. If it were otherwise, no man would have the courage to enter the profession. It would be cruel in the extreme, to impose such a responsibility. It appeared, from Dr. O'Leary's evidence, that Joseph Lamb was a man of sensitive nature and nervous temperament, and one to whom it was most desirable that chloroform should be administered, for the purpose of an operation which to him would have been painful and exciting. It had been assumed that Dr. Bennett determined upon the operation without any previous examination. On the contrary, he examined the man carefully; he found a healthy pulse of 70, he saw that the man was robust and healthy, and saw the respiration by stripping the chest. He spoke to the man about the amputation and chloroform, and the man expressed his assent to both. There was no hurry; on the contrary, the utmost care was taken, and an examination made that occupied at least fifty minutes. It was proved that the apparatus used, namely, Skinner's, for administering the chloroform, was the best that could be procured; and it would be established that the preparation of chloroform was of the best description. It having been ascertained that the pulse was at 70, the application of the chloroform was commenced, and a student was placed to watch the pulse. That steady experienced young man, Mr. Forsythe, happened to have his hand upon the femoral artery, not for the purposes of the chloroform, but with a view to the proposed operation; he was not pressing the artery, but merely had his finger upon it. How could the business of hospitals be carried on if such a staff as assisted on this occasion were not to be considered sufficient to undertake any operation? Dr. Barton was fully occupied in administering the chloroform, holding the apparatus with one hand and the dropping bottle with the other. That the students—one of them of three years standing—faithfully performed their duty, was proved by the fact that the moment they felt the weak beats, the one at the wrist and the other at the femoral artery, they simultaneously called out. It would be proved that only three drachms of chloroform were administered, and that the process had not gone beyond the first stage. There would not be a shred of a case were it not for the evidence of Gouly, a juror at the inquest. He first said it was Dr. Barton who was asked about examining the heart, and about an overdose, and then he said it must have been Dr. Bennett. Nothing of the kind occurred. Neither Dr. Barton nor Dr. Bennett was examined, although they desired to be, and tendered themselves for examination. It was stated, by Dr. Meldon, that, in his opinion, death resulted from some constitutional peculiarity which led to a fatal action of the chloroform by producing paralysis; and it was also deposed to by that gentleman, that the nature of this constitutional peculiarity could not have been discovered by any examination either before or after death. The Emperor Napoleon passed away as suddenly as the twinkling of an eye, and was it to be said that the eminent men who attended him were to be held responsible for his death? Dr. Morgan said death had resulted from the use of chloroform in many cases in which every possible precaution had been taken, and that the causes of death could not be discovered by *post mortem* examination. Were medical men to be held responsible for deaths under such circumstances? It was stated by Lister and Snow that, even where extensive disease of the heart existed, it was desirable to apply chloroform rather than operate without it. Dr. O'Leary, who knew Joseph Lamb, had proved that that man had no disease of the heart—no fatty degeneration—no disease of the kidneys, nor any epileptic tendencies. He had what was called "functional derangement of the heart," but that was all moonshine. The medical witnesses for the defence would be examined, and the verdict would uphold the character for skill, benevolence, and philanthropy, for which the Irish medical profession were distinguished throughout the world.

Dr. John Barton: I am one of the defendants. Next December I

* Concluded from page 94 of last week's JOURNAL.

shall have been two years house surgeon of Sir Patrick Dun's Hospital. I am a surgeon; I have had my diploma for five years. I have the degree of M.B., from Trinity College. I remember Joseph Lamb being brought to the hospital, about five o'clock, on the evening of February 12th, last. I examined him; he had a compound fracture of the great toe of the right foot, and the second and third toes were also fractured. I came to the conclusion that amputation was necessary, to prevent mortification or tetanus. Lamb had a full, strong, regular pulse—about 70. He was in great pain, and I gave him some laudanum. He was not faintish when I saw him; I dressed the wound in the ordinary course. I informed him of the necessity for an operation; he did not object. I saw him again that night at ten o'clock, and gave him more opium; he was then suffering from pain, and said he was afraid he could not sleep. I saw him again next morning about nine o'clock, and about half-past nine I saw Dr. Bennett, and called his attention to this case. Lamb was very quiet when I saw him in the morning; he had slept well. I removed the dressings to show Dr. Bennett the injuries. Lamb said he was content to allow Dr. Bennett to take off as much as would be necessary. Dr. Bennett felt his pulse, and asked when he had had his last meal. I do not think any further examination was made. I left Dr. Bennett and Lamb conversing. I was with them about ten minutes that time. I don't think anything had been said previously about chloroform. I next saw Lamb in about three-quarters of an hour afterwards; he was then on the table in the operation theatre. The upper part of his chest was stripped. Dr. Bennett was standing at the table, and desired me to commence giving the chloroform. I felt the pulse, and then told Pim to hold the pulse. The man became violent in about a minute, and I took the mask from his face. He became quiet in about a minute. He became violent about three times, and on each occasion I removed the apparatus, and waited until he was quiet. At the end of the third struggle, not seeing his chest moving, I called to Dr. Bennett, and said that something was wrong. I had not, before calling Dr. Bennett, put the apparatus to him again. I did not put it to him at all after I observed that the chest was not moving. Just as I called to Dr. Bennett that something was wrong, Pim and Forsythe also called out to me. After they called out I did not administer any chloroform. I did not conceive he was dead, but I proceeded to try to restore him. I used artificial respiration by Sylvester's method, for an hour, and pulled out his tongue with a forceps; an injection of brandy was given, and a galvanic battery applied. These are the proper means to use in such a case. There were a couple of gasps at first. Up to the time when I called to Dr. Bennett, I had observed no extraordinary symptoms, except that he was more violent than usual. I am the person who usually administers chloroform in Sir Patrick Dun's Hospital. I have done it on an average twice a week since December, 1871. I use Skinner's apparatus and the dropping-bottle. Duncan and Flockhart's was the preparation I used; it is the best made. I had previously used a portion of the contents of the larger bottle in the other cases, and successfully, and I have since used the chloroform that remained in the larger bottle, and did so without any accident. That dropping-bottle is specially designed to prevent too large a quantity from escaping. About two drachms were used altogether. I attended the inquest on both days, Saturday and Monday, and Dr. Bennett attended on Monday. Neither of us was examined. I asked on the Monday to be examined. The coroner refused. I was in court yesterday, and heard Mr. Gouly examined. He did not ask me or Dr. Bennett any questions. I did not make any statement at the inquest, nor did Dr. Bennett. I think I was there the whole time Dr. Bennett was present.

Cross-examined: I am not sure I was present the whole time at the inquest. I meant that Dr. Bennett was not asked any question in my presence. I was not the first who saw Lamb when he came into the hospital on the evening of February 12th; Chester, the resident student, was the first who saw him. When I saw him, I came to the conclusion that amputation was necessary. The great toe was completely crushed. The bone was crushed, and the end laid bare. There is a rule of the hospital to send for the visiting surgeon, if the case be an immediate one. This was not such a case. I had administered chloroform before I went to this hospital, at St. Mark's Hospital, and at the Meath Hospital, and in the country. I did not hear him asked or told anything about giving him chloroform. The violent struggles which induced me to suspend the administration of the chloroform occurred three times. The man was very powerful. The amount of violence was more than usual, but not the number of the returns. The intensity of the violence in this case was unusual. Each time I watched his respiration. I did not make any examination. It takes about three drachms to produce unconsciousness in an ordinary case. In some cases there is no excitement. I would say about one drachm on the average is consumed during the excitement stage. I have no doubt the man was dead im-

mediately I called out. I don't remember whether I was informed by Mr. Chester, the resident student, that the man got stimulants the night before, or that the man had fainted. I did not inquire of Lamb as to whether he had had any medical attendant, nor as to his habits of life.

Re-examined: I think the amount of violence in a patient is generally proportioned to his strength. I was about half a minute applying the chloroform the first time. About a minute elapsed before I renewed it. I applied it the second time for about half a minute or a minute; then there was an interval of about half a minute; and the last application was for about two minutes.

Dr. Bennett: I am a Fellow of the Royal College of Surgeons, Professor of Anatomy in Trinity College, and one of the visiting surgeons of Sir Patrick Dun's Hospital. I have been connected with the hospital since 1865. I first heard of Lamb's case on my arrival at the hospital on Thursday morning. I met Dr. Barton, and had a communication with him about the case, and also with Chester, the resident student. I inquired from Chester as to the condition of the patient. Mr. Chester, in answer to me, said there was some amount of shock on his admission, that it was slight, and that he gave him stimulants when undressing him immediately after admission. I proceeded with the house-surgeon to see Lamb, who was then in bed. Dr. Barton stripped the foot partially, and I stopped him upon an expression of pain from the patient. I found a full, strong, regular pulse up to 70. I judged first of all, from the condition of his hand, that he was not a drunkard. I entered into conversation with him as to how the accident happened. I told him then that an operation was necessary, but that I could not estimate the amount, as I had not an opportunity of seeing the whole of the wound. I told him I would, if he wished, defer the full examination of the wound until he was under chloroform. He said he would rather wait until he was under the influence of chloroform. He expressed great anxiety as to the amount of amputation necessary. While I was holding his hand and dressing him, his breast was stripped. His breathing was perfectly normal. I examined his tongue, and I asked whether he ever had had any serious illness, such as fever, in his life. He said none. I ascertained he had breakfasted nearly two hours before, which was a sufficient interval to allow the administration of chloroform. I next saw him on the table. According to the best of my skill and judgment, I considered that man a perfectly fit subject to be operated upon and to receive chloroform. When on the table, he asked again what amount would I take off? I told him that he must leave that matter in my hands entirely. His answer was—"I leave the matter entirely in your hands." The house-surgeon, to whom I left the administration of the chloroform, placed Mr. Pim at the pulse. I placed Mr. Forsythe at the femoral artery; and, as the patient was a strong man, I placed Mr. Hart to prevent him from striking out during the operation. In my opinion, every precaution that skill and judgment could suggest for the proper administration of chloroform was taken. I did not minutely observe the process of administration of the chloroform, but I observed the fits of violence because they extended to the wounded foot. He was a powerful man, over six feet two inches high. The muscles were as well developed as I ever saw. The moment Dr. Barton called out there was something wrong I went to his assistance, and commenced the application of the restoratives myself. I heard, almost simultaneously with the call from Dr. Barton, the warning from the students, showing that the pulse and femoral artery had been closely attended to. In my opinion, all the proper tests were applied by me in this case. I think it would have been quite unnecessary to make any more examination than was made. I attribute the death to the sudden arresting of the heart's action, the result of his idiosyncrasy. In my opinion, no further examination than I made would have enabled me to discover that peculiarity, nor could the nature of it have been ascertained by a *post mortem* examination. I was present at the inquest on the second day. I was not sworn or examined. I was not asked any question by any one, coroner or juror. I made no statement at all at the inquest, except to give to the coroner, at his request, the names of the students, Chester and Forsythe, who were present at the operation. I asked to be examined; but the Coroner declined to receive my evidence.

Mr. Joliffe Tufnell: I have heard all the evidence in this case. In my opinion, he was a proper subject for an operation, and for the administration of chloroform; and every reasonable precaution was adopted. I do not think any examination of the heart would have been of the slightest use. I think the pulse was a sufficient indication of the state of the heart. In my opinion, all that was done in the administration of the chloroform was right, proper, and cautious; and there was not a particle of negligence or unskillfulness on the part of either of the defendants. I heard Dr. O'Leary's evidence. I do not think there was anything in the shock or the giving of stimulants that called for

further examination than was made. If this man had functional derangement of the heart, it did not militate in any way against the administration of chloroform. I attribute this man's death to a constitutional tendency to succumb to the influence of chloroform.

To a Juror: An overdose of chloroform would not produce the violence described.

Cross-examined: I do not consider this man ever had any serious illness, judging from what I have heard about him. Had that man come under my care, I would have acted as Dr. Bennett did. Even though told the man had been faintish and got stimulants, I would not have considered it necessary to examine as to the state of the heart if the man had presented to me the appearances he presented to Dr. Bennett. Ether is very generally used in America. I cannot speak as to Germany or France. I have a general knowledge about America. I have seen chloroform administered every week in Dublin, and I have never known a fatal result. Had this man been brought to the City of Dublin Hospital, the same line of treatment would have been adopted. I would in some cases have examined the heart, but not in such a case as this.

Mr. Butcher: I am a Fellow of the Royal College of Surgeons, and University Lecturer on Operative Surgery. I have heard the evidence respecting this case, and I do not think it was necessary to make a stethoscopic examination of Lamb's heart. In my opinion, what Dr. Bennett did was sufficient to ascertain the fitness of the man for the administration of the chloroform. I do not consider that any further examination than is stated to have been made was necessary. If I had been the surgeon in that case I would not have adopted any other course. I believe death in this case was caused by the chloroform acting as a direct poison upon the heart, arising from some peculiar idiosyncrasy which could not have been discovered by any examination of the heart, or by a *post mortem* examination. I think the fact of one man holding the pulse and another having his finger on the femoral artery would be quite sufficient to give intimation of the condition of the heart. I have not heard anything to lead me to suppose there was an overdose of chloroform for an ordinary man. No precaution known to medical science was omitted in this case.

Cross-examined: There is a good deal of difference of opinion between British and continental surgeons as to the use of chloroform. We all admit chloroform is dangerous, but take the greatest care in its use. I am aware Erichsen says it is more convenient, but we do not use it for the sake of convenience. I will not say chloroform is less dangerous, if safely administered, than ether; but I will say that it can be safely, if judiciously, used. I have not had experience of ether. I am quite aware chloroform was condemned by a commission of the Royal Medical and Chirurgical Society in 1864. I am aware ether is used in America; and it is reported that during the late Franco-German war ether was used in both armies. If I put my hand upon a man's pulse and found it regular, and saw his respiration was regular, I would not think it necessary to examine the heart. No examination of the pulse nor of the heart would be likely to disclose a peculiar idiosyncrasy. This seems to have been a stopping of the heart's action, for which I cannot account, and the cause of which could not be discovered by any examination. I do not think any previous knowledge of the man's condition would have enabled a medical man to discover it. It was stated that this man Lamb had an anæmic pulsation in the neck. This would be caused by nervousness; it would not indicate this peculiar idiosyncrasy.

Dr. Bennett's cross-examination was proceeded with.

I have often examined the heart for the purpose of ascertaining whether an operation could be made, and with a view to the administration of chloroform. I have often found disease of the heart, and yet used chloroform. I never met with a case in which disease of the heart was so serious that I would not administer chloroform. In the majority of cases of disease of the heart, it is beneficial to administer chloroform. I recognise the dangers of chloroform, and agree with Dr. Butcher, that its administration may be dangerous if proper precautions are not taken, but its dangers may be avoided. There is a certain amount of danger in every case; there is not a bit more danger in its use in a case of heart-disease than in a case where there is none. A diseased heart does not aggravate the danger in case of an operation. In some of the principal hospitals in the United States they use ether, and in some chloroform. In 60 per cent. of the cases operated upon in the American war the operations were performed under chloroform. I think the cause of this man's death was the arrest of the heart's action. The cause of his death was certainly the chloroform. Too large a quantity of chloroform would act as a poison. From half a drachm to two or three drachms may be used to produce the first stage—the state of excitement; it will depend upon circumstances—the time occupied in the administration and the condition of the patient. I had nothing

to do with the actual administration of the chloroform; but I directed its administration. It was Dr. Barton who gave me the first warning. The students called out at the same time. The man had a series of violent paroxysms, but not more violent than I would expect in the case of so powerful a man. The man was dead when I left the foot to go to his head.

Re-examined: The reason, I say, that there may be less danger in giving chloroform to a man with heart-disease is that the shock of the operation may be more dangerous to him without chloroform.

Dr. Rawdon McNamara: I am a Fellow of the College of Surgeons, and have been President. I have heard a great deal of this case. I heard the evidence of Dr. Barton, and the direct evidence of Dr. Bennett, and his description of the examination he made, and of the result of it. In my opinion, the man was a fit subject for the operation and for the administration of chloroform so far as human means could ascertain. I would have acted in the case as Dr. Bennett acted. I would have had the chloroform administered in the same manner. I attribute the death to what has been described as a peculiar idiosyncrasy. No previous knowledge of the patient's state of health nor any previous examination could have thrown any light upon the existence of this peculiar idiosyncrasy. In my opinion, the quantity of chloroform administered to this man was not more than should have been administered to a man who had not this peculiar idiosyncrasy.

Cross-examined: Idiosyncrasy is a peculiar condition of individual patients, which renders them unduly susceptible of the action not only of chloroform, but of many other remedies and of articles of diet also. I have no experience of ether. We have had very little experience in Great Britain or Ireland of ether. About the time I came to the profession ether was adopted.

Dr. M'Dowell: I am a Fellow of the College of Surgeons, Professor of Surgery and Anatomy in Trinity College, and one of the visiting surgeons of St. Patrick Dun's. I have heard all the evidence in this case; and, having heard it, I am of opinion that nothing more than was proper and right could have been done. I do not see any evidence of the least negligence. The examination made by Dr. Bennett was, in my opinion, quite sufficient. I have long been of opinion that the examination of the pulse is sufficient. I know of no other precaution which could have been taken. I agree in what has been said as to the cause of death.

Cross-examined: I heard the evidence of Dr. Barton as to the paroxysms. In many cases of disease of the heart, that would be a reason for administering chloroform before a serious operation. There may be some diseases of the heart which would render the use of chloroform dangerous. The administration of chloroform may be dangerous, and it may be given in a quantity sufficient to poison. The paroxysms almost invariably take place, and the violence is proportioned to the muscular power. I would be more uneasy in a case in which there was no violence than in a case in which there was considerable violence. It is very often done in hospitals to entrust the keeping of the pulse to a pupil of one year's standing. I attribute death in this case to the stoppage of the heart's action, caused by the chloroform. I have seen thirty drops suffice, but from three to four drachms are given in ordinary cases. A good deal is wasted by evaporation and otherwise. The quantity necessary depends upon various circumstances.

The jury here intimated that they were perfectly satisfied, and would find for the defendants.

Mr. Pim, the student who held the pulse of Joseph Lamb, was produced: I am a student of one year's standing. I have devoted myself closely to my studies. I have been present at a great many operations by Dr. Bennett, and I have frequently felt pulses and kept the pulses of patients several times for Dr. Bennett. I remember the case of Lamb. I saw Dr. Bennett examining him in bed, and I saw him arranged on the operation-table. I was requested by Dr. Barton to take my position at the pulse. I did so, and kept close attention to it, at the same time that Mr. Forsythe had his finger on the femoral artery. I did not notice any change until at the end it suddenly became weak—gave about four weak beats and stopped. Until I observed these weak beats, the pulse was strong and regular. Immediately on feeling the weakness, I told Dr. Barton the pulse had become weak. I had on several previous occasions of the administration of chloroform to other patients held the pulses at the request of Dr. Barton. At the same time, on the occasion that I told Dr. Barton the pulse was weak, I heard him say something to Dr. Bennett. I noticed the violence that has been described. I do not think I ever observed so much violence exhibited before, but that may be accounted for by the fact that I never saw so strong a man under chloroform. There was no variation in the pulse until it suddenly became weak. The three or four weak beats were somewhat similar. Up to that the pulse was about 70. It was strong, if anything. I told

Dr. Barton about a second before he spoke that the pulse had become weak.

Mr. Gibson said that after the intimation made by the jury, he would not adduce any more evidence, and he would say only a few words to the jury. He said a grave charge—a charge of unskilfulness and negligence—had been made against the defendants. If the charge were well founded, they should be driven from their profession. But it was utterly unfounded; and to show that the whole of the facts and circumstances had been detailed, the most distinguished members of the profession had been examined. After the trial that had taken place, it was only an act of justice to the defendants to find a verdict freeing them from every imputation.

Mr. Crean replied for the plaintiff. He said that after the expression of opinion given by the jury, he spoke necessarily under considerable embarrassment. He hoped, however, although they had formed an opinion in favour of the defendants, to satisfy them by fair reasoning upon the evidence that the plaintiff was entitled to a verdict at their hands. He proceeded to observe upon the evidence, and contended that a fuller examination of the man's condition should have been made before submitting him to the chloroform; that the several paroxysms of violence which occurred during the administration should have prompted an examination of the state of the heart; and also that it was shown an overdose of chloroform had been given so as to cause death. He complained of the entrusting the pulse to a student of one year's standing.

In the course of the learned counsel's address, Mr. Justice O'Brien observed that all the medical witnesses, with one exception, concurred in stating that it would have been impossible by any examination, either before or after death, to have discovered the "peculiar idiosyncrasy" which, acted upon by the chloroform, they said caused the man's death. Mr. Justice O'Brien said the jury had not only heard the evidence, but showed by their questions that they understood it. Sympathy had been spoken of, but this was not a case in which sympathy for either side should influence them. No doubt they all should sympathise with the plaintiff and her children, and deplored that they should have been reduced in circumstances by the loss of the husband and father. At the same time, the case was a vital one for the defendants. It was a case involving not only the damages that might be awarded, but involving character also. They had heard frequent mention of an overdose of chloroform. That the man died from the effects of the chloroform there could be no doubt, but the question was whether there was negligence, unskilfulness, or carelessness on the part of the defendants. No doubt Joseph Lamb died from chloroform. But why? What was the meaning of the word "overdose?" It meant such a quantity as should not have been administered to any ordinary person under all the circumstances of the case. All the medical witnesses, except Dr. O'Leary, said the chloroform caused the death because of—as they termed it—a "peculiar idiosyncrasy" for which they could not account, and of which they could not give any explanation. He would not go through the evidence, but merely read for them a statement made by Dr. Meldon, one of the witnesses for the plaintiff, that he would have examined as to the state of the heart, but that most medical men would be satisfied with an examination of the pulse if they found it healthy. Dr. Morgan described three causes of death from chloroform, one of which acted directly by some immediate paralyzing influence. Dr. Bennett proved he examined the man's pulse carefully, and there did not appear to have been any negligence; and it further appeared that Mr. Pim, who held the man's pulse, performed a similar duty on previous occasions with other patients.

The jury at once found for the defendants on all the issues.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

An *Address in Medicine* will be delivered by EDMUND A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

An *Address in Surgery* will be delivered by JOHN WOOD, Esq.,

F.R.S., Professor of Surgery in King's College, and Surgeon to King's College Hospital.

An *Address in Physiology* will be delivered by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

The business of the Meeting will be transacted in six Sections.

SECTION A. MEDICINE.—*President*: Dr. Sibson, F.R.S., London. *Vice-Presidents*: Dr. Habershon, London; Dr. Eason Wilkinson, Manchester. *Secretaries*: Dr. John Murray, 42, Harley Street, London, W.; Dr. Silver, 2, Stafford Street, Bond Street, W.

SECTION B. SURGERY.—*President*: John Hilton, Esq., F.R.S., London. *Vice-Presidents*: W. S. Savory, Esq., F.R.S., London; Dr. George Buchanan, Glasgow. *Secretaries*: Henry Arnott, Esq., 6, Nottingham Place, London, W.; Dr. Alexander Ogston, Aberdeen.

SECTION C. OBSTETRIC MEDICINE.—*President*: Dr. Braxton Hicks, F.R.S., London. *Vice-Presidents*: Dr. G. H. Kidd, Dublin; Dr. Leishman, Glasgow. *Secretaries*: Dr. J. H. Aveling, 1, Upper Wimpole Street, London, W.; Dr. A. B. Steele, Liverpool.

SECTION D. PUBLIC MEDICINE.—*President*: Dr. Lyon Playfair, C.B., M.P., F.R.S., London. *Vice-Presidents*: G. W. Hastings, Esq.; T. J. Dyke, Esq.; Merthyr Tydfil. *Secretaries*: Dr. Corfield, 10, Bolton Row, Mayfair, W.; Dr. Baylis, Birkenhead.

SECTION E. PSYCHOLOGY.—*President*: Dr. Harrington Tuke, London. *Vice-Presidents*: Dr. Radcliffe, London; Dr. Thurnam, Devizes. *Secretaries*: Dr. Blandford, 71, Grosvenor Street, London, W.; Dr. S. W. D. Williams, Hayward's Heath, Sussex.

SECTION F. PHYSIOLOGY.—*President*: Professor Humphry, M.D., F.R.S., Cambridge. *Vice-Presidents*: Dr. Rutherford, London; Dr. Ransom, F.R.S., Nottingham. *Secretaries*: Dr. W. M. Ord, 11, Brook Street, London; Dr. McKendrick, Edinburgh.

The General Meetings will be held, and the Addresses in Medicine, Surgery, and Physiology delivered, in the Large Hall of King's College.

The Sections will meet in rooms of the College appropriated for the purpose.

The Annual Museum will be arranged in the Library of the College.

TUESDAY, August 5th.

10 A.M.—CHORAL SERVICE AT ST. PAUL'S CATHEDRAL:—Garrett in E: Anthem, "Hear my prayer" (Mendelssohn).

11.30 A.M.—MEETING OF COMMITTEE OF COUNCIL.

1 P.M.—MEETING OF COUNCIL (1872-73).

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.*

WEDNESDAY, August 6th.

9.30 A.M.—MEETING OF COUNCIL (1873-74).

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.†

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.*

RECEPTION OF MEMBERS.

Members attending the meeting are requested to enter their names, immediately on their arrival, in the books which will be provided for the purpose in the Entrance Hall of the College.

Each provincial member of the Association who has given intimation of his intention to attend the meeting, and every metropolitan member, will receive by post a printed voucher, which must be given

* Each member is invited to bring one lady with him to the soirees at the Mansion House and at University College.

† The luncheon will be provided in King's College by the Metropolitan Members, who invite to it all gentlemen attending the meeting.

to the clerk in attendance, and in exchange for which he will receive cards of admission to the meeting and to the public receptions.

The names of members will be received from 12 noon to 4 P.M., on Monday, August 4th: and on each of the following four days between the hours of 9 A.M. and 4 P.M. It is particularly requested that all applications be made as early as possible, as the business on each day will commence punctually at the hour named.

Provision will be made for the receipt and postage of letters, for the sending of telegrams, and for the care of parcels, etc. A reading and writing room will be provided.

SPECIAL NOTICES REGARDING THE DINNER AND SOIRÉES.

The Lord Mayor's Reception: Tuesday, August 5th. Cards of invitation for the reception by the Lord Mayor will be given to the members who have entered their names, on Tuesday, August 5th, between the hours of 10 A.M. and 4 P.M.; after which hour no cards can be issued. These cards are to be produced at the Mansion House; and members are requested to bear in mind that without a card no one can be admitted. Each member will be entitled to bring one lady with him.

Soirée at the Royal College of Surgeons: Wednesday, August 6th. Cards of invitation will be issued to members on entering their names, up to 4 P.M. on Wednesday.

Dinner: Thursday, August 7th. Members are requested to take their tickets on entering their names in the reception hall. No tickets for the public dinner can be issued after 12 noon on Tuesday.

Soirée at University College: Friday, August 8th. Members will be admitted on presenting their cards of membership. Each member is invited to bring one lady with him.

The cards of membership, appended to the programme of the meeting, will (unless where special cards are issued) admit members to the meetings of the Association and to all places open to them during the week, and must be presented whenever required.

PLACES OPEN TO MEMBERS.

By kind permission, the following places will be open to members attending the annual meeting.

The rooms of the Royal Medical and Chirurgical Society, 53, Berners Street.

The rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square.

The library of the Obstetrical Society of London, 291, Regent Street.

The Picture Galleries of Stafford House, St. James's (by permission of the Duke of Sutherland) on August 6th and 7th. Ladies will be admitted.

The Picture Galleries of Grosvenor House, Upper Grosvenor Street (by permission of the Marquis of Westminster) on any day during the meeting.

Dorchester House, Park Lane (by permission of Mr. Holford) on any day during the meeting.

By permission of the Archbishop of Canterbury, the Library of Lambeth Palace will be open to members on Monday, Wednesday, and Friday, from 10 A.M. to 3 P.M.; when Mr. Kershaw, the Librarian, will be in attendance.

National Gallery. Admission to the National Gallery will be granted on the days on which it is ordinarily closed (August 7th and 8th).

British Museum. By permission of J. Winter Jones, Esq., Principal Librarian, facilities for visiting the galleries, libraries, and MS. departments will be afforded to members daily during the week. Special parties will be formed on Friday and Saturday afternoons, August 8th and 9th, to visit the Museum, when objects of special interest (including rare missals, MSS., and prints, not shown at other times) will be shown. Gentlemen desirous of joining these parties are requested to inscribe their names in the Reception-Room not later than 12 noon on Wednesday. Ladies will be admitted.

The Gardens of the Royal Botanical Society, Regent's Park, will be open to members on presenting their cards on any day between August 4th and 11th.

Burlington Fine Arts Club, Savile Row. Members will be admitted to inspect the collection of choice china, etc., on presenting their cards.

The Universities Club in Jermyn Street will, at the suggestion of Dr. Lavie, accord the privileges of membership during the week to one hundred University graduates, being members of the Association attending the meeting. Gentlemen desirous of availing themselves of this privilege, are requested to forward their names at once to Ernest Hart, Esq., 59, Queen Anne Street.

Medical Club.—Provincial members of the Association attending the

meeting are invited to consider themselves members of the Medical Club during the week, and will be admitted on presenting their cards of membership.

The Royal Mews.—By permission of the Marquis of Aylesbury, Master of the Horse, Mr. Norton, Superintendent of the Queen's Stables, Buckingham Palace, will attend on Wednesday, August 6th, at 4 P.M., and will conduct any members presenting their cards of membership over the Royal Mews, Piccadilly.

EXCURSIONS.—Saturday, August 9th.

Brighton.—Arrangements have been made for affording to members the opportunity of visiting the Aquarium at Brighton, together with other objects of interest in that town. The London, Brighton, and South Coast Railway Company have granted permission to members to travel at reduced rates on that day by any train. Trains will leave the Victoria and London Bridge Stations at 10 A.M.; and return from Brighton at 5.0, 6.10, and 8.30 P.M. A plan and programme of the day's proceedings will be given to all intending visitors. Ladies may accompany members on this excursion. The Curator of the Aquarium, Mr. Saville Kent, has kindly promised to attend and explain the nature and habits of the inhabitants of the various tanks. Free admission to the Aquarium has been kindly accorded to all members by the proprietors, at the instance of Sir John Cordy Burrows, one of the directors. The Free Library, and Museum, containing many rare and interesting objects; the Pavilion, the New Pier, the County Hospital, etc., will also be open to visitors. A dinner will take place at the Grand Hotel at 3.15 P.M.

Windsor and Cliefden.—An excursion to Windsor, with the opportunity of viewing numerous portions of the Castle not generally shown to visitors, the armoury, the Chapel Royal, etc., is also arranged; Dr. Fairbank having obtained from Her Majesty unusual facilities for thoroughly exploring the beauties of this interesting spot. After luncheon, an excursion will conduct the excursionists to Taplow, where barges will await them at Maidenhead bridge to take them up to Cliefden, the seat of the Marquis of Westminster, along one of the prettiest portions of the Thames. After visiting the house and grounds, which have been kindly placed at their disposal, the excursionists will return to Maidenhead, and partake of a dinner, to which Her Majesty the Queen has been graciously pleased to contribute a buck. The number of members who can take part in the excursion to Windsor and Maidenhead is limited to 150.

Bushey Park, Hampton Court, etc.—Trains will leave Waterloo (by loop line) at 9.40 and 10.25 A.M. for Teddington, arriving at 10.23 and 11.10 A.M. respectively. A walk of about a mile conducts to Hampton Court, where Dr. Langdon Down, who has kindly undertaken to entertain the visitors, will provide light refreshments. Members will have the opportunity of going through the paddock and viewing the breeding stud of Her Majesty the Queen. After visiting the picture galleries, Gothic Hall, etc., in Hampton Court Palace, portions of the palace not usually shown to visitors will be viewed, Mr. Greenhill having obtained permission from several of the residents to show special objects of interest. At 2 P.M. visitors will proceed by boat from the bridge at East Moulsey to Teddington Lock, returning along one of the prettiest portions of the Thames near London to Hampton Wick, where they will have the privilege of viewing Dr. Langdon Down's asylum. At 5 P.M. Dr. Down invites members to a collation at his residence adjoining the asylum. The number of members who can take part in this excursion is limited.

It is especially requested that all gentlemen who intend to take part in the excursions will send in their names on or before Wednesday, August 6th, to Dr. ARTHUR W. EDIS, Honorary Secretary of the Excursion Committee, at the Reception Room, King's College.

Royal Arsenal, Woolwich. Members will be admitted to the Royal Arsenal and Works at Woolwich by permission of General Adye, on any day throughout the week between the hours of 10 and 1 and 2 and 5, on presenting their cards of membership. A special party will be formed at 2 P.M. on Friday afternoon, August 8th, to visit the Arsenal, when operations of interest will be shown. Colonel Campbell has kindly undertaken to conduct visitors over the works. Gentlemen desirous of joining the party are requested to inscribe their names at the Reception-Room not later than 12 noon on Wednesday. Ladies will be admitted to the Arsenal.

Romford Sewage Farm.—By permission of Mr. Hope, V.S., a party will visit his sewage farm at Romford. Notice of the time of the visit will be given.

Metropolitan Sewage Works.—By permission of Colonel Hogg, Chairman of the Metropolitan Board of Works, parties will be arranged to visit the pumping works and system of sewers of the Board, under the

guidance of Mr. Bazalgette, C.B., Engineer of the Board. Communications relative to the above may be addressed to Dr. Corfield, Honorary Secretary of the Public Medicine Section, 10, Bolton Row.

VISITS TO HOSPITALS.

St. Bartholomew's Hospital.—Mr. Morrant Baker, warden of the college, will be in attendance daily at 4 P.M., and will be happy to show visitors over the hospital. The great hall, with the portraits and paintings by Holbein, Hogarth, Millais, and others, will be open to members of the Association.

Guy's Hospital.—Dr. Steele, resident superintendent, with some of the members of the medical staff, will be in attendance daily at 4 P.M. to show visitors the hospital and museum, and to explain the system of ventilation, etc.

St. Thomas's Hospital.—Some of the medical officers will be in attendance to receive visitors on Wednesday and Thursday from 3 to 5 P.M.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will be arranged in the library of King's College, under the following departments:—1. Pathological specimens; 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

A carefully prepared and illustrated catalogue of the museum, edited by Mr. Waren Tay, is prepared, and will be supplied to members on application in the Reception Hall, at the price of sixpence.

Exhibition of Patients.—It is intended to arrange for the exhibition of living subjects of disease at special hours. Under this head the following notices have been given.

Dr. C. Bell Taylor, of Nottingham, will exhibit patients, illustrating his methods of treatment of conical cornea and of amaurosis, and of extracting cataract, at 3.30 P.M. on a day of which notice will be given.

Dr. Lichtenberg will exhibit patients on whom he has performed rhinoplastic operations, at 3.30 P.M. on Thursday.

Dr. Thomas Ballard will, at 3.30 P.M. on a day to be fixed, exhibit an infant aged 5 months, who has been pronounced by many well-known and competent observers to present well-marked typical signs of congenital syphilis; and an individual who has been inoculated with virus and blood from a ripe vaccine vesicle on the arm of the infant.

Mr. Brudenell Carter will exhibit patients with his demonstrating ophthalmoscope at 3.30 P.M. on a day to be fixed.

Physiological Demonstrations.—Dr. Lauder Brunton will demonstrate the action of heat on the frog's heart at 3.30 P.M. on a day of which notice will be given.

PAPERS, etc.—The following papers and contributions (including anatomical and physiological demonstrations) have been promised.

Section A.—MEDICINE.

Francis E. Anstie, M.D. Alcohol in Pyrexia.

T. Clifford Allbutt, M.D. The After-history of Cases of Railway Accident.

H. Charlton Bastian, M.D., F.R.S. On the Modes of Causation of Epilepsy and allied Convulsive Affections at different Periods of Life.

James Ross, M.D. The Theory of Counterirritation.

Thomas J. MacLagan, M.D. The Germ-theory of Disease applied to the Explanation of the Phenomena of Idiopathic Fever.

William Sedgwick, Esq. The Absence of Purging in Cholera.

T. Grainger Stewart, M.D. On Chronic Bright's Disease.

T. Buzzard, M.D. On Co-ordinated Convulsions from Mental Shock.

T. Spencer Cobbold, M.D., F.R.S. Observations on *Hæmatozoa*, illustrated by Specimens. 2. Treatment of Tapeworm and Thread-worms.

James Finlayson, M.D. The Alleged Dangers of Dentition, and the Practice of Lancing the Gums.

J. Hughlings Jackson, M.D. Hemiplegia from Blocking of Cerebral Arteries.

George Harley, M.D., F.R.S. The Formation of Stone, and its Medical Treatment.

James Thompson, M.D. 1. The Use and Abuse of *Nux Vomica* and its Alkaloids. 2. Remarks on a Method of Administering Leamington Spa Water.

Dyce Duckworth, M.D. 1. The Causes and Treatment of Certain Forms of Sleeplessness. 2. A New Method of Determining the Presence of, and Recovery from, true Ring-worm.

C. R. Drysdale, M.D. The Views of Niemeyer and others on Phthisis Pulmonalis.

W. Carr, M.D. The Use and Abuse of Purgatives.

Georges Dieulafoy, M.D., Paris. Application of Pneumatic Aspiration to Medicine.

R. N. Ingle, Esq. Two Cases of Hysteria with Remarkable Complications: Successful Treatment by Chloroform.

Noel Gueneau de Mussy, M.D. (Paris). On Enlargement of the Bronchial Glands.

D. Maclean, M.D. Diseases of the Chest in Children: their Treatment by Blisters.

Prosser James, M.D. Laryngeal Phthisis.

Geo. Grey, M.D. On Herb-poisoning at the Cape of Good Hope.

H. Vandyke Carter, M.D. 1. The Microscopic Structure and Mode of Formation of Urinary Calculi. 2. Mycetoma, or the Fungus-Disease of India. 3. The Morbid Anatomy of Leprosy.

H. Mac Cormac, M.D. 1. Another Remedy for Tapeworm.

W. S. Oliver, M.D. What is Cholera?

Lawson Tait, Esq. On Methylene Ether as an Anæsthetic.

John Morgan, M.D. Ether as an Anæsthetic.

J. T. Clover, Esq. Induction of Sleep during Surgical Operations.

John C. Murray, M.D. Urinary Calculi: their Preventive and Solvent Treatment.

Sir Duncan Gibb, Bart., M.D. Cyanopuon Laryngitis; or Thyroiditis with Blue Suppuration.

Oscar Liebreich, M.D. (Berlin). On the Constitution and Action of Croton-Chloral-Hydrate.

Section B.—SURGERY.

Christopher Heath, Esq. On Colotomy.

G. W. Callender, Esq., F.R.S. On the Isolation and Treatment of Wounds.

Jonathan Hutchinson, Esq. Some Notes on the Effects of Iodide of Potassium.

William S. Savory, Esq., F.R.S. On the Treatment of Strictures of the Urethra.

Arthur E. Durham, Esq. The Removal of Bronchoceles by Operation.

Berkeley Hill, Esq. A New Urethrotome for incising very Narrow Strictures.

T. Holmes, Esq. On the Diseases which simulate Aneurism.

George Crichtett, Esq. The Treatment of some of the Superficial Affections of the Eye.

T. Pridgin Teale, Esq. On the Restoration of Perinæum and Sphincter Ani ruptured during Labour.

William Mac Cormac, Esq. Some Remarks on Onychia Maligna.

Spencer Wells, Esq. On the Excision of the Enlarged Spleen.

C. E. FitzGerald, M.B. A Series of Ophthalmoscopic Drawings with Explanatory Notes.

Lawson Tait, Esq. On the Anatomy and Treatment of Dermoid Cysts of the Ovary and Peritoneum.

Herbert Page, M.B. A Case of Traumatic Pneumothorax, illustrating the use of the Aspirator.

W. F. Teevan, Esq. The Treatment of Retention and Extravasation of Urine.

Edward Woakes, M.D. Case of Double Ventral Hernia: one strangulated on admission, the second becoming so five days after operation on the first. Second Operation: Recovery.

F. Waterhouse, Esq. Case of Conical Cornea with Staphyloma.

J. H. Aveling, M.D. A Loop-saw, or Substitute for the Ecraseur.

William Adams, Esq. On the Pathology of the Cases of so-called Spinal Concussion following Railway and other Accidents.

Francis Mason, Esq. Remarks on a Case of Melanotic Tumour developed in a Congenital Mole.

William Cadge, Esq. Median Lithotomy.

Edward Lund, Esq. Fallacies and Failures in Antiseptic Surgery.

Victor de Méric, Esq. On Peculiar Modes of Transmission of Syphilis in Married Life.

John St. S. Wilders, Esq. 1. The Treatment of Gleet by the Insufflation of Astringent Powders. 2. Remarks on two Cases of Syphilitic Aphasia.

Morell Mackenzie, M.D. The Treatment of certain forms of Bronchocele by Injections of Iodine.

E. Lund, Esq. On a Mode of Using a Three-pad Tourniquet in the Treatment of Aneurism.

J. Vose Solomon, Esq. A Disease of the Eyelid not described by authors.

S. Lodge, Esq. On some important Cases in Surgery and their Treatment by the Antiseptic Method.

S. M. Bradley, Esq. On Warts.

G. Cowell, Esq. Astigmatism of the Cornea after Extraction of Cataract.

C. B. Taylor, M.D. 1. Cases of Extraction of Cataract by Peripheral Section of the Iris without invading the Pupil. 2. Cases of Conical Cornea treated by Ablation of the Summit of the Cone. 3. Cases of Amaurosis successfully treated by the Hypodermic Injection of Strychnia.

C. A. Hemingway, Esq. A New Appliance for the Treatment of Fractured Ribs.

Ernest Hart, Esq. On Unrecognised Glaucoma.

C. B. Drysdale, M.D. On Syphilitic Iritis.

Furneaux Jordan, Esq. Notes on Diseases of the Rectum.

Pearson R. Cresswell, Esq. A Successful Case of Ligature of the Superficial Femoral Artery for Aneurism on the Summit of the Principle.

John Morgan, M.D. A New Source of Venereal Sores, illustrated by drawings and wax models.

Georges Dieulafoy, M.D. (Paris). Application of Pneumatic Aspiration to Surgery; with Demonstration of the Instrument.

W. Brown, Esq. Remarks, founded on Cases, on Dislocations of the Clavicle and Humerus, with a New Method of reducing Dislocations of the Shoulder: with remarks, and Cases also on Dislocations and other Injuries of the Elbow.

Section C.—OBSTETRIC MEDICINE.

Thomas W. Hime, M.B. Intrauterine Therapeutics.

Ewing Whittle, M.D. The Anticipation of Post Partum Hæmorrhage.

John Bassett, Esq. The Prevention of Uterine Hæmorrhage.

A. B. Steele, L.K.Q.C.P. Case of Apoplexy and Hemiplegia in the Puerperal Period, terminating in Recovery.

Thomas Savage, M.D. Some Points on the Treatment of Flexions of the Uterus.

E. J. Tilt, M.D. The Prevention of Uterine Inflammation.

A. Wiltshire, M.D. New Obstetric Instruments.

Protheroe Smith, M.D. The Treatment of Displacements of Internal Organs and of their Functional Diseases by means of External Appliances.

C. A. Hemingway, Esq. On a New Method of Arresting Post Partum Hæmorrhage.

John Wallace, M.D. 1. Case of Stricture of the Female Urethra. 2. Case of Acute Metritis occurring in the Seventh Month of Pregnancy during Rheumatic Fever. 3. Exhibition of an improved Cephalotribe after the Edinburgh Model; and of Stethoscopes for Vaginal and Abdominal Uterine Stethoscopy.

A. E. McRae, M.D. The Electro-Magnetic Current in Labour.

D. Lloyd Roberts, M.D. Short notes of a Case of Imperforate Hymen with Retained Menstrual Fluid.

Hugh Miller, M.D. Tedious Labour from Debility, and its Treatment.

John Ringland, M.D. Transfusion in Extreme Uterine Hæmorrhage. A. Rasch, M.D. 1. On the Diagnosis of Early Pregnancy. 2. On Retained Placenta after Abortion, with a New Instrument.

Thomas Chambers, M.R.C.P. A Case of Vegetating Epithelioma of the Body of the Uterus, treated by Dilatation, the Curette, and the Local Application of Tincture of Iodine.

Dr. Spiegelberg (Breslau). On the Mechanism of Labour with Contracted Pelvis.

T. D. Griffiths, M.B. The Causes and Pathology of the various Acquired Malpositions of the Uterus.

J. Matthews Duncan, M.D. A Digital Cranial Impression produced by the Accoucheur; its History and Results.

T. More Madden, M.D. On some Improvements in the Constructions of the Long and Short Forceps, and their Use in Midwifery Practice.

Section D.—PUBLIC MEDICINE.

J. A. Wanklyn, Esq. 1. The Action and Relative Value of Disinfectants. 2. The Chemical History of Excreted Urea. 3. The Ammonia process of Water-analysis for Medical Officers of Health.

T. W. Grimshaw, M.D., and D. Toler Maunsell, M.B. State Medicine and Public Health in Ireland.

J. W. Moore, M.D. 1. Influence of Mean Temperature on the Prevalence of Small-Pox. 2. Crystallisation of Nitrate of Urea from Urine.

Henry W. Rumsey, M.D. The State Medicine Qualification.

John Murray, M.D. (Inspector-General). The Communicability of Cholera.

Edward Waters, M.D. The Propagation of Typhus Abdominalis. J. W. Tripe, M.D. The Sanitary Statistics of the different Metropolitan Districts for the years 1861-70; especially with regard to Density of Population and Relative Wealth of the Residents.

Edward J. Syson, L.R.C.P.Ed. The Duties of a Medical Officer of Health.

W. R. E. Smart, C.B., M.D., R.N. Notes towards a History of the Medical Department of the Navy.

Robert Boyd, M.D. Observations concerning Medical Relief and Pauper Lunatics, based on Personal Experience.

H. Heygate Phillips, M.B. The Influence of Impure Water in the Diffusion of Cholera.

V. Jagielski, M.D. The Physiological Effects of Kreuz- and Ferdinands-brunnen of Marienbad.

Dr. Foster (New York). On the Practice of Animal Vaccination in New York.

H. Mac Cormac, M.D. 1. Anæsthesia for the Brute. 2. Substitution of Goat's Milk for the Sucking Bottle. 3. Prophylaxis of Asiatic Cholera.

W. Carr, M.D. Cases illustrating the Endemic and Non-infectious character of Cholera.

Section E.—PSYCHOLOGY.

Charles Elam, M.D. On Disturbed Mental Phenomena falling short of Insanity.

J. G. Davey, M.D. The Delusions of the Insane: their real value as a Means of Diagnosis.

J. Langdon Down, M.D. On some of the Causes of Imbecility and Idiocy.

Francis E. Anstie, M.D. Some of the Relations of Nerve-pain with Mental Derangement.

David Nicolson, M.B. On the Occurrence of Insanity among Criminals.

W. H. O. Sankey, M.D. Is there such a Disease as Acute Primary Mania?

H. Sutherland, M.D. Climacteric Insanity in the Male.

W. J. Mickle, M.D. On Morphia in some Cases of Insanity.

David Yellowlees, M.D. Insanity and Intemperance.

Section F.—PHYSIOLOGY.

J. Batty Tuke, M.D. On the Pia Mater as a Coat of the Cerebral Vessels, with Remarks on its Relation to the Hyaline Members of Gull and Sutton.

J. Batty Tuke, M.D., and J. G. M'Kendrick, M.D. The Morbid Changes following Experimental Injuries to the Brain.

E. A. Schäfer, Esq. Exhibition of Preparations of Muscular Fibre.

G. Rainey, Esq. Currents occurring in Fluids kept in Closed Vessels, and their bearing upon Endosmosis, Diffusion, and Cyclosis.

A. Ransome, M.D. Demonstration of Apparatus for Measuring the Chest.

John Harley, M.D. Physiological Effects of *Æthusa Cynapium*.

John G. M'Kendrick, M.D. 1. Report on Actions of Certain Drugs. 2. Researches of Mr. Dewar and Dr. M'Kendrick on the Physiological Action of Light. 3. Effect of Light on the Iris of the Common Cat. 4. Demonstration of Helmholtz's Views on the Mechanism of the Bones of the Ear.

W. K. Parker, Esq., F.R.S. The Ossicula Auditûs in the Mamalia and their Representatives in the Ovipara.

W. M. Ord, M.B. Slips of the Tongue.

W. Laidlaw Purves, M.D. 1. A New Method of Diagnosis of the Refraction of the Human Eye. 2. The Passage of the White Corpuscles through the Capillaries.

J. Hughes Bennett, M.D., F.R.S. Report of the Committee on the Antagonism of Drugs.

T. Lauder Brunton, M.D. The Action of Purgative Medicines.

U. Pritchard, M.D. Exhibitions of Sections of the Cochlea.

J. F. Payne, M.B. The Histology of the Omentum.

Charles Stewart, Esq., F.L.S. The Structure of the Hectocotylus of a small Cephalopod.

Robert J. Lee, M.D. General and Microscopical Examination of the Decidua, Chorion, etc., in a recent Specimen of a Gravid Uterus which contained a Perfect Ovum between the fifth and sixth weeks of Development.

George Paton, M.D. The Action and Sounds of the Heart.

R. Norris, M.D. Demonstrations on the Formation of Rouleaux of Red Corpuscles of the Blood, and of the Passage of Leucocytes through the Walls of the Blood-vessels.

James Edmunds, M.D. The Physiological Influence of Alcohol.

H. M. Madge, M.D. On Transfusion of Blood.

A. Ransome, M.D. The Constrictor Action of the Intercoastal Muscles.

M. Marey (Paris). Experimental Observations on the Dynamics of the Heart.

O. Larcher, M.D. (Paris). On some Diseases of the Female Organs of Birds.

Henry Power, Esq., and T. L. Brunton, M.D. On the Physiological Action of Diuretics.

Ernest Hart, Esq. Experimental Inquiry on the Relation of Lesions of the Semicircular Canals to Movements of Rotation.

NOTICES OF MOTION.

1. The President of the Council will move the following alterations in the Laws.

Rule 7. To omit the word "and" in the second line, and insert after "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872".

Rule 8. To omit the word "fortnight", and insert instead the words "five weeks"; also in the same rule, to insert the word "twenty" instead of "ten".

Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-elect, President of Council, Treasurer, the Vice-Presidents, and one Secretary from each Branch. 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.

"Mode of Election.—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons."

2. Mr. R. H. B. Nicholson, of Hull, gives notice that he will move, at the annual meeting in August, that Law 23 be omitted; viz., "The Committee of Council shall annually prepare a statement of accounts up to the last day of each year, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year. The accounts shall be previously audited every year by two auditors, appointed at the preceding annual meeting, and not holding any other office in the general Association." And that the following new Law be substituted for it:—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to the 31st day of December of each year, and such account shall include a statement of assets and liabilities, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year."

3. Dr. Steele gives notice that, at the Annual Meeting of the Association, to be held in London in August next, he will move—"That the Committee of Council be requested to draw up a complete code of laws and bye-laws for the government of the Association, based on the existing laws, with such suggested alterations and additions as may appear desirable, and to submit the same for consideration to the next general or annual meeting of the Association."

SOUTH-EASTERN BRANCH: ANNUAL MEETING.

THE twenty-ninth annual meeting of this Branch was held at Ashford on Wednesday, July 4th. Previously to the meeting, the members visited the cottage hospital and open-air swimming-bath belonging to the town; also the cemetery and the fine old church, with its interesting monuments.

Dr. ALFRED CARPENTER, the retiring President, said that his year of presidency had been a very pleasant year to him. During the period that had elapsed, many circumstances of great importance as regarded the profession had occurred, more especially the passing of certain bills in Parliament which would be alluded to in the report, and the appointments made in various parts of the country in connection with the Public Health Act. He thought the action of the Branch in obtaining from Mr. Stansfeld, the President of the Local Government Board, a decided statement as to the intentions of the Government with regard to the Public Health Act, had had a good effect in many parts of the country. The way in which those suggestions had been received, showed that there were two opinions as to what was best in this matter; and now, having appointments made in accordance with the

suggestions of Mr. Stansfeld on the one side, and in accordance with the views of those opposed to him on the other, we should in a short time see the results, and he felt that the profession and the public would support that course which showed itself most beneficial to the country at large. Dr. Carpenter expressed his very great regret at the Secretary having signified his intention of retiring from his appointment, for reasons which compelled him (Dr. Carpenter) to forbear pressing him to retain it. After thanking the members for their assistance in his year of office, he introduced his successor, Mr. Garraway.

The new President, EDWARD GARRAWAY, Esq., then took the Chair. *Vote of Thanks.*—On the motion of Sir JOHN CORDY BURROWS, seconded by Mr. JOHN BURTON, a vote of thanks was unanimously passed to the President and Vice-Presidents for their services during the past year.

President's Address.—Mr. GARRAWAY delivered an address. After some preliminary remarks, he commented on the want of appreciation manifested by the public with regard to the efforts of the medical profession to prevent as well as to cure disease. He then commented on the state of the public health; and next spoke of progressive medicine, contrasting the former and present principles of treatment; and referred especially to the modifications which had taken place in the treatment of cerebral affections, especially those characterised by convulsions and hemiplegia. He then gave a sketch of the controversy on the relative safety of ether and chloroform as anæsthetics, and suggested that the essential element productive of anæsthesia might be a new compound formed in the lungs. He then referred to the question of spontaneous generation as one exciting much interest. The President then paid a passing tribute to two members of the Branch who had died since the last meeting—viz., Dr. Edward Latham Ormerod, of Brighton, and Mr. John Macrae, of Lewes. He congratulated their warm-hearted and genial friend Sir Cordy Burrows upon the honour Her Majesty had been pleased to confer upon him. [*Applause.*] In conclusion, he said: One lesson only can I flatter myself it has been my lot to teach you, and that is the lesson which good George Herbert tells us we may extract from bad preachers—"The worst speak something good; if all lack sense, God takes a text and preaches patience." [*Applause.*]

Mr. HECKSTALL SMITH moved a vote of thanks to the President for his address. It was thorough in its simplicity, truthfulness, and suggestiveness.—Dr. ALFRED HALL seconded the vote of thanks, which was unanimously carried.

The Report of Council was then read by Mr. HODGSON, the Honorary Secretary. Last year the list included 320 names; this year, against 15 erasures there had been 34 additions, leaving a total of 338 members. After noticing the loss the Association had sustained by the deaths of Dr. Ormerod and Mr. Macrae, the report went on to say that, with the single exception of West Surrey, the several districts of the Branch had been worked with much vigour during the past year, and the honorary secretaries associated with them deserved the best thanks of every member. These district meetings were quite a feature of this Branch, and undoubtedly tended much to promote the leading objects of the Association. Early last month, the Branch Council held a meeting at Redhill, to consider the new Public Health Act and the Adulteration of Food Act, certain clauses in which were considered so objectionable that the Council resolved on seeking an interview with Mr. Stansfeld. At the interview, the chief points urged upon Mr. Stansfeld's attention were the necessity of large sanitary areas; of duly qualified medical inspectors to supervise them; and that these by connection and salary should be independent of local interests. The difficulties likely to arise from the present arbitrary division of parochial and union districts were also pointed out. The Bill on Local Taxation introduced by Mr. Stansfeld demanded the close attention of all those interested in this question. The Medical Amendment Act Bill had been introduced by Mr. Headlam, and numerous petitions in favour of the direct representation of the large body of educated medical practitioners of the country at large, which was embodied in the Bill, had been presented by some of our members of Parliament. That among the greater mass of a learned profession such an anomaly should exist in the present day as the utter absence of any voice in their own so-called representative body as prevailed in the General Medical Council, is a condition which should only demand recognition for its immediate remedy. The Infant Life Protection Bill, the Adulteration of Food Bill, and various other Acts of Parliament bearing on professional and sanitary questions, had occupied the attention of the Parliamentary Committee of the Association.

On the motion of Mr. REID, seconded by Mr. THURSTON, the report was received and adopted.

The Financial Report showed the year to commence with a balance of £52:14:3; Branch subscriptions, £67:6:6; total, £120:0:9. Expenditure, £59:4; leaving a balance in hand of £60:16:9.

Sir J. CORDY BURROWS proposed "That the report be adopted." He spoke of the manner in which Mr. Hodgson had performed the duties of Honorary Secretary, working very hard, and winning for himself the regard and esteem of the members; and expressed his regret at his intended resignation.—Mr. BROWNE seconded the motion, and the accounts were duly passed.

A discussion was raised relative to the disposal of the surplus fund. Dr. CARPENTER said that the balance had arisen in consequence of the Branch not having for a few years voted a sum to the Medical Benevolent Fund, and he did not think it would now be wise to reduce the balance, as they might expect in future to have to pay for work which Mr. Hodgson had been accustomed to do himself. Otherwise, he should have been prepared to suggest a premium for the best paper read before the district meetings in connection with the Society.—Mr. HODGSON said it would not be wise to appropriate the balance as yet; the West Surrey district was not in working order, and when that was the case there would be more expense.

Officers and Council.—The voting papers for electing representatives in the General Council and members of the Branch Council gave the following return. *General Council:* J. Armstrong, M.D., Gravesend; R. L. Bowles, M.D., Folkestone; J. M. Burton, Esq., Lee; Sir J. Cordy Burrows, Brighton; Alfred Carpenter, M.D., Croydon; W. Carr, M.D., Lee; E. Clapton, M.D., St. Thomas's Street; E. Garraway, Esq., Faversham; A. Hall, M.D., Brighton; J. Braxton Hicks, M.D., F.R.S., George Street, Hanover Square; G. F. Hodgson, Esq., Brighton; C. Holman, M.D., Reigate; A. Napper, Esq., Cranleigh, Guildford; T. Heckstall Smith, St. Mary Cray; N. Tyacke, M.D., Chichester; J. R. Wardell, M.D., Tunbridge Wells. —*Council of the Branch:* J. S. Bostock, Esq., Horsham; T. M. Butler, Esq., Guildford; T. S. Byass, Esq., Cuckfield; J. M. Cunningham, M.D., Hailsham; J. Cooper Forster, Esq., London; R. Gravely, Esq., Newick; C. C. Hayman, Eastbourne; H. M. Holman, M.D., Hurstpierpoint; J. Lee Jardine, Esq., Capel; B. Marsack, Esq., Tunbridge Wells; W. Withers Moore, M.D., Brighton; S. Monckton, M.D., Maidstone; S. G. Sloman, Esq., Farnham; J. R. Stedman, M.D., Guildford; J. B. Thomson, Esq., Ramsgate; W. Wallis, Esq., Hartfield.

On the motion of Mr. BROWNE, seconded by Dr. WILKS, the usual vote of thanks was accorded to the retiring Council.

Resignation of the Honorary Secretary.—Dr. ALFRED CARPENTER, with great regret and under protest, moved that the resignation of Mr. Hodgson be accepted, as that gentleman had stated that he could not continue to carry on the annually increasing duties of the office and his practice as well. He moved this resolution under considerable apprehension, that they might not have the place filled in the same satisfactory manner as it had been filled by Mr. Hodgson. It was a very important position, and must necessarily be filled by a man of business, as well as one who had the confidence of the Branch.

Mr. HECKSTALL SMITH, in seconding the motion, testified from his own knowledge to the great industry and ability displayed by Mr. Hodgson in connection not only with the local Branch, but with the affairs of the Central Council of the Association.

After some words from the CHAIRMAN, who similarly deplored the retirement of Mr. Hodgson, the resolution was carried.

Mr. HODGSON thanked the meeting for taking him at his word, and said he had not come to the determination to retire without mature reflection, and not without very great reluctance. At the same time, he had been driven to do so by his inability to perform the work, and because he felt he had other duties which had higher claims on his attention.

Dr. CARPENTER moved that a very cordial vote of thanks be presented to Mr. Hodgson for his past services, and that he be requested to hold the office until his successor could be appointed; and that the subject of the appointment of a new secretary be referred to the Executive Council.—Sir JOHN C. BURROWS seconded this resolution, and it was agreed to, Mr. Hodgson consenting to hold office on the understanding that his successor is to be appointed before the expiration of the present year.

President and Vice-Presidents.—Dr. ALFRED HALL said that the Council had selected Brighton as the place for next year's meeting, and himself as President, with Dr. Withers Moore and Mr. Humphry as Vice-Presidents. He, however, considered, in common with other members, that the honour of the presidency should be conferred on Mr. Hodgson. He therefore had very great pleasure in withdrawing from the position, and in proposing, at the proper time, that Mr. Hodgson be elected President for next year. [Applause.]

Sir J. C. BURROWS, after complimenting Dr. Hall for the graceful courtesy manifested in his withdrawal, proposed that the next annual

meeting be held at Brighton.—Mr. NAPPER seconded the resolution, and it was unanimously carried.

It was then unanimously resolved, on the motion of Dr. HALL, seconded by Sir CORDY BURROWS, that Mr. Hodgson should be the President-elect. Dr. Withers Moore having declined accepting the office of Vice-president this year, Dr. Hall offered himself for the office, and was appointed in conjunction with Mr. Humphry.

Mr. REID expressed the gratification he felt at what had taken place, especially at the gentlemanly and unselfish feeling manifested throughout by Dr. Hall.

Proposal to Discontinue the BRITISH MEDICAL JOURNAL.—Mr. J. MARSHALL moved—"That it is the opinion of this meeting that the funds of the Association should no longer be expended in maintaining the BRITISH MEDICAL JOURNAL, and that its publication be discontinued at the end of the present year." Mr. Marshall's resolution found no seconder, and consequently fell to the ground.

A Vote of Thanks to the Chairman terminated the proceedings of the meeting.

The Dinner took place at the Saracen's Head Hotel. The President, E. Garraway, Esq., presided, and all the members who attended the meeting were present with the exception of two. In addition, there were the following visitors. The Rev. Canon Alcock, Vicar of Ashford; G. F. Wilks, Esq., T. Thurston, Esq., C. S. A. Atkinson, Esq., and C. A. Nason, Esq., of Ashford; B. Browning, Esq., Littlebourne; J. Hackney, Esq., Hythe; F. Dorrell Grayson, Esq., Hythe. The loyal and patriotic toasts were followed by those of "The British Medical Association," by the President; "The President," by Mr. Heckstall Smith; and "Prosperity and Success to the BRITISH MEDICAL JOURNAL and its Editor," by Mr. Napper.

MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Midland Branch was held in the boardroom of the Leicester Infirmary, on Tuesday, July 8th. The chair was taken by Dr. ROBERTSON of Nottingham, the President, who, after making some remarks on the working of the Midland Branch, vacated it in favour of Mr. LANKESTER of Leicester, the President-elect.

New Members.—Six members of the Association were elected members of the Branch; and fifteen new members of the Association were elected.

Representatives in the General Council.—The following gentlemen were chosen to represent the Midland Branch in the General Council of the Association: J. W. Baker, Esq., Derby; J. W. Benfield, Esq., Leicester; E. Morris, M.D., Spalding; Thomas Paget, Esq., Leicester; W. H. Robertson, M.D., Buxton; W. T. Robertson, M.D., Nottingham; T. Simpson, Esq., Lincoln; Joseph White, Esq., Nottingham; with T. Blunt, M.D., Leicester, as the acting Honorary Secretary for the present year.

Honorary Secretaries.—The following were re-elected: C. Harrison, M.D., Lincoln; A. Dolman, Esq., Derby; J. White, Esq., Nottingham; T. Blunt, M.D., Leicester and Rutland.

President-elect.—It was moved by Dr. MORRIS (Spalding), seconded by Mr. J. W. BAKER, and carried—"That T. Simpson, Esq., of Lincoln, be the President-elect; and that Lincoln be the place of meeting next year."

President's Address.—The PRESIDENT gave an interesting address, touching on the excessive infant mortality of Leicester, and on the advantages of the non-alcoholic treatment of diseases.

Papers.—1. Dr. MORRIS (Spalding) read a paper on the Passage of Renal Calculi down the Ureters.—2. Mr. DOLMAN (Derby) described three interesting cases of Compound Fracture of the Skull.—3. Dr. CHARLES B. TAYLOR (Nottingham) read a paper on Modern Anæsthetics, and showed some cases of Cataract on which he had operated by peripheral section.

A Vote of Thanks was passed to the Weekly Board of the Leicester Infirmary for the use of the boardroom.

The members then visited the new Turkish Baths, and afterwards dined at the Bell Hotel.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Railway Hotel, Taunton, on Thursday, July 24th, at half-past two-o'clock. Thirteen members and one visitor attended.

Letters from the retiring President and from a number of other members, regretting that they were unable to be present at the meeting, were announced by the Secretary to have been received by him.

GEORGE GILLET, Esq., being voted to the chair, on taking his seat as President, said that, having for some years retired from prac-

tice, he could not present them with anything novel from his own experience; and, as there were no less than five papers entered to be read to the meeting, the time, he thought, would be more profitably spent in discussing those papers than in listening to a speech from himself, which, at the best, could only be borrowed from the opinions of others; and he would at once, therefore, proceed to the routine business of the meeting.

Minutes.—The minutes of the last general meeting were read and confirmed.

Report of Council.—The following Report of Council was read by the SECRETARY. 1. The Council, in reporting to you on this your thirtieth anniversary, are happy to state their belief that the Branch was never in a more satisfactory condition than at the present time, both as regards numbers and usefulness. 2. As regards numbers, we have to regret the withdrawal, from various causes, of a few old friends; but, on the other hand, we have had the pleasure to welcome several new ones. The list of members now contains the names of fifty-three medical men. In numerical strength, therefore, the Branch compares favourably with any former period of its existence. Happily, this year we have not to deplore the loss of any member by death. 3. At the two intermediate meetings—the one held at Yeovil in October, and the other at Bridgwater in April last—useful subjects for discussion, and cases presenting special points of interest, or teaching some practical lesson, were brought forward; and the Council confidently assert that all who attended those meetings could not fail to have derived pleasure and instruction from having done so. The Yeovil meeting was not only in itself a decided success, but in its results great benefit to the Branch must accrue from the infusion of new blood, the following gentlemen resident in that part of the county having then or since joined the Branch; viz., Mr. H. Adams of Queen Camel, Mr. Cox of Crewkerne, Mr. Hunt of Yeovil, and Dr. Wybrants of Shepton Mallett. 4. The only special matter calling for notice, upon which the Council required to take action during their year of office, was that of supporting by petition Mr. Headlam's Medical Act (1858) Amendment Bill. At a meeting held on the 14th of May last, your Council agreed upon and signed a petition which was presented to the House of Commons by Mr. Gore Langton. The Bill, however, as all present are doubtless aware, has necessarily been abandoned for the present, under the pressure of more urgent matters in Parliament. 5. The appointment of several members of this Branch to important posts as officers of health under the new Sanitary Act has been noticed with gratification by the Council; and they think that the congratulations of the Branch may be offered both to those gentlemen and to the public on the choice which has been made. These new offices supply opportunities and open fields for scientific inquiry never before available; and it is to be hoped that valuable contributions on sanitary matters from the gentlemen holding these appointments will be made at future meetings of the Branch. 6. The Treasurer's report, duly audited, is presented herewith; and it shows that he holds a credit balance of £5:8:5 in favour of the Branch.

The Treasurer's Balance-sheet was also read.

It was proposed by Dr. MACKAY, seconded by Mr. TODD, and resolved—"That the reports now read be received and adopted; and that the thanks of the Branch be given to the Council and to the Treasurer for their reports, and for their services during the past year."

Branch Council.—The following were elected in the place of the three members of Council who retired by rotation: H. J. Alford, M.D.; W. Liddon, Esq.; and G. Mackay, M.D.

Representatives in the General Council.—George Gillett, Esq., and H. J. Alford, M.D., were elected, with the Honorary Secretary, to represent the Branch in the General Council. A resolution was passed, that future annual meetings of the Branch shall be held sufficiently early before the general annual meetings of the Association, that the proper notice of the election of representatives may be sent to the General Secretary, in conformity with Rule 8.

Secretary and Treasurer.—Dr. W. M. Kelly was re-elected Secretary and Treasurer.

Next Annual Meeting and President-elect.—It was proposed by Dr. H. J. ALFORD, and seconded by Mr. ASHFORD—"That the next annual meeting be held at Milverton; and that H. W. Randolph, Esq., be the President-elect."

Intermediate Meetings.—It was resolved that intermediate meetings be held during the ensuing year—at Wellington in the autumn, and at Bridgwater in the spring.

Papers and Communications.—The following were read and discussed. 1. A Case of Diaphragmatic Hernia; with Preparation. By H. W. Randolph, Esq., of Milverton. 2. A Case of Tympanitis. By Wynn Westcott, Esq., of Martock. 3. On Traumatic Tetanus; with Cases. By George Cordwent, M.D.—Dr. Cordwent also exhibited

the following instruments of his own invention: a modification of the Aspirator; and a new form of Uterine Pessary.

Communications by Mr. G. Norris (Wiviliscombe), and by Mr. F. T. C. Parsons (Bridgwater), had been promised; but those gentlemen were prevented from attending the meeting.

Dinner.—An excellent dinner was served, and duly enjoyed by those who remained to partake of it; but several members were obliged to leave before dinner.

The meeting went off most pleasantly, and the papers and discussions were of a specially interesting character.

NORTHERN BRANCH: ANNUAL MEETING

The ninth annual meeting of this Branch was held in the Library of the Newcastle-Upon-Tyne Infirmary, on Thursday, July 3rd; Dr. G. V. HEATH, President, in the chair. There were also present forty-one members and seven visitors.

The Honorary Secretary (Dr. PHILIPSON), announced that the retiring President (Charles Trotter, Esq.), was unable to attend the meeting, not having yet sufficiently recovered from an illness. He briefly introduced the President-elect (Dr. Heath).

President's Address.—The PRESIDENT, having sympathised with the members in their regret at the absence of the late President, observed that there were many subjects occupying the minds of the profession; and, were he as conversant with medical politics, so to speak, as many of his friends, he could, he had no doubt, in discussing these subjects, deliver a very striking, interesting, amusing, and exciting address. His habits of life, however, were such, and his hours were so fully occupied by the pressure of practical professional work, that he must confess to a considerable amount of ignorance on the subjects which were included in the term medical politics. He must, therefore, put on one side the subject of the Contagious Diseases Acts, and leave them to struggle with their enemies, with those who were so fanatical and enthusiastic in compassing their destruction. He must leave on one side, too, that knotty point which was just now stirring the mind of the profession, the institution of one gate by which a student might pass into the full-grown medical practitioner. Still more did he abstain from the vexed question of the education of women as doctors. Referring to some of the more indefatigable and persevering ladies who had entered into the profession, and one of whom had recently visited Newcastle, Dr. Heath remarked, that surely if any one had the right to use that old-fashioned quotation, those ladies have the right to say with Brutus,

"Tis not in mortals to command success,
But we'll do more, Sempronius—we'll deserve it."

They had not, however, he added, yet succeeded in arranging to hold mixed classes of male and female medical students in the University of Durham. There was one question connected with the education of women, bearing on medical matters, however, on which he did feel competent to say a few words, and that was the education of women as nurses, a duty to which they were admirably adapted. Though they could not undertake the education of mixed classes of medical students, they did undertake to train women as nurses in the institution. It was now just a year since a meeting took place in that very institution, at which the idea of a Home and Training School for Nurses in Newcastle, was, he might say, originated. That institution, he was very glad to say, was now in successful operation; and that the nurses were appreciated, was sufficiently shown by the fact that they scarcely ever had any nurses in the institution. He had particularly alluded to the matter, because he thought those present had it in their power to assist very much in making the Nurses' Home a success. These, then, were the topics with which he felt that one more conversant than himself might have dealt in an infinitely more interesting manner, and at much greater length. Dr. Heath then passed to what really was the subject matter of his address, an account of, or rather an analysis of the statistics of the operations of lithotomy, performed in the Newcastle Infirmary, since its foundation in 1751, a period of one hundred and twenty-two years. There had been 544 cases. The average number in each year had been 4.4. Out of the cases there had been seventy-seven deaths in all, that was 14.15 per cent., or a mortality in the proportion of 1 in 7.06. This was a fair average, and, while nothing to boast of, was nothing to be ashamed of, and considering that they went back one hundred and twenty-two years, he might say it was a very favourable result. In conclusion, the President anticipated the speedy arrival of the time when that old building would cease to exist, and when they would have a nobler and handsome institution, better situated, and supplied with all the modern appliances of medical science.

Mr. JOHN PAXTON (Norham) moved, Dr. EASTWOOD (Dinsdale Park) seconded, and Dr. CHARLTON (Newcastle) supported, a cordial vote of thanks to Dr. Heath, for his able address.

Thanks to the Retiring President and Officers. Dr. HUMBLE (Newcastle) proposed, that the best thanks of the meeting be given to the retiring President, the Council of Management, and the other officers, for their services during the past year. This was seconded by Dr. J. C. MURRAY (Newcastle), and carried by acclamation, and the Secretary was instructed to convey the vote of thanks to Mr. Trotter, together with an expression of their regret at his illness.

Report of Council.—Dr. PHILIPSON read the report of the Council, which spoke favourably of the stability of the Branch. The number of the members was two hundred and ten, including eleven new names added during the year. Fourteen members, however, had either died, left the district, or, from resignation, or non-payment of their subscriptions, ceased to be connected with the Branch. During the past year, an important alteration had been made in the establishment of the intermediate meetings, making the number of meetings three, including the annual meeting. The report referred to various petitions that had been presented to Parliament on questions affecting the profession, and concluded by urging upon the members the necessity for renewed exertions to increase the numbers of the Branch.

Treasurer's Report.—Dr. PHILIPSON read the Treasurer's statement, which showed that the balance in hand, at the commencement of the year 1872, was £1 3s. 11d.; and the amount received in annual subscriptions was £20 17s. 0d.; total, £22 0d. 11d. The expenses during the year amounted to £18 19s. 8d., leaving, on December 31st, 1872, a balance of £3 1s. 3d.

Mr. H. G. HARDY (Byer's Green), moved the adoption of the report, and took occasion to suggest that the amount of the annual subscriptions be augmented. The holding of three meetings in place of one necessitated an increase. It was decided, as a formal notice had not been given, that the question should be considered at the autumnal meeting.

Officers for 1873-4. On the motion of Mr. S. FIELDEN (Shildon) seconded by Dr. DENHAM (South Shields) it was unanimously resolved, "That the next annual meeting be held at South Shields, the autumnal meeting at Darlington, and the spring meeting at Durham; that Dr. Legat be President-elect, Dr. Philipson Honorary Secretary and Treasurer; Dr. Charlton, Dr. Gibson, Dr. Frain, and Dr. Dixon, the Council of Management."

Representatives in the General Council.—On the motion of Dr. DIXON (Sunderland) seconded by Mr. W. H. SMITH (Houghton-le-Spring), the following members were elected to represent the Branch in the General Council of the Association: G. Y. HEATH, M.D., Charles Gibson, M.D., M. Burnup, M.D., J. B. Bramwell, M.D., Robert Wilson, M.D., John Jobson, Esq., S. W. Broadbent, Esq., H. G. Hardy, Esq., J. W. Eastwood, M.D., A. Legat, M.D., R. N. Robson, Esq., and G. H. Philipson, M.D., *ex officio*.

Representative in the Parliamentary Committee of the Association.—It was moved by Dr. GIBSON (Newcastle) seconded by Dr. LUKE ARMSTRONG (Newcastle) and unanimously agreed to, "That Dr. Philipson be the representative of the Branch in the Parliamentary Committee."

After the formal business of the meeting, the majority of those present accompanied the President to inspect the new operating theatre of the Infirmary, which was admitted to be one of the most complete and well arranged rooms in the kingdom.

Dinner.—The members and their friends dined together at the Turk's Head Hotel, Dr. Charlton, Vice-president of the Association, presided, Dr. Heath having been summoned away from town; and he was supported by the Mayor of Newcastle (R. Cail, Esq.), and the Vicar of Newcastle (Rev. H. J. Martin, M.A.), Surgeon-Major Woods, R.A., Dr. Philipson occupying the vice-chair. A comprehensive toast list was gone through, and a most agreeable evening was passed.

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Bristol Library and Institution on Thursday, July 10th; T. G. STOCKWELL, Esq., President, in the Chair. Forty-four members were present. Mr. Stockwell, after a few remarks, resigned the chair to EDWARD LONG FOX, M.D., President for 1873-74, who read an address on Pathology and Therapeutics.

Mr. PRICHARD proposed, and Mr. H. ALFORD seconded—"That the thanks of this meeting be given to Dr. Fox for his admirable address."

Representatives in the General Council.—The following members were then chosen to represent the Branch on the General Council of the Association. J. S. Bartrum, Esq.; F. Brittan, M.D.; J. G. Davey,

M.D.; E. L. Fox, M.D.; H. Marshall, M.D.; J. K. Spender, M.D.; C. Steele, Esq.; T. G. Stockwell, Esq.; and R. N. Stone, Esq.

Report of Council.—Mr. BOARD read the following annual report of the Branch.

In presenting the thirty-second annual report of this Branch, your Council feel much satisfaction in being able to inform you that, during the past session of 1872-73, sixteen new members have been added to this Branch, whilst eight only have been lost. Two members have left the neighbourhood, four have resigned membership, and one has been removed from the list.

It is the painful duty of your Council to report the death of Mr. W. F. Morgan, an old and very highly respected member of this Association. The Bristol Royal Infirmary has lost one of its most valuable consulting officers, and one whose opinion carried the greatest weight with every member of the staff; and his more intimate acquaintances have lost a steadfast, straightforward, and genuine friend. Mr. Morgan had not long retired from the Council of this Branch, of which he had been a member for many years. The number of members belonging to this Branch is now 198, an increase of eight members over last year.

Eighteen papers have been read during the session (including several on "The Administration of Anæsthetics"), which have given rise to long and interesting discussions. The attendance at the meetings has been uniformly large.

Your Secretaries have attended several of the meetings of the Committee of Council of the Association, and wish to draw your attention to the fact, that it is proposed to increase the number of the elected members of that Committee from the twenty. This will be brought before the general meeting of the Association. It was proposed also to recommend that the Branch secretaries should no longer be members of the Committee of Council; but this was negatived by a large majority of the meeting, which, at the same time, expressed a wish that the Branch secretaries would always attend if possible.

The financial condition of the Branch continues most satisfactory, there being a balance in hand of £23 : 6 : 6. Your Council recommends that the subscription of three guineas to the Medical Benevolent Fund be repeated as heretofore.

The scrutineers appointed to examine the voting papers report the following members elected to fill the vacancies in the local Councils: for Bath, Dr. Falconer and Messrs. Stone, Mason, and Harper; and for Bristol, Dr. Brittan, Dr. Martyn, and Messrs. Prichard, Steele, and Leonard.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: ANNUAL MEETING.

THE annual meeting was held in Aberdeen on Saturday, July 26th. A large number of members and guests were present.

Exhibition.—An exhibition of books, drugs, and instruments, which had appeared since last July, was held in the Imperial Hotel. This department was very complete in each branch; all the newest drugs, including propylamine, eucalyptus globulus, etc., and instruments, including new stethoscopes, thermometers, and batteries, with aspirators, Rutherford's new microtome, etc., being shown by various members.

Hospital Visit.—At the Infirmary, ophthalmic and aural cases were demonstrated, and operations on the eye and ear were performed. Some more bloody operations were also performed by the surgeons in the theatre.

Business Meeting.—This was held in the Imperial Hotel. Some new members were proposed, and the Council's Report and Treasurer's Balance-sheet were tabled. The former embodied a recommendation for the formation of district sections, especially in Banffshire and Kincardineshire. The Balance-sheet, in spite of the heavy expenses in starting the branch being included in it, showed only a small debt which another year will suffice to wipe out.

Election of Officers.—Dr. Lyon, of Neterculter, was elected President-elect for the year, and Banchory was fixed on as the place of next June meeting. Drs. Jamieson, of Peterhead; Coutts, of Banchory; Trail, of Monymusk; and Jackson, Harvey, and Wight, of Aberdeen, were elected members of Council. The Honorary Secretary and the Honorary Treasurer were re-elected. Drs. Greig, Angus Fraser, and Crabbe were chosen Representatives in the Council of the Association.

Galvanism during Labour.—Dr. McRae, of Penicuik, communicated a paper on galvanism, as applied with marked success in three cases of inertia uteri.

Dinner.—The Branch dinner was afterwards held in the Imperial Hotel, Dr. Greig, the President, in the Chair.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

MAY 21ST, 1873.

P. D. HANDYSIDE, Esq., President, in the Chair.

Pathological Specimens.—Dr. BATTY TUKE showed microscopic preparations: 1. The Pia Mater of a case of Idiopathic Melancholia, exhibiting large deposits of crystals of phosphate of lime. 2. A section of the left Corpus Striatum of a woman who had Paralysis of the right arm, from which she partially recovered, but died of exhaustion. The corpus striatum was studded with aneurisms, here and there showing evidence of rupture and a sort of minute apoplexy.

Cases of Laryngeal Abscess Simulating Croup.—Dr. STEPHENSON alluded to the difficulties attending exact diagnosis in laryngeal disease, and confined himself in this paper to cases in which the morbid action is extra-laryngeal. Retropharyngeal abscess is well known, and has been often described. It is diagnosed from croup by (1) its longer duration; (2) being often accompanied by dysphagia; (3) the production of pain and dyspnoea by any change in posture, hence the neck is kept straight and stiff; (4) the cough is low and not brassy. Abscesses of or near the larynx are very rare, few being on record. After detailing cases which had been furnished him by Dr. Thin and Mr. Joseph Bell, the author described three cases he had himself seen. 1. A patient in the Sick Children's Hospital died of pneumonia. An abscess was found at the outer side of the right thyroid cartilage. 2. Three weeks of symptoms of croup resulted in a swelling in the mesial line of the neck, which was opened, letting out three or four drachms of pus with great relief. The child eventually died exhausted. 3. A child eighteen months old had symptoms for several weeks, and a large swelling on the outer side of the sterno-hyoid muscle. When evacuated, this contained about four ounces of pus. A good recovery took place. After detailing a case of submucous laryngitis described by Riillet and Barthez, the author pointed out the importance of a correct diagnosis and early treatment.—Mr. JOSEPH BELL praised the paper, and gave a short account of the papers of Bickersteth of Liverpool, and Croly of Dublin, on Cellulitis of the Neck. He advocated early and free incision, and brought out the importance not only of dividing the skin, but also of slitting up extensively the deep cervical fascia.—Dr. SANDERS inquired as to the state of the laryngeal cartilages in these cases.—The PRESIDENT described an interesting case in which he had been asked to perform tracheotomy; but in his dissection had come on an abscess on the left side of the cricoid, which he opened with complete relief.

A New Operation for the Close of Artificial Anus.—Dr. JOHN DUNCAN stated that in many cases destruction of the septum was not successful, and that there were great variety in operative methods, and a great want of success. Case F., aged 45, had a femoral hernia of seven days' standing in 1869. The bowel was gangrenous and ruptured. The patient recovered with an artificial anus, admitting two fingers; nothing passed *per anum*. In June 1870, Dr. Duncan destroyed the septum by the gradual tightening of silver wire to a distance of an inch and a half, after which faeces began to pass *per rectum*. In December 1870, the orifice was still open, so another portion of the septum was destroyed nearly an inch higher. No improvement. In April 1872, after clearing out the bowels, Dr. Duncan dissected up the mucous membrane all round the orifice to a distance of half an inch, invaginated it, and then sewed the surface together by six catgut sutures, then deeply pared the edges of the skin, and brought them together by silver wire; flexed the thigh on belly, and confined the diet to milk and lime water. The cure was perfect.—Dr. MATTHEWS DUNCAN described a case of artificial anus he had seen in which a spontaneous cure resulted after parturition had taken place in the interval.

Surgical Cases in Relation to Records of Temperature.—Mr. JOSEPH BELL read a paper on this subject. Twenty-four cases of operation or severe injury which had occurred in his wards or private practice during the last year were selected on account of the notes of their temperatures having been kept fully and carefully. He divided them into three classes. 1. Those in which suppuration had continued free from putrescence, and the temperature remained at a low standard. These, thirteen in number, included cases of excision of the mamma along with the axillary glands; amputations at the ankle; trephining for depressed fracture of the skull and compound fracture; lithotomy and excisions of the knee, wrist, and elbow. 2. Those in which high temperatures warned of approaching mischief, yet patients eventually recovered. These, eight in number, included trephining of the skull for

abscess of the diploë; amputation at the shoulder-joint for gangrene; gangrenous erysipelas of the scrotum; herniotomy with peritonitis, etc. 3. A series of four cases in which high temperatures were followed by death. One was a case of excision of the metatarso phalangeal joint of the great toe in an old woman, who died of erysipelas after the wound had nearly healed; the others were suicide by cut-throat, meningitis after scalp-injury, and bed-sores after delivery. The cases were all carefully but briefly analysed, and the more interesting was reported more fully. Each case was illustrated with a chart exhibiting pulse and temperature. The results deduced were briefly as follows. 1. Suppuration so long as it remains sweet does not necessarily imply a high temperature. 2. Putrefaction of discharges, and still more sloughing, is invariably accompanied by a high temperature. 3. Temperature gives warning of mischief a day or a day and a half before the pulse does.—A desultory conversation followed, in which the President, Dr. Sheaf, Dr. John Duncan, and Dr. Matthews Duncan joined, on the difficulties in obtaining reliable results. Mr. Bell explained the precautions he had taken to ensure, as far as possible, that the various observations in each case should be taken under similar conditions.

CORRESPONDENCE.

PENSIONS TO MEDICAL MEN AND THEIR WIDOWS.

SIR,—The proposition of Dr. Garland, published in the JOURNAL of the 12th July, recalls the unfortunate issue of a somewhat similar scheme which, about eight years ago, was entered upon by the Association at the instance of a number of well meaning and over sanguine members, who, in spite of every warning from those who foresaw inevitable failure, induced the Association to embark in an undertaking quite beyond its scope, and for the successful management of which its very constitution is altogether unsuited. All that is sought to be accomplished by the present scheme can be carried out with less difficulty and with far greater security by many of the already existing life insurance companies. Beside the Edinburgh office quoted in the proposal, there are others who make this particular form of life insurance a special feature in their business.

It is but a trite remark that professional men are not either sound financiers or good men of business; and without claiming for the executive of the Association a special exemption from this general rule, I would venture to predict that they will be found to be endowed with sufficient foresight and prudence to profit by past experience, and to avoid engaging in a financial undertaking which involves responsibilities and risks altogether beyond the sphere of their legitimate functions as managers of a purely professional and scientific Association. As I believe the proposal to be unsound in principle, it is needless to enter into details, or it would not be difficult to point out fallacies in some of the calculations. To take one example. I much question if, within the pale of the Association, "several thousand persons of the age of thirty could be found who are able to save thirty pounds a year out of their professional income"; if, however, I here underrate the average financial position of my professional brethren (and I should rejoice to find it were so), then I say that a practitioner in the prime of life, and with an income exceeding his expenditure, may, if so disposed, make provision for a rainy day in a variety of ways; and the very last expedient I should advise him to adopt would be to place his hard earned savings in a fund to be managed by amateur financiers. The strong, healthy, and successful practitioners must not look to the Association to teach them providence and foresight; the unhappily too numerous class of unfortunate members of our profession are, for the most part, necessarily beyond the reach of any but a benevolent society.

July 15th, 1873.

I am, etc.,

A. B. STEELE.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman passed the preliminary examination for the fellowship on June 17th, 18th, and 19th.

Bryden, Richard Joseph, Uffculme, Devon

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—*Double Qualification.*—The following gentlemen passed their first professional examination during the July sitting of the examiners.

Beatty, Thomas Carlyle, Seaham
Douglas, Thomas, Northumberland
Forrester, James Stevenson, Edinburgh
Willacy, Charles, St. Michael's
Walker, George Abraham, Darlington
Walsh, Thomas, Limerick

The following gentlemen passed their final examination, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh.

Ashworth, Handel, Lancashire
Atkins, George Purcell, Cork
Bohrendt, Maximilian Raphael Julius, Prussia
Court, Adam Smith, Barrow-on-Humber
Davies, David Llewellyn, Glamorganshire
Hughes, Robert Jaffray, Birkenhead
James, William Mawer, Jersey
Leslie, Louis Gordon, Hampshire
Martin, John, co. Down
Mathews, James Snodgrass, co. Londonderry
Piggott, Edward Alfred, London
Rundle, George Edward, Hampshire
Spowart, Thomas, Fifeshire
Stewart, James, Canada
Welch, William John Joseph, Staffordshire
Whitla, William, Monaghan

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

John Liston Crawford, Girvan; James Grant, Caithness.

The following gentlemen passed their final examination, and were admitted licentiates of the College.

John Brown, Melrose; Theodore Maxwell, Barnsley; John M'Naughten, Perth; John Joseph Greene, Dublin; Thomas Price Whittington, Glamorgan.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 24th, 1873.

Chaple, Charles, Burdett Road, E.
Deakin, Charles Washington Shirley, Kingstone Grange, Hereford.
Drake, Arthur John, Kingsclere, Bucks.
Eskell, Maurice Clifford, Grosvenor Street, Grosvenor Square, W.

The following gentlemen also on the same day passed their primary professional examination.

Barnes, James John Frederick, Westminster Hospital.
Beaumont, William Marden, Middlesex Hospital.
Romano, Frederick William Richard, Guy's Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 8th, 9th, and 10th of July, the following candidates obtained the License to practise Medicine.

Nicholas Edward Atkin, Joshua George Brereton, John Wainwright Crowe, Peter Keelan, Michael Loughnan, James M'Gann, Henry Anthony Wills Richardson.

The following candidates were examined for and obtained the Midwifery Diploma.

Nicholas Edward Atkin, John Wainwright Crowe, Peter Keelan, Michael Loughnan, Henry Anthony Wills Richardson.

PRESENTATION PORTRAIT TO SIR WILLIAM FERGUSSON.—A meeting took place lately in the Hall of the Royal College of Surgeons, Edinburgh, for the purpose of promoting subscriptions in Scotland towards the proposed portrait of Sir William Fergusson. The chair was taken by Mr. Walker, President of the College, and amongst those present were Sir R. Christison, Bart., Professors Spence and Simpson, Dr. Andrew Wood, Dr. Gillespie, etc. The following resolution was proposed by Professor Spence: "That the friends of Sir William Fergusson in Scotland are desirous that the proposed honour to their eminent countryman should be heartily responded to; they moreover hope that the contributions shall be sufficiently liberal to enable them to obtain a replica of the portrait to be placed in the hall of the Royal College of Surgeons, Edinburgh, of which Sir William is so distinguished a Fellow, as a memorial of his eminence and a mark of the esteem in which he is held in the city which was the scene of his early labours and success." Mr. Forbes, of Medwyn, seconded the motion, which was agreed to unanimously. On the motion of Mr. J. Ord Mackenzie, of Dolphinton, seconded by Dr. Gillespie, an influential committee was appointed to collect subscriptions, Professor Spence and Mr. Wm. Blackwood being elected joint secretaries.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY, Manchester—Surgeon.
BAKEWELL UNION, Derbyshire—Medical Officer for the Cramford District: £15 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Resident Medical Officer: £60 per annum, room, board, washing, and attendance.

BIRKENHEAD URBAN SANITARY DISTRICT—Medical Officer of Health.
BOURNEMOUTH GENERAL DISPENSARY—Resident Physician: £100 per annum, furnished apartments, etc.

BRADFORD (Yorkshire) INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £50 per annum, board and residence.

BRIGHTON HOSPITAL FOR SICK CHILDREN—Resident Medical Officer, Secretary, and Dispenser—wife to act as matron: £75 per annum, board, residence, etc.

COVENTRY PROVIDENT DISPENSARY—Medical Officer: £269 last year.
EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN—Resident Medical Officer.

GREENWICH—Public Analyst.

GUILTCROSS RURAL SANITARY UNION—Medical Officer of Health: £50 for one year.

KILKEEL UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilkeel Dispensary District, No. 2: £80 per annum, and fees. Applications to James Walmsley, Esq., Ballykeel House, Kilkeel.

KNIGHTON UNION—Medical Officer and Public Vaccinator for the Llanbister District: £100 per annum, and Fees.

LEEDS CONSTABULARY—Surgeon.

LEICESTER INFIRMARY AND FEVER HOUSE—House-Surgeon and Apothecary: £120 per ann., rising to £150, board, etc., apartments, and washing.

LOYAL UNITED BRETHREN BENEFIT SOCIETY—Surgeon and Apothecary: £40 per annum. Applications to S. Emmanuel, 24, High Holborn.

LOUTH UNION—Medical Officer for the Hainton District.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Demonstrator of Anatomy: £100 per annum.

MANORHAMPTON UNION—Medical Officer to the Workhouse: £80 per ann.

NORTH BIERLEY RURAL, and several Urban Sanitary Districts—Medical Officer of Health: £600 per annum for three years. Applications to W. Lancaster, Esq., Solicitor, Bradford, Yorkshire.

OUGHTERAD UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cloonbur Dispensary District: £90 per annum, and fees. Applications to Michael J. King, Esq., Kilmelken.

POCKLINGTON UNION—Medical Officers for the Pocklington No. 2 District, the Bishop Wilton District, and the Workhouse: £20, £28, and £20 per annum respectively.

UPTON-ON-SEVERN RURAL SANITARY DISTRICT—Medical Officer of Health: £100 for one year.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea—Assist. Physician.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—Physician's Assistant: £100 per annum, board, washing, and furnished apartments.

WREXHAM INFIRMARY AND DISPENSARY—House-Surgeon: £80 per annum, residence and maintenance.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*HUTCHINSON, Valentine, M.D., appointed Medical Officer of Health to No. 3 District, Bishop Auckland Union.

*KILBURN, W.B., M.R.C.S., appointed Medical Officer of Health to No. 2 District of the Bishop Auckland Union.

*MANSON, R. T., L.R.C.P. Edin., appointed Medical Officer of Health to No. 1 District of the Bishop Auckland Union.

PIERCE, Frederick Morrish, M.D., L.R.C.P. Lond., appointed Physician to the Hulme Dispensary, Manchester.

*WILSON, Samuel, M.R.C.S., and L.S.A., appointed House-Surgeon to the Ingham Infirmary and South Shields and Westoe Dispensary.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

EXPECTED OPERATIONS AT THE HOSPITALS.

THE HOSPITAL FOR WOMEN, Soho Square, Wednesday, August 6th, 9.3 A.M. 1. Ovariectomy; 2. Ovariectomy; 3. Colotomy.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

BLACK DOTS ON THE WALL.

THE duties of extern obstetric attendants (says the *Guy's Hospital Gazette*) are never very pleasant; but during the summer months those externs who are possessed of an ordinary amount of sensitiveness in their skins, feel their position exceedingly uncomfortable when, on entering a room, in which they may be destined to spend several anxious hours, they notice sundry red blotches on the wall, varied here and there by black dots, which latter, at times, give evidence of locomotive powers. A correspondent who has passed through all this, informs us of the means he took while extern to preserve himself from the attacks of these black dots, and we feel it our duty to make his plan of defence known for the benefit of present or intending externs, and for all such other persons as it may concern. Our correspondent makes a strong solution of corrosive sublimate, about ten grains to the ounce; this he applies—not sparingly—beneath the collar of his coat, to the ends of his sleeves and trousers, and in all places over which the assailant has to pass. This he assures us has kept him almost free from bites during a severe campaign in the Irish quarters.

THE "LANCET" ON THE ANNUAL MEETING.

RUSTICUS.—It seems to be out of the power of the *Lancet* to make any reference whatever to the Association—and it rarely trusts itself to make any—without untruthful detraction. The paragraph in which it has broken its silence this year is no exception. It is unnecessary to say that there is no such thing as a self-constituted entertainment committee, and that the document referred to was not an effort to stimulate hospitality, for no such effort was in the least degree called for; but the customary circular from the executive of the Reception Committee, which was issued at the last London meeting, and has been customary at most annual meetings, to assist in the distribution of intended hospitalities with some attempt at regularity, and to guard against regrettable omissions by supplying official information not otherwise easily obtainable by private hosts. It has, perhaps, been misunderstood in some quarters; and it cannot, of course, escape the criticism of professional objectors, but on the whole it has answered its purpose satisfactorily.

DUTIES OF CERTIFYING FACTORY SURGEONS.

SIR,—In your remarks on certifying surgeons, in one of your leaders, you have not quite accurately described their duties. All the law authorises a factory certifying surgeon to do is to attend at the mill and examine into the fitness of the operators to work before they commence, and to give a certificate, and, in case of accident, to report to the subinspector and inspector. For the former duty, the millowner pays; for the latter, the Government. The certifying surgeon has no medical charge, even of the accidents he reports. It is quite optional with the millowners whether they employ him. He has no right of inspection of works or interference with the work-people at all, or even to go into a mill except for one of the purposes before mentioned. I here speak of the legal duties.

Certifying surgeons do a great deal willingly both for millowners and for the inspectors, which they are not bound to do or paid to do. We are always ready to co-operate with either when our co-operation is wished for; and just aid is afforded by us to clerks and others in putting them into the right way of keeping the books; but the point I wish to impress on you is, that we have no inspecting authority whatever, or responsibility as to the sanitary condition of works. We have tried to get it through the Chairman of the Certifying Surgeons' Association, Dr. Arlidge, but have never succeeded. Special duties, such as seeing whether hands have been vaccinated or not, have been laid on us by the Secretary of State from time to time; but we have no power, any more than the good child in the Catechism, to do these things of ourselves.

I am, etc.,
CHRISTOPHER JOHNSON, Certifying Surgeon of 25 Years' Standing.

LOSS OF VOICE.

SIR,—Your readers will find in *Medical Communications*, 1790, vol. ii, a very interesting paper on this subject by Dr. James Carmichael Smythe. Other contributions from this distinguished physician, in this and other volumes of the communications, well deserve careful perusal by all who take pleasure in tracing the progress of scientific medicine.

I am, etc., C. J.

SALARY OF SANITARY MEDICAL OFFICER TO THE LEEDS URBAN SANITARY AUTHORITY.

SIR,—The strangely various amounts of salaries offered by sanitary authorities, supply food for rumination or reflection; and but too clearly disclose the ignorance of the natural laws of health, the small value set on human life and health (and only on human life, as the cattle-plague history proves), and the unreasonable value put on money, "the almighty dollar," irrespective of whatever return may be expected from its discreet expenditure, on the part of those who have, by the Government, been so ill-advised and suicidally entrusted with the management of the weightiest of all our social interests, the greatest of all "vested rights," as affecting Life and Health. The same "sanitary authority" may be observed to vary its offer of an annual salary, as at Leeds. On the 8th of last March, at p. 273, Leeds offered £500 a year, and repeated the offer on the 15th March last, at p. 302 of the JOURNAL. Since then, Leeds seems to have slipped out of view until now; when, on the 12th July, the same authority reappears, at p. 49, as offering £400 a year. Is it possible that the recent introduction of enormously grand aquaria at Sydenham and at Brighton can have had any influence on visitors from Leeds? Can any sanitary authorities have taken lessons in calisthenics from some member of the genus cancer, or from some old wide-awake wriggling octopus? Can any Leeds correspondent give the history and explanation of this retrogression?

Carlisle, July 17th, 1873.

I am, etc., A SANITARIAN.

MR. LLOYD (General Post Office) writes to express a hope that the fund for restoring St. Paul's Cathedral may benefit by the attendance of members at the Special Choral Service on Tuesday,

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE TREATMENT OF ASIATIC CHOLERA.

SIR,—As there is every reason to fear that the reappearance of this disease in this country will not long be delayed, the question which presents itself is, "How are we prepared to meet it by remedial treatment?" If we have not put this question to ourselves individually, the sooner we do so the better, as it is impossible to say at what moment the services of any one of us may be required to combat this formidable assailant; and to be able to do this with any reasonable prospect of success, we must be forearmed with some rational notion of the proximate cause of the disease, before we can decide upon the means which will be the best calculated to counteract it.

Now, as it cannot be denied that we are still very much in the dark with respect to this, I trust I may not be considered presumptuous in assuming that it may possibly consist in the presence in the circulation of a specific poison, whose operation is to impair or destroy the vitality of the *red corpuscles* of the blood, or the *absence of an element upon which that vitality depends*. In conformity with this supposition, more especially the latter part of it, the question I have put to myself is, "Does iron present itself to our notice as a rational remedy which might, nay ought to, be tried?" and, believing that it does so, I have made up my mind to give it a trial should opportunity unhappily occur. My plan would be to place the patient in a bath of hot water strongly impregnated with the perchloride or sulphate of iron; to administer, at short intervals, a mixture composed of the sulphates of iron and magnesia, with chloroform spirit, in strong peppermint water; and to give brandy *ad libitum*. With the sickness and purging I would not interfere, looking upon them as efforts of nature to expel the poison; but there is no reason why the exhibition of opium should not be combined with this treatment if thought desirable.

Should any of your readers who may have an opportunity of testing the merits of these suggestions, feel disposed to avail himself of it, I trust he will not fail to publish the result, and so greatly oblige
Yours, etc., J. P. OATES.
Erdington, July 23rd, 1873.

LADY DOCTORS.

SIR,—Dr. Drysdale asks how it is that the entrance of women into the medical profession meets with so much opposition in this country. Permit me to say that the Bible, our ultimate appeal, has not yet been set aside, but still holds its influence over the mind of England. And without entering into discussion, allow me to say that God designed woman to take care of the home, with all its wonderful influences, and only exceptionally gifts her to appear in public. So if in an evil hour she consents to be drawn out of her appointed place of usefulness, she will soon be shorn of her locks of gentleness and modesty, and must take the consequences, while her advisers, too, will rue the day.

Liverpool, July 26th, 1873.

I am, etc.,

BENJ. BLOWER.

PRICKLY HEAT.

SIR,—When in the western tropics in 1869, I had several attacks of "prickly heat," and I found that clothes wetted with a weak solution of bicarbonate of soda (two grains to the ounce) applied to the parts affected, and kept constantly wet, allayed the irritation. When the body was hot, the itching was more severe. This I obviated by lying naked on my bed, under mosquito curtains, with the wet clothes on me. I think "A Country Member" will find this treatment effectual.

I am, etc., T. E. IMAGE.

We are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 12th; The Manchester Guardian, July 16th; The Aberdeen Daily Free Press, July 12th; The Bath Express, July 12th; The Birmingham Daily Post, July 16th; The Herts and Essex Observer; The Roscommon Journal; The Hull Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Sussex Daily News; The City Press; The Birmingham Daily Mail; The Kendal Mercury; The Daily Review; The Western Mail; The Wrexham Guardian; The Lincolnshire Chronicle; The Inquirer; The Lincoln Gazette; The Redruth Times, July 11th; The Liverpool Albion; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Struthers, Aberdeen; Dr. Vandyke Carter, London; Dr. H. J. Shaw, Louth; Mr. J. W. Crane, Leicester; Mr. Fowler, Bath; Mr. Duffey, Dublin; Mr. R. H. B. Nicholson, Hull; Mr. Brown, Callington; Mr. Woodman, Exeter; Dr. C. J. Workman, Teignmouth; Dr. Ransome, Manchester; Mr. Oakes, Birmingham; Professor Virchow, Berlin; Mr. Wilders, Birmingham; Mr. Jeaffreson, Newcastle-on-Tyne; Dr. Blower, Liverpool; Mr. W. A. Bonney, London; Mr. E. Gill, London; Mr. H. P. Newman, Southampton; Dr. J. Thompson, Leamington; Dr. Wade, Birmingham; Dr. H. J. Alford, Taunton; Dr. J. Mapother, Dublin; Dr. Harris, Redruth; Dr. Mercer Adam, Boston; Mr. C. J. White, Snodland; Dr. Macreight, Torquay; Dr. Shinkwin, Cork; Dr. Mackay, Stony Stratford; Mr. Woodforde, Taunton; Mr. N. S. Kerr, Markgate Street; Mr. Spackman, Harpenden; Dr. Royle, Manchester; Dr. Muter, London; Dr. Pierce, London; Dr. Ord, London; Dr. Rix, St. Neots; Mr. R. Bryden, Uffculme; Dr. Hugh Miller, Glasgow; Our Manchester Correspondent; Mr. Dyke, Merthyr Tydfil; Dr. Branwell, Brighton; Dr. Hughes Bennett, Tarbet; Dr. De Cristofons; Dr. L. Zambelletti, Milan; Mr. Lloyd, London; Dr. Blandford, London; Mr. Spencer Wells, London; Dr. Smith, Cheltenham; Mr. Davies Newport; etc.

BOOKS, ETC., RECEIVED.

The Baths and Wells of Europe: their Action and Uses. With Notices of Climatic Resorts and Diet Cures. By John Macpherson, M.D. London: 1873.
Notes on Beds and Bedding: Historical and Anecdotal. By James N. Blyth, London: 1873.

PRESIDENT'S ADDRESS,

DELIVERED AT THE

FORTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

BY

SIR W. FERGUSSON, BART., F.R.S., F.R.C.S.,

Surgeon to King's College Hospital, London, and Serjeant Surgeon to the Queen.

ON assuming the position of President of The British Medical Association, I feel naturally impelled to express to you the very high sense I entertain of the great honour which you have conferred upon me. Looking back to the long list of distinguished men who have preceded me in this position, distinguished alike by their high social qualities and eminent professional reputation, the honour of being selected to hold this chair, during the meeting of the Association in 1873, is such as might be thought to fill to overflowing the cup of ambition upon which any member of our profession may have set his mind. It has happened to me to have received a share of honours far beyond my humble merits, and far beyond what the wildest dreams of youth and early years could have anticipated. For these I hope that I am dutifully grateful; and for this crowning distinction which places me, for a time, at the head of the largest Association of medical men ever voluntarily banded together for the general good of our profession, I say to you with a heart full of emotion that I am thankful, far beyond my command of words to express, for this indication of your appreciation of my personal or professional merits, to hold the foremost place among you.

On such an occasion as this, it is one of the duties of your President to do more than merely express thanks for the honour he has had conferred upon him. He is expected to deliver an address which shall in some way or other be appropriate to the occasion. In the early years of this Association these addresses were, to a great extent, limited to matters connected solely with our profession in its social and practical aspect. Forty years ago, men like Hastings, Barlow, Conolly, Prichard, Crosse, Bardsley, and others, comprising to a large extent the foremost of the provincial practitioners in England, were impressed with the conviction that the members of our profession, scattered over the length and breadth of the land, were united by no stronger tie than the general one of a common brotherhood, which merely secured (if indeed it did that) professional courtesy between man and man. There seemed no other common bond; for the sources of education, licenses to practice, and degrees of distinction, were so numerous, so varied, and the local head quarters of the profession at so many different points, that the link of one with the other was of the feeblest description. The men referred to saw that the time had come when members of a great and noble profession might be held together by ties stronger, and even more appropriate, than those of a common professional brotherhood. Separated as each man was from his *alma mater*, bound by no tie which could claim his strict allegiance, there seemed room, almost a necessity, for an institution such as that which was founded by the gentlemen alluded to. The necessity was the more marked as, at the time in question, there was not that genial community of feeling which now happily obtains between town and country. The dignitary of the metropolis occasionally affected an air of superiority which his country brother could not conscientiously admit; and so by a determined, yet graceful, display of moral force, worth, and vigour, these men of the provinces asserted for themselves a professional status which, whatever

may have been in former times, is now conceded by their metropolitan brothers, and freely acknowledged by the public at large. The best proofs to this effect are, that leading professional men of the metropolis attended the provincial meetings of their brethren; that the term "Provincial" was changed to that of "British Medical"; that the Association, having held its meetings for more than a quarter of a century in provincial towns, held a most successful first meeting in London eleven years ago, and now again meets in the same city under the happiest auguries.

When Dr. Hastings—a name since more revered under the title of Sir Charles—first addressed the original members, he pointed to the necessity, for such a combination, the defects in our social and technical condition, the need for changes and reforms, not only as regarded ourselves, but for the sake of the community, with a prescience that must ever redound to his credit, as having foreshadowed many of those changes in our professional work and status, which have gradually altered and strengthened our relative positions to our fellow-men. Subsequent addresses followed in similar spirit; but all seemed to hold the main features of such to be a retrospect of the leading incidents of the past year, in association with topics pertaining to our profession. Few subjects of the kind, however distant the relationship might be, were overlooked; and each orator for the year was deemed a sort of Hippocrates, a Galen, or a Celsus, who should display an amount of concentrated knowledge such as might be expected in a well appointed university. It is marvellous to me how many of these orators distinguished themselves in languages, science, philosophy, medicine, and surgery; and their addresses, to say nothing of the collateral knowledge we have of the men otherwise, speak highly of the accomplishments of those who were our immediate predecessors and the founders of the Association which we now represent. A feeling must, I imagine, have gradually arisen that such a retrospect as was then expected from the president of the year was something which overtaxed the energies of the best men in our ranks, particularly if, as often happened, these men were deeply engaged in ordinary practice; and soon it was thought advisable that this extensive range hitherto prescribed for one man should be looked for from two or more, and hence arose the custom of separate addresses on Medicine, Surgery, Physiology, and other subjects, irrespective of what might be expected from the President. As the Association increased in numbers and importance, a necessity for sections was felt, and now, however strange the statement may appear, we have within our body the very concentration of specialities. Our annual meetings constitute as it were an university of specialities. This isolation, as it may be called, seems a necessity of the times. The results of special investigation seem more than an ordinary mind can comprehend; and the structure of our Association, built upon varied elements of importance, seems the natural development of thousands of minds worthily bent on showing that our profession combines as much of human knowledge, in a concentrated form, as may be found in any other. From time to time some of my predecessors assumed the task of discoursing on matters which they had made special objects of study,—epidemics, fevers, small-pox, cholera, and what not. Theories of the preceding year were dwelt upon as if the true foundations of our physiological knowledge had been laid for the first time. A study of these addresses induces a reverent respect for most, I may say for all of these authors, yet it is mortifying to think that much which they considered of importance has passed into the oblivion which has engulfed so large a proportion of the so called philosophy of our profession.

There are few annual professional addresses delivered in this country more interesting than those by eminent physicians and surgeons appointed for the purpose by this Association. The custom with Presidents of Sections to make special addresses is a modern and valuable addition to the interest of our meetings; and, in the course of these changes, the President of the Association for the year feels himself so surrounded by specialists, that he can hardly consider himself an authority on any subject. At any rate, whatever he may select, there will likely

be a number of experts present whose authority may probably be estimated above his own, and so he has no firm standing anywhere.

I imagine that few physicians or surgeons of the present day, who might be honoured with the post of your president, would venture upon such extensive ground as that taken up by many of those who gave presidential retrospects at early meetings of this kind. Doubtless "there were giants in those days," for they did their work well; but it may be claimed, on behalf of the like men of the present day, that the field of observation is now greatly extended, and that few can hold themselves as thorough masters in all departments.

On looking to those who have to deliver special addresses on this occasion, and considering the characters of the gentlemen who will preside over our sections, I confess myself at a loss to determine what I shall say to you, or how I can in any way give interest to this Inaugural Address. I have a most pleasing recollection of the President's Address last year. Mr. Baker left the ordinary beaten path, and, like some of his predecessors, adroitly seized on a subject which possessed, for the time, an interest even more exciting than ordinary professional subjects. The town of Birmingham and its surroundings, the topography of the district, its great factories, its deep mines, out of which so much of the wealth of England has been developed, were themes which proved most attractive; and every one present felt that he was listening to a story of England's greatness, described by one whose lifelong residence in the district, and whose talents and acquirements, qualified him in a high degree for the duty he undertook. Conjecturing what I might say to you on this occasion, I naturally, from the local example of last year, thought what a subject I had before me were I to take London and its environs. With a history well nigh as old as our knowledge of the Island of Great Britain, with a progressive aggregation of humanity larger than the world has ever seen, there are materials for hundreds of addresses, although possibly none might be so appropriate to our senses as the subject selected by our last year's President; and it may be allowed that the valley of the Thames, however beautiful as regards its surface, or interesting as the largest and most populous in our island, lacks much of that special interest which engrosses the attention and occupies the labours of modern men in reference to the mineral products from underground. There is nothing in the London clay, nothing in the geology of the valley of the Thames, which can compare in interest with under-surface matters in other parts of the country.

There are, however, certain features connected with the valley of the Thames, which seem to me worthy of special attention; and naturally, among men educated as we have been, questions may fairly be raised as to the hygienic condition of the locality. I suppose there can be little doubt that those who planted London as a post or capital looked to the ground on which the Tower now stands as a good commanding position on the estuary of the Thames, and that little was thought then of the teeming millions of subsequent inhabitants who would populate the town and valley above. At that date there must have seemed a world of waters sufficient for all after years; the question of drainage would then be little thought of. In primitive times, springs, river sides, and shallow wells, were the chief immediate sources of water-supply. As years rolled on, where population increased, these resources were found deficient, and additional ones, in a higher style of engineering, were required. For my own part, I am more impressed regarding the civilisation of the Romans, by what they have left indicative of their efforts to give supplies of water when required for health and comfort, than by any other features now extant. The great conduits which testify to the engineering skill of the time, as also to the expenditure incurred in regard to this necessity of life, and the remains of their baths, are ample proofs to this effect.

To many it may seem strange that I should refer specially to such a subject on this occasion. It may be thought to pertain chiefly to water-companies, engineers, and rate-payers, but in reality it pertains to the public at large, to public hygiene, and

in the latter respect peculiarly to our profession; and for such reasons I know of no section of what is now often called State Medicine more interesting than that of water-supply where men do congregate. It is right and fitting, in my opinion, that at a meeting such as this some special reference should be made to the subject. Next to the treatment of disease and accident, it seems to me to stand foremost in our professional minds, for water is as much a question of food as any other dietetic material that can be named. Our supplies of vegetables, of fish, of animal material, come possibly second in importance to this necessary of life. Mother Earth herself takes nourishment from her own direct produce—effete vegetation, from the decay of fish, and the *débris* of animal life; but all these would count for nothing if she were deprived of water nourishment. Rational physiology may be called the philosophy of life, and we, claiming physiology as one of the highest departments in our special profession, may claim, as the most skilled conservators of the public health, that our opinions regarding water supply should hold due influence over the public mind. We say we are a meeting of "The British Medical Association"; we might as well say that we are a hygienic congress of medical men; for all our efforts are towards the amelioration, the mitigation, the suppression of disease. It is to the honour of this and all other similar meetings that almost every paper in our sections is devoted to such purposes. In law, man deals with what man has done or chooses to do. In diseases, we deal with causes and courses which I may say, in general terms, are far beyond the ken of man, we come into contact or into collision with nature in varied aspects and phases which the wise thinker in our profession would hardly venture to explain. It is at this point, perhaps, that our profession has from time to time broken down by attempting too much. Who among us knows what miasm is? What sense is there in the idea that it may be averted or obstructed by coverings or nets, driven away by fires, or frightened off by artillery? Yet all such theories have obtained more or less favour in our profession, even in the nineteenth century. Who among us can positively, in reasonable terms, define the physical condition of miasm as it once prevailed in the fens and swamps of Lincolnshire, or possibly even now lingers, if it does not dwell, in horrid perfection, on the banks of the Niger? Let us hope that our profession may in time be able to appreciate the palpable physical qualities of the great enemy in this shape. We have learnt empirically in time how to knock him on the head by force of quinine, but he is as impalpable to us now in these days of dengue, as in the time of Hippocrates.

But, to return to common palpable matters. Irrespective of rivers of Biblical, classical, or strategical interest, there are few to compare with Father Thames. The wealth carried on his surface below London Bridge well-nigh defies calculation. Besides the large share of what may be called our domestic wealth, the argosies of every country in the world are welcome to his waters. There lies the true greatness of the Thames. There seems no exaction that man could ask from such a father which has not been granted; yet it is most worthy of consideration how far those who have lived and now survive on his banks have dealt fairly with the great stream. The Thames, in his lower course, is one of the greatest highways of commerce ever known to man. In his upper reaches he has been one of the best or worst abused streams that the world has known. He has been at once called to be one of the essentials of life to the inhabitants on his banks, and the cloaca of human aggregation. His streams have been run shallow, and his clear waters have been dimmed by the filthiest pollutions, until the sense of man has, in a manner, revolted at the work. The river thus abused was, in the days of Henry VIII, declared by Parliamentary document the finest salmon-stream in his Majesty's dominions. This polluted upper stream is a large source of the water-supply of the south and west of London.

In many respects, a "water question" is one of the most interesting in social life. It is as great now as when Moses struck the rock; water is an absolute necessary of life. Many of what are called comforts and luxuries might be absolutely

dispensed with ; but, without water, both vegetable and animal life would cease, and in a hygienic point of view we are professionally interested in such a question. Here, as in many other public and national questions, there is great diversity of opinion. The sources of supply, the quantity, quality, and expenses thereof, form separate heads, of which various classes of the community take special notice. The quantity and quality are the features in which perhaps we are most interested. The public at large probably look upon the sources and expenses as the most important features ; but even here we, as ordinary citizens, are as much interested as are our fellows. In regard to quantity and quality, all seem to agree that there should be the largest and best imaginable of both ; no stinted time supply, but a continuous run of the finest. It seems, however, next to an impossibility to have such in this locality. The Thames cannot afford a sufficient supply unless his main stream were nearly run dry ; nor does it seem possible, under the circumstances, to render the purity of that quantity such as should satisfy all. Filtering in great tanks on the river side, in cisterns or vases in houses, scarcely seems to accomplish this ; and I am here tempted to say, that possibly a fault lies on our side, that we expect too much for ourselves, and lead the public to expect too much, on the score of what may be considered quality and purity. Moreover, we differ largely among ourselves in regard to these points. As educated chemists, in reference to animal life and nourishment, we talk and write learnedly about elements. The purest water may be defined as that which holds least saline, animal, vegetable, or earthy material. The physician thinks so highly of this feature, that in a fluid dose of medicine he orders the bulk of the potion of distilled water ; yet in that water he probably congregates an amount of saline, animal, or vegetable material, with which no natural spring, or unpolluted stream, can be compared. He sends his patients hundreds or thousands of miles to partake of waters where the converse of purity is generally the chief feature of the fluid. But this, it will be said, is in accordance with the science of combinations and a just appreciation of the efficacy of salines, especially those compounded by nature in the bowels of the earth. I do not object to these impregnated waters as curative agents in certain forms of disease ; I do not quarrel with the physician when he orders distilled waters as the purest fluid for his compound,—but in either instance he cannot fancy that his patient is about to drink pure water,—it may be admitted that he has no such idea, yet the same man insists stoutly on the necessity for unexceptionally pure water for ordinary drinks. This “Adam’s wine” may be filtered, boiled, distilled, yet certain so-called impurities will hold their place or speedily reappear. Vegetable matter, animal matter, earthy or saline matter, are the bugbear of those who want pure water for man. Even the presence of a few fleas, to use a familiar expression, dead or alive, in a great natural basin of water, has been held as an influential objection to a scheme offering a double supply.

Supposing that the greatest chemist in the world places a pint of pure water, absolutely without alloy, at the meal of his fellow-man, be he poor or be he rich, let us, as medical men, do what the community at large cannot—trace this fluid until it is no longer palpable. Take as a type the pet of the day, the “working man,” allow him to be a model teetotaler who has taken a vow against alcohol and all fermented liquors. He takes his frugal meal—say water and bread. Trace that meal as far as your physiological imagination can, down the intestinal canal and into the blood, and fancy from your knowledge the affluents thereon. Can “pure water” be recognised beyond the teeth in this downward course? Mucus, saliva, tonsillary secretions, mucus again, and gastric juice, and pancreatic, and biliary, all join the ingredients of the simple meal. But let us suppose that the working man indulges in the luxury of a bit of beef or mutton, with some of the usual adjuncts, potatoes, turnips, greens, cabbages, peas, or beans ; what is the fate of the pint of pure water which is deemed the grand feature of this excellent fare? Here vegetable and animal matter are joined with pure water to an extent a thousand times beyond the imagination of the pure water theorist, and the bread and

water system is simplicity itself compared with this. I take a grade of society above that of the “working man” ; go to the “upper ten thousand,” where in reality pure water-drinkers abound, and consider what are the associations of the half pint or pint of pure water, ere fluid can no longer be traced. Look even at the condition or risk of the epicure whose means permit him to indulge in the high-flavoured grouse or daintily managed venison, and suppose him a “pure water” man, what becomes of the water as soon as it is swallowed? what about the pleasing adjuncts to these delicious articles of food, and what (to those who are always referring to salts in water) about the common salt which is consumed in quantities palpably larger than those pointed out by the chemist in so-called saline waters? What can we, as medical men, say of the refinement in diet of the savage who prefers animal food in a putrid state to that recently killed, and uses such surface water, or any other kind, as chance may put in his way?

I believe that the public look largely to us for opinions on such subjects. I fancy that the pure chemist is often taken for one of us ; I fear that many of us affect too much the airs of the pure chemist. Do we not but too frequently jumble up chemistry and physiology, so that the characters of each seem to suffer? Are we not in reality too fastidious about “pure water”? Whilst the public—no doubt considerably influenced by the opinions of the doctors—haggle over this feature, the more important one of ample supply, for all the purposes of man, is overlooked. Although water for drink is essential to our existence, how small in proportion is that, compared with the requirements for sanitary purposes otherwise, such as cleaning, washing, in arts and manufactures. I have often thought it an unfortunate use of words when a water-supply to a town is illustrated by the statement that it is equal to so many gallons per head. From thirty to thirty-five gallons seems to be held as that absolutely required in good modern views on the subject. To those who do not think about it, the quantity seems enormous. It may be doubted if a couple of quarts of drinking water per head in any population is taken into the stomach, in the course of twenty-four hours ; and making allowance for ablutions, baths, clothes, and household washing of all kinds, it would be difficult to convince a family of ten people in ordinary citizen life, including domestics, that they consume between four hundred and five hundred gallons of water per day. They simply will not believe it ! and, judging chiefly from their own experience, they think that the call for more water than that which they imagine forms the daily consumption in the house is extravagant, both as regards themselves or neighbours. Would it not be better if water-engineers and water-companies would let it be known what the water is really required for in a community, instead of making the statement that each individual has allotted to him from thirty to thirty-five gallons? There is no doubt, I suppose, that such a quantity as this implies is actually used in those towns where water-supply is efficient ; but if every individual in the community chose to amuse himself by running to waste that which is his allotted quantity, I fear that social economy in regard to water-supply would be terribly disturbed. Arts, manufactories, breweries, steam-power, would be well nigh paralysed or arrested. How would town horses, cows, and dogs fare? If these matters were held fairly in view, I venture to think that there would be less discussion regarding the quality of water for general use than invariably arises when the question of additional supplies is raised. For man’s stomach, the requisite quantity of wholesome water is so small that the trouble and cost of purifying by filtering and otherwise would be as nothing compared with the advantage of having what might be called a superabundance. If that superabundance were what the simple housewife calls soft, the water desideratum would be fulfilled. I have heard on the best authority, that in Glasgow alone, with a population of nearly half a million, where a large and wise expenditure has been incurred, there has been a saving of something like forty thousand pounds a year for soap, owing to the softness of the water from a natural reservoir, which doubtless is formed by the water-shed of the district in which it lies. The good

folks of Glasgow tapped the side of one of the most beautiful and classical of Scottish lochs, and brought the water through conduits some forty miles long, to place it at public disposal. The loch is none the worse, and the benefit to the citizens of the second city in the kingdom is perhaps incalculable.

It seems almost by instinct that, in the humblest of our cottages, and in most of our moderate, unpretending dwelling-houses, there is a desire to have a supply of rain-water. The pump, or the nearest open well or spring, may be resorted to for water to drink; but the small quantity that can be caught from a stone, tile, or slate roof, is eagerly sought by the judicious housewife.

The quality of this water suits domestic purposes better than the brightest from well or pump. Largely though this little luxury is indulged in,—for the water-butt abounds in every district,—it is curious how this sort of instinct, as I have called it, has been neglected by many who have catered for the supply of water on a large scale. If this water is so esteemed by poor cottagers, why should it not be available to the whole community? If the rich man, with a big roof over his head, collects it, at considerable expense, for his baths and washings, why have we not more of it? But here I touch the margin of an important question regarding water-supply to large communities. Is such a supply, supposing it to be the most desirable, to be had at reasonable cost? That it is desirable can scarcely be doubted. There are many who approve the project of increasing the supplies of Manchester, Birmingham, and other midland towns, including London, from the natural lakes of Cumberland and Westmoreland. But might not something be done, less stupendous, yet equally effective? Natural lakes, of sufficient bulk, are not to be found in many districts; but might not artificial ones be constructed, which would largely supplement our present water-supplies? In most of the upland districts in this country there are spaces, hollows, ravines, and valleys, where, as much of the surface is otherwise worthless, the water might be dammed up, and lake above lake might be made to appear on the landscape. This is, as we all know, no new proposal. It has been acted upon in countries of ancient historical date, where we fancy that civilisation was never equal to that we now boast of, and the custom prevails to a considerable extent in this island. But all that has yet been done in this way among us is but little better than the action of the poor cottager who is content to catch from the fleeting shower a pitcher or tubful of the precious gift of nature. Look to the rainfall of a season in this country, and consider how much, or how little, of this gift from heaven is actually used by man. Of all the necessities of life this is the one which comes upon us in this island most bountifully; and yet how much it is neglected! Instead of letting the floods damage our best alluvial soils, destroy vegetable and animal life, endanger man himself, and finally flow uninterruptedly to the sea, might not much of this flood be impounded on our watersheds, and there form small and large reservoirs and lakes which would be ample supplies of the best water at every season of the year, and even keep in fair volume some of those primitive streams which, doubtless, were the attraction of those who originally settled on their banks? It is distressing to see, in some of our large towns, to what condition these once fair streams have been reduced: the water is taken off above until the bed of the river has been dried, and then let on again in every imaginable degree of pollution. Under such circumstances the water thus taken from the stream might be supplemented by the upper stores; or, better still, these stores might be relied upon for most of the requirements of large communities.

Spring waters, although much prized by some for medicinal qualities, and others for seeming purity, are not in such quantity as to supply the wants of large populations in civilised life. It may be doubted if the deepest borings would suffice. From springs and wells the water is filtered from earth's surface, and the filter-beds are beyond the control of man. Doubtless, river-water is more serviceable under many circumstances; but it is constantly liable to be, for the time of floods, unfit for the use of man or beast, unless precautions are taken to filter the

supply immediately required; and at all times, when the population is dense, as on the banks of the Thames, it seems beyond the power of man to avert entirely such pollutions as are incidental to masses of population.

It seems sad to see the bed of a streamlet or river actually dry because man chooses to divert it from its natural course, never to be returned again except in diminished quantity and polluted condition. For certain arts and manufactures, distilled water is indispensable; yet there are curious instances in which it is objectionable. I fancy, however, that we might all agree that distilled water, if it could be had in sufficient quantity, would pretty well suffice for man's wants. But no system of distillation which we could devise would suffice for the quantity required. It appears to be overlooked by the general community that the waters of large and deep lakes are chiefly the product of distillation. In these natural reservoirs we have accumulations of such fluid. There may be springs in their bottoms or sides, but who can doubt that the chief supplies come affluent from the watersheds around, frequently many miles away? These sources, springs, and rivers, all come from rain, and rain is probably the purest of distilled waters. How few of those who pass our flooded valleys during rainfalls, seem to know that the muddy streams they see below are in reality condensed from impalpable vapours in the air; literally evaporated or distilled waters restored to the surface of the earth again in solid form, holding in a floating condition only dusty and earthy *débris* for a few hours or days. Such muddy streams produce no effect on the main volume of a good-sized lake or reservoir; and when this pollution—if the term be correct—subsides, the pellucid fluid left is probably as useful for all general purposes as man could desire.

I am not aware that it has yet been calculated how much water is allowed to pass thus on its way to the sea. I have, in my time, seen several severe droughts in this country, and have occasionally wondered what might be the result to animal life—man and beast—if the general distress should continue a few days or weeks longer. This involves a great hygienic question; and interested as we are in it professionally, taught as we all are in the virtues of water—home-distilled, nature-distilled, home-filtered, nature-filtered, looking to the value of water to man as regards his internal and external bodily wants, I do not know any point of hygiene of more interest. Fish, sheep, and cattle can be brought in reasonable quantity—hundreds, it may be—in conserved condition, thousands of miles, but water cannot be fetched such distances in sufficient quantity at reasonable terms. And here I cannot but again express my opinion that we, in our professional capacity, may err grievously in making trivial and questionable objections to the quality of water, when there seems a fair prospect of getting that which is most desirable for man's use, a full, ever-flowing quantity which might give a perpetual current, day and night, well-nigh fresh from the dew of heaven.

But I dare not dwell longer on this topic! and, as it is, I have to apologise for venturing upon a theme which to many may seem little associated with the department of our profession in which I have been chiefly engaged. However feebly my humble views may influence you, I firmly believe that water-supplies for large communities are among the most important features of hygiene which can interest us on behalf of our fellow creatures. There is perhaps not a single department of hygiene in which we are not in the foremost ranks. Drainage and sewerage are most closely allied with this theme; and in modern times, when the Legislature has determined that officers of health shall be in every district in our land, and that such office-bearers shall belong chiefly to our profession, I trust that I shall not be considered to have gone beyond the proper bounds of the position in which you have placed me, or of the intentions of this great meeting of medical men.

There are many other professional subjects in which we are all interested, which may or may not attract attention in our sections, and to which I might venture to call attention, but time will not permit me to do so. It is, however, peculiarly my duty to congratulate you upon the commencement of another

yearly meeting of this Association. After forty years of similar gatherings, in most of the large towns of England, we meet for the second time in the great metropolis. From a beginning nobly conceived, and cherished by the brightest luminaries in the provinces, you have expanded into a large and cosmopolitan institution, and carry on your rolls the names of almost every man of note in the metropolis. Beginning with a few hundreds in number, you muster more than five thousand highly educated men. From your professional standing, great social and moral influence, you are the arbiters of a large portion of human happiness. Let us hope, indeed we cannot doubt, that the proceedings of this meeting will add greatly to the status of our profession, and we may fairly anticipate that our present efforts may bear comparison with those of former years. The hand of time has pressed heavily upon kind hearts and bright intellects which graced and enlightened bygone meetings; yet, whilst avowing our admiration for our predecessors, let us fondly trust that there are hearts and heads among us still to uphold the character, in every varied aspect, of our noble profession.

Never has this Association met under more favourable auspices. Through the generous liberality of the Council of King's College, you have at your disposal all the accommodation in respect of halls, meeting-rooms, and lecture-theatres, which is required. The Chief Magistrate of the City (the Lord Mayor of London) will grace us with the hospitalities of the Mansion House. The Royal College of Surgeons of England will give us a hearty greeting, and throw open its halls, libraries, and unequalled museums, for our inspection. One of the most gratifying events of the occasion is the courtesy of the Benchers of Lincoln's Inn, comprising many of the most distinguished lawyers of the day, including the Lord Chancellor of England, in permitting the use of their splendid hall for our dinner festivity. Never, perhaps, has there been such a blending of Law and Physic before,—a happy omen of our times. Her Majesty's great Castle at Windsor, the episcopal Palace of Lambeth, the mansions of many of our nobility and gentry, are thrown open to permit inspection of æsthetic collections possibly not to be surpassed in the world. Our fourth evening's entertainment will spring from the generosity of the Council and Professors of University College, where, as professional men, we shall meet in harmony on the premises of one of the most distinguished and efficient of our modern Medical Schools.

We have begun our work this morning holily, under the dome of St. Paul's; let us conduct it wisely, and thus fulfil the well chosen motto for King's College, within whose walls we are now met, "Sanctè et sapienter."

ACTION OF NITROUS OXIDE.—Joylet and Blanche (*Archives de Physiologie*, v, July 1873, p. 364) have obtained the following results from their experiments on this subject. Chemically pure nitrous oxide will not support the respiration either of animals or plants, as they cannot decompose the gas. When breathed in a pure state by animals, it causes asphyxia and death, with all the symptoms usually occasioned either by strangulation or by the respiration of an inert gas, such as nitrogen or hydrogen. Nitrous oxide causes death in nearly the same time as these other asphyxiating agents. Nitrous oxide has no special anæsthetic action. The anæsthesia which it may produce when inhaled in a pure condition is only due to want of oxygen in the blood. Insensibility appears when the oxygen in arterial blood is reduced to less than 2 or 3 per cent. Arterial blood is then very dark, and contains 30 to 40 per cent. of nitrous oxide. Animals can live and show no alterations of sensibility while breathing mixtures of nitrous oxide and oxygen, in the same proportion as nitrogen and oxygen in air. The arterial blood then contains about 30 to 35 per cent. of nitrous oxide. Birds placed under a bell-jar filled with this mixture, behave exactly like those placed in a jar of the same size filled with air, and die after having exhausted the oxygen to a similar extent and formed a similar amount of carbonic acid. As nitrous oxide is an irrespirable gas and does not possess the anæsthetic properties which have been attributed to it, the authors conclude that its employment cannot but be dangerous, and ought, on this account, to be excluded from medical practice.

ADDRESS IN MEDICINE,

BY

E. A. PARKES, M.D., F.R.S.,

Professor of Hygiene, Army Medical School; Emeritus Professor of Clinical Medicine in University College.

WHEN the Council of the Association did me the honour of asking me to deliver the Address in Medicine, my thoughts naturally turned to the progress in the art of recognising, curing, and preventing diseases which has taken place during the period over which my personal, knowledge extends. I began to try and recall the medical practice of my student days, now not very far from forty years ago, and to think over the chief changes which have since occurred. I found the retrospect interesting; and, in the hope that it may prove so to others, I shall endeavour to pass in brief review the principal points in practical medicine which have seemed of most influence during my medical life.

When I commenced attending hospital practice thirty-seven years ago, the two great discoveries of the first quarter of this century—viz., Richard Bright's recognition of albuminuria, and Laennec's application of the ear to discover the normal and abnormal actions of the heart and lungs—had hardly made their complete impression on medical practice. The urine, indeed, was tested in every hospital, and the stethoscope was taught in every school; but we were still able to see something of the old practice, and to observe how great a change had been produced. By a little effort, a student of the present day may imagine what a light the discovery of renal and of auscultatory signs threw upon the chaotic practice of earlier times. Without a recognition of the state of the kidneys, diagnosis was often little better than guesswork, and in many cases was impossible. Diseases, such as some dropsies and uræmic nervous conditions, ran their course without their nature being in any way detected. There were still some old practitioners who did not use the stethoscope, and were obliged to rely on very uncertain indications when judging of heart or lung diseases. But everywhere these two grand advances were being diligently pushed on, and their extraordinary importance for the whole human race was recognised. Our every-day work became defined; indecision, the most harassing of our troubles, was replaced by certainty; symptoms thought to be identical were suddenly separated; what had been deemed important was seen to be useless; what seemed insignificant was shown to be full of meaning.

Nor has any advance since that time equalled these two great steps. To Laennec's work, indeed, as far as it concerns the interpretation of auscultatory phenomena, little has been added. The completeness of his investigation is nothing short of marvellous. Let any one go over the diagnosis of the diseases of the thoracic organs in the ante-Laennec period, and then read his wonderful treatise; then let him look through the almost countless works since; and he will see how much was done, how little was left undone, by the great Frenchman. He never went wrong, except when he left the interpretation of what he heard, and attempted details of morbid anatomy for which the time had not yet come. And, if Bright's great work was not so complete, this was inevitable from the very nature of the case. He was not merely investigating the meaning of sounds which a special instrument made audible; he was dealing with the most intricate changes within the body. It was impossible he should round off and make clear the signs of the several kidney-degenerations whose nature was not even suspected; yet all he did do was perfect. It is wonderful how little error of commission there is in Bright's essays. While Laennec, in his discussion on tubercle, wished to give a complete and exhaustive account, which he could not really do, and desired to bring everything into the narrow circle of a definition which really left half out, Bright kept to his facts. What he saw, he stated, and, as far as the facts warranted, he interpreted; but he went no farther, and in this he showed a more philosophical mind even than the illustrious discoverer of auscultation.

These two great discoveries stand high above all that has followed, nor is it likely that equal advances will be made in this century. Laennec's work has been somewhat enlarged, and here and there corrected. Bright's albuminuria, like a newly discovered country, has been separated into provinces, surveyed, classified, and enumerated. The work is not yet ended; but I presume we see now its limits more

of less direct consequence to be thoroughly known.

The value of the discoveries which have since chiefly influenced practical medicine will be estimated differently by different persons. To my mind, one of the most important practical advances in the last thirty years is the discovery of embolism and thrombosis. The immediate effect on diagnosis was considerable. To be able to separate a class of apoplexy from other apoplectic cases, to recognise blockage of the pulmonary, the ophthalmic, and other arteries, was a great gain; but the indirect consequence of the doctrine of embolism—the recognition of the effect of minute capillary blockage, and of the transference of cells which are arrested in other parts and give rise to growths there—has a still more important bearing. In the same way, the doctrine of thrombosis—of so-called spontaneous clotting and arrest of circulation, and the mixed cases of embolism and thrombosis—has most important practical consequences, which are gradually becoming clear. In 1845, Virchow first got the hint for his great discovery of embolism, which he subsequently fully elucidated in his essays published in 1846 and 1848. Among all the discoveries in pathology which have been made by the surpassing genius of Virchow (and he has touched pathology at all points and never without adorning it) there is none more valuable than the recognition of embolism.

Another advance, which appears to me to have greatly influenced practical medicine, is of a very different order. The entozoic diseases of men have long been known; but the mode of access and the transformations of the entozoa have been only made out within twenty-five years. How marvellous they are—what light is thrown upon obscure diseases by the tracing of the embryo or ova through its different stages and hosts to its maturity in its last resting place—I need not say. The labours of Van Beneden, Küchenmeister, Leuckart, our own Cobbold, and many others, have given us a degree of certainty about these animals and the diseases they cause which was quite unlooked for thirty years ago. We now understand, and can therefore prevent if we please, not merely the common entozoic diseases, such as tapeworms, round worms, and the like, but we see how to deal with such wide-spread maladies as the indigenous liver-disease of Iceland, which has been traced to an echinococcus; as the chlorosis of Egypt, caused by the *dochmius duodenalis*; as the fatal trichina disease, which has doubtless been until now confounded with the specific fevers; and as the Bilharzia affection of Natal. The importance of recognising these diseases, of bringing them out of the domain of mystery into the light of common day, and of thus freeing the class with which they were mixed up from a heterogeneous element which made investigation very difficult, is too obvious to need comment.

The latest contribution to our knowledge of entozoa is by no means the least curious. That a nematoid worm shall live in the blood of a man—shall multiply there, or, at any rate, somewhere in the system—shall be in such numbers that there must be many thousands at once in the body, is wonderful; but passing wonder is the fact that these thousands of active, living, feeding worms, seem to do little injury. Their discoverer, Dr. Timothy Lewis, of the Army Medical Service, has given evidence which proves that some of the persons infested with them must have had these worms for years, and yet not only live, but pursue their avocations, and are in the possession of fairly good health. How is it these thousands of worms do not cause blockage and obstruction? Why do they not take the nutrition the body ought to have? What becomes of them when they die and decay, for they must do so? Where do they decay? and in what way is the structure of the blood-vessels and other parts through which they pass influenced by their passage? What a number of singular points arise, for which further investigation must find an answer! The discovery shows us, at any rate, that the entozoic diseases are not yet exhausted, and that many things must still lie over for those who have eyes to see and energy to use their eyes.

The recognition again of the diseases (chiefly of the skin) which are owing to cryptogamic plants, has had important bearings on practice; it leads at once, as in the case of the discovery of the itch insect in the last century, not only to the adoption of a local treatment of a special kind, but to the recognition of the method of spread and to the means of prevention. At present the recognised diseases from the implantation and growth of plants have been chiefly those of the surface, or of what may be called the external passages, such as the throat, stomach, or bronchi, which are in communication with the air. But what shall we say of the researches of the last three or four years, which seem to trace many affections, in part or wholly, to the influence of the bacterioid bodies which at present we must call plants?

Without venturing to enter into the class of plants which, for convenience, are massed together as Schizomycetes, have to the specific and infectious diseases, or to putrefaction, it seems clear that a profound study of them must be fraught with deep consequences to practical medicine. We are now certain that, penetrating from without by the surface of wounds, or more rarely by the intestinal surface, these minute cells, whose numbers are to be reckoned as untold millions, pass into spaces or blood-vessels (on the walls of which they colonise and live), or enter living cells, it may be wandered white blood-cells, and are carried to distant parts of the body, or grow in and block vessels and cause a sort of embolism, or adhere to and grow on the valves of the heart, and may in one way or another cause various diseases and complications, and in some cases originate a disease which is mortal within a few days' time. Without exaggerating the frequency or the importance of these "mykoses," we can yet feel sure that in this direction practical medicine is about to make another step, and that, as there is "a disinfecting surgery," so also there will have to be a "disinfecting medicine."

In a class by itself, for the recognised cause of the disease cannot at present be referred to any plant, though it resembles, perhaps, no common animal cell, must be placed the small cell which, by its extraordinary powers of growth and attraction of food, causes the painful and obstinate sores known in India and Syria by many names. The Delhi or Damascus sore, the Aleppo evil, and other names have been applied to a disease which is spread all over the East, affecting men and dogs, and which, though not fatal, is yet in the highest degree harassing and discomfiting. The discovery of the cause and its cure we owe to Dr. Fleming, of the Army Medical Service; and it is a good instance of the great use of the microscope in the hands of a competent man. Dr. Fleming found as a constant element in these rodent ulcers a small cell; its nature is quite doubtful; no kind of plant can be developed from it, and it is presumably of animal origin; it contains nuclei, and grows marvellously fast, though whether by cleavage or budding or exosmotic transit, so to speak, of small cells through its wall, has not been made out. By pressing on and absorbing the nutrition of the skin, it soon destroys portions of the surface, and forms most unsightly and painful ulcers. That this cell is the cause has been proved by repeated inoculations. It is very tenacious of life and resistant to chemical agents, hence the uselessness of the common plans of local treatment which have been repeatedly tried without effect. The only cure is at once to destroy the cells with potassa fusa. In a few days, a sore which has been open and extending for months is cured as by magic. The cure is infallible; and if this plan of Dr. Fleming be carried out, he will have the merit of having at once obliterated a disease which has been a plague for hundreds of years, and neither spared the great Aurungzebe in his hall of Paradise nor the meanest pariah who was no more than useless dust beneath his feet.

The discoveries to which I have now referred, *i.e.*, embolism and the entozoic and microphytic diseases, exert at once a great influence, not only on diagnosis but on treatment and prognosis. But to some the changes in the general doctrines of pathology in the last forty years will appear, perhaps, even more interesting. During this time we have learnt partly to know the great class of degenerations with its two divisions; *viz.*, degenerations which are simply the result of age, *i.e.*, of the loss of the peculiar formative force, which first builds up, then maintains, and then finally dies out and leaves behind it a tissue worn out, effete, and useless; and degenerations which are the slow result of some excessively slight but constant failure in nutrition. Fibroid, fatty, and atheromatous changes, and wastings especially of muscular fibres, but also of gland-cells and mucous membranes and nerves, come in to complicate the acuter maladies and largely to increase their mortality. It must be confessed that, while they will account oftentimes for failures of treatment, the chance of degenerations being present in middle-aged patients is a source of great embarrassment in prognosis. Except when attacking the kidneys and the muscular tissue, they are diagnosed with great difficulty, and slow degenerations of the alimentary mucous membrane or of the nervous system are among the most puzzling of maladies. In the means of detecting the presence and estimating the amount of these degenerations, we have still much to learn, and no greater benefit could be conferred on the human race than a perfect analysis of their causes, and a recognition of how they may be avoided.

The great subject of inflammation which underlies so much of pathology has suffered many changes, and yet the views held by some observers thirty years ago at the outset of microscopic research were to a large extent correct.

Thirty years ago the doctrine of the Vienna school, based partly on the teaching of Rokitsansky, though never, I think, accepted as a whole by that great master, was dominant in Germany and in France.

Everything was dyscrasia; and the belief that a profound alteration of the fluids, and especially of the blood, underlies most morbid changes, for a long time governed a large school of pathologists.

In this country it never obtained great weight, though it certainly tended to modify our ideas of the origin both of cancer and of tubercle. Gradually losing ground before the pressure of opposing facts, the doctrine of crasis at length gave way to a local pathology almost as extreme. The theory which superseded it was the celebrated cellular pathology of Virchow; that theory which looked only to the individual elements; which traced all to growth of cells, and which virtually rejected the idea of exudation in the old sense of the word. It was admitted, indeed, that nutritive cell-less fluid emerged in disease from the vessels as in health, but it was caught up and appropriated by the cells met with outside the vessels, and especially by the connective tissue-corpuscles. At one time it seemed as if the time-honoured term "exudation" would be banished from pathology, and the old doctrine of inflammation seemed altogether undermined. But this cellular pathology was like the creed it superseded, pushed too far. True to a large extent, it was made to embrace conditions beyond it, and the inevitable reaction came. In 1867, Cohnheim described the transit of the white blood-cells through the unruptured walls of the capillaries, and the old doctrine of exudation had again an empirical foundation. I say Cohnheim described, but I did not say he discovered. For the discovery had long been made, and the fact that it had been made and had been disregarded is a striking instance of want of appreciation of a cardinal fact, of which so many cases are recorded in the history of all sciences. It is bare justice to record that in 1839, William Addison, now of Brighton, perfectly described the emigration of the white blood cells as well as many other phenomena which attend inflammation. The fact did not escape notice, and one writer, at least, Charles Williams, in his well-known work on the *Principles of Medicine*, appreciated its importance. But, as a practical matter, the discovery fell dead, and when Cohnheim announced the fact twenty-eight years later, the world of pathology was stirred to its depths. It is also but justice to observe that the chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside vessels was not known.

At present the pathology of inflammation seems settling down on a mixed humoral and solid basis. It seems to be admitted that the albumen in the blood which feeds the organs partakes of the quality of the food which supplies it, and is modified also by the condition of the organs, whose action prepares its introduction into the main torrent of the blood. Degrees of nutritive adaptability may, therefore, exist in it, and we may fairly assume that the composition of the blood albumen must vary, and that it is quite possible it may be sometimes so degraded as to justify the idea which underlaid the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules, so to speak, which, though without a cell wall, can be classed with cells. The cellular pathology is, to this extent, an undoubted and valuable generalisation.

If the doctrine of inflammation has thus, as it appears to me, made the full circle of change, the same may be almost said of phthisis pulmonalis. Laennec's genius, so sure and accurate when he was dealing with the interpretation of physical phenomena, failed when he attempted a definition of phthisis. Like many a geographer, he wished to fill up his blank map, to insert a coast line here and a watershed there, and to have everything defined, described, and completed. It was an impossible attempt, for the country had not been surveyed.

Laennec's opinions on tubercle were widely influenced by those of Bayle, and doubtless his interest in the subject was heightened by the fact that, like Bayle, he was himself the subject of phthisis. Influenced probably also by reflection on the hereditary derivation of phthisis, he at last elevated tubercle into a special and peculiar product and as the only sign and cause of phthisis; he took tubercle out of the category of common inflammatory changes, and made, so to speak, an entity of what may be merely a form. His influence was so great, his hypothesis, for it was no more, so exactly chimed in with many of the facts of phthisis, and gave an explanation so simple and complete, that it met with general acceptance.

But in this country there were not wanting those who, from both clinical and pathological stand-points, never accepted Laennec's theory in its integrity. The masterly descriptions of Thomas Addison, of Guy's, published nearly thirty years ago, show how completely that great and original physician had seen the imperfection in the favourite view of tuber-

culosis. But Addison was not alone in this. It is but just to the memory of a man whose extraordinary talents did not save him from mistakes which eventually overshadowed a brilliant career, and left him in his old age neglected and stranded on the shallows whither a false light had enticed him; it is but just to John Elliotson to recall the fact that he constantly asserted the production of phthisis pulmonalis from common inflammation, and the identity of many so-called tuberculous and inflammatory processes. So also it is but justice to Charles J. B. Williams, a pupil and follower of Laennec, so say that he also brought into great prominence the intimate connection between inflammation and tubercle.

But it was not until 1847 that Laennec's theory in its exclusiveness was to receive its death-blow. In that year Reinhardt, himself, like Laennec, soon to be a victim of phthisis, published his exhaustive examination of the microscopical characters of tubercle, and asserted that there was no difference between tubercle and common inflammatory products.

Then, gradually opinions seemed to settle down in three directions. There were some who held to the old theory of Laennec, that there was a specific tuberculous product or deposit; some who followed Reinhardt, that the deposit was of a common inflammatory nature; and some who steered between the two, and considered phthisis pulmonalis to be a generic term covering two, if not more, distinguishable morbid conditions. How we now stand in this matter it would be rash to assert, but it seems to me that the late able discussions in this country and in Germany tend more to the idea that the tubercular character is the consequence merely of an anatomical condition, and that the greater or less amount of lymphoid tissue in the lungs and the fact of its involvement will account for the peculiarity of form.

Time, indeed, has added two important facts to Reinhardt's masterly description; the one is the implication of the lymphoid tissue in the most typical form of tubercle, and the other is the demonstration of the infective character of phthisical inflammation, for which we have to thank Villemin, Simon, Andrew Clark, Sanderson, and Wilson Fox.

There was a moment, indeed, when Villemin first announced the production of tubercle by inoculation, when it seemed as if the specific nature of tubercle might after all be true, but the researches in this country soon proved that the inoculation of many kinds of noxious matter might give rise to tubercle, and that there need not be anything special about the introduced starting point; and so tubercle has, perhaps, come to this, that it is merely a form of those common changes which are most conveniently grouped as inflammatory, with this addition, that the presence of a special structure impresses on it a special form. The tendency of inquiry seems to me to indicate that we must look to the anatomical condition of the bodily tissues, and especially to the abundance or special condition of the lymphatics in the lungs or throughout the body, to explain the hereditary nature of tubercle in certain cases, and also to account for those instances of general tuberculosis which formed the basis on which Bayle built up his hypothesis of phthisis.

But how in this whirl of controversy, in this endless assignment of names, and discussion of what these names mean, how has the practical physician who had to treat phthisis found his practice changed?

In some ways favourably, in others, as I conceive, unfavourably. The principal change in the treatment of phthisis has been the introduction of the supporting plan, based on the idea of tubercle being the indication of a weak and morbid nutritive condition. Cod-liver oil, practically unknown in my student days, reintroduced in this country (after long years of forgetfulness) by Hughes Bennett, and tested by Charles Williams, has become an article of commerce on an enormous scale; good feeding in other respects, and exercise and pure air to improve the pulmonary circulation, are the main grounds on which many practitioners treat phthisis; so far, the effect of the view of phthisis to which I have referred has been most useful. But, in another aspect, I doubt whether we have not somewhat lost in the little attention paid until lately to the inflammatory conditions. Formerly there was a vast amount of local counterirritation, and even local bloodletting, which certainly seemed to be very useful, and of measures used with the idea of removing exuded inflammatory products, such as the preparations of iodine and even mercury. There are many cases of phthisis which appear to be largely benefited by measures of this kind, or by a union of the two plans, and, in so far as the common notion of the peculiar specific nature of tubercle discouraged the use of anti-inflammatory measures in some cases, so far I conceive harm was done.

In two points late researches have, I think, influenced our view of looking at phthisis. In the first place, it has been shown how many cases of phthisis are caused by removable conditions: breathing of air impure with solid particles, constrained positions, syphilis, etc.,

are now known to produce many cases of wasting lung-diseases; and, as it is possible to prevent these, and thus to lessen the prevalence of phthisis, we have now a greater element of hope than formerly. On the contrary, the evidence of the so-called infective nature of phthisis; that is, the way in which it can originate in the lungs from distant infected parts, the way in which it extends to adjoining parts, or, perhaps, to distant parts of the lung by absorption from a diseased lung centre, and thus returns and returns until fatal inroads are made on the organ or the system at large; the constant production, in fact of fresh centres of spread, is a discouraging aspect. On the whole, the last thirty years have done much for the treatment of phthisis, but it is not all unmixed gain, and the amount of future progress is uncertain.

But I must pass from this subject of tubercle, which might occupy the whole address, to glance at a clinical advance which has done much to extend and to define our views on the great class of the specific febrile diseases. Forty years ago many of the peculiar diseases which, under the term epidemic, or endemic, or in late years zymotic, cause a large mortality among all nations, were well-known, but a large class still remained misunderstood. I can confidently appeal to those of my contemporaries who studied in fever hospitals before the year 1840 to bear me out when I say that few points in practical medicine were more unsatisfactory than the diagnosis and treatment of continued fevers. We seldom had knowledge of what existed, and none of what was coming, and no provision of what to-morrow might bring forth. The most unexpected turns occurred in different cases: sudden recoveries, sudden relapses, sudden gushes of blood in one case, sudden sinking, or come, or convulsions in another. No practitioner ever gave more than an uncertain prognosis, for he did not know what changes a day would cause, and the want of knowledge of morbid lesions sometimes led to the employment of improper remedies, such as the use of strong purgatives in advanced typhoid fever.

How wonderful is the change now. We can make in most cases of so-called continued fever a diagnosis as certain as in small-pox or measles, we know what to expect and can indicate the limits within which the morbid cause acts. When I contrast this certainty with the vague hesitating conjectural diagnosis of former times, when I think also of the result of this accurate diagnosis, viz., a recognition of the mode and conditions of spread, a recognition which leads at once to preventive measures, I begin to doubt whether, after all, this is not our greatest advance in practical medicine. Certainly in extent of consequences it stands behind few others. We all know how many men of many countries, France, America, and Germany, have contributed to this great result; but I shall not be accused of national pride if I claim a large share of the honour for our own countrymen. A most active member of this Association, Dr. A. Stewart, was a very early pioneer in this matter, and to one of the greatest physicians of our time, to William Jenner, must be ascribed the immortal honour of the demonstration which converted dubious conjecture into certainty. The great work of Murchison has become the guide of every one, not only in this country but abroad, for it has been largely translated, and has greatly influenced public opinion in Germany and in France. The researches of Mr. Simon and his able band of investigators, have proved the causes of the fevers of England to every point, and if allowed to guide the action of the State it is not too much to say that the diseases which caused so great a mortality in times past, and which even now kill so many persons, will become things gone by, and as little known in England as leprosy or plague.

Enough has been done in the case of all those diseases to show us how we must act in preventing or in healing them, but I cannot avoid a reference to the inquiries now going on respecting the causes of the so-called specific diseases.

It is now more than thirty years ago that a physician of singularly penetrating and philosophical mind, one of those men who influence less their contemporaries than their successors, wrote a work of remarkable power. Gathering up from all sides the numerous observations whose significance became apparent only when they were brought together, Robert Williams of St. Thomas's first gave, in his work on *Morbid Poisons*, a clear demonstration that the several epidemic and contagious diseases must own separate and specific causes. How gradually this belief has gained ground until it is held by most persons I need not say, nor how it bears at once on preventive measures. In all these epidemic diseases we now—or, at least, most persons now—recognise that there is a material cause; that conditions of meteorology, such as heat, moisture, and the like, or conditions of season or locality, or states of the human body itself, are merely additions which influence by aiding or retarding transmission or growth. In this belief, logically born of facts, which is no dream or invention,

but a plain deduction, we have a solid ground for action. If material, those causes must enter the body through some channel and by the agency of some other substance, by the aid, that is, of air, of water, or of food, or by broken surfaces of the body. By this conception of the "morbid poisons," to use his own term, Robert Williams marked off a great class of febrile diseases from those which might be produced by alterations in meteorological conditions, by excessive radiant heat, or intense electrical conditions, or parched and burning air, all of which may cause febrile symptoms. He thus simplified and defined, and cleared the ground for future inquiry. But it must be confessed progress has since been slow. It was seen that, if the causes of the epidemic diseases be material, they must come within the scope of modern instrumental inquiry. Either by chemistry, or by microscopical research, it was hoped that they would be seized and recognised and made to give up the secret of their birth, parentage, and power. But it was not known how far behind the delicacy of the problem were the instruments of the day. The recognition of these agents is evidently a task more difficult than to seize and decompose the light of the planets, or the dim luminosity of the nebulae. At present inquiry has carried us to the very threshold. How long will it be until some one opens the door and bids us enter? In the face of so subtle a point, and of so many differences of opinion among the best microscopists, I fear to prophesy; and when Beale takes one side, and Ferdinand Cohn another, he would be a bold man who would decide between them. But I think we may safely say that the sap has been carried up to the very wall of the fortress, though how long it will be till the final assault is delivered it would be rash to say. One may conclude, perhaps, that the problem in question is not a simple one like trichinosis, for example, where it is simply the entrance into the body of an animal with extraordinary powers of multiplication and penetration; but that in the case of the specific diseases we must not only have determinate breeding-places in the body, but also possibly special conditions of nutrition, without which the agent cannot increase, and cannot recur.

Closely connected, again, with this question of the nature of the agents which produce small-pox, scarlet fever, measles, typhus, and enteric fever, or other infectious diseases, is that of the causes of septicæmia. I cannot tell in what light the observations of Coze and Feltz, of Klebs, or von Recklinghausen, or Burdon Sanderson, and Klein, and others, or the singular success of Lister and his antiseptic treatment based on the germ-theory, may appear to others. To me they seem in the highest degree important. To refuse them credence, or to pass them by as immaterial, seems to me about as philosophical as it was to discredit Jenner because the protective powers of vaccination seemed at the time so improbable. The rapid multiplication of bacteroid bodies, their colonisation and emigration, the effects they produce by pressure, blockage and embolism, the changes they cause in the white blood-cells and perhaps in the albumen and fibrine, the disintegration of the white blood-cells, and the fibrillary deposits in the vessels, are all phenomena which can be shown. Can these things be without importance when they not only are real but agree so curiously both with the symptoms of septicæmia and with the most successful treatment of surgical injuries? It does not follow that we have got to the bottom of the question but surely we have made a step, and that no trifling one, in learning one aspect of "blood-poisoning"; a term true, yet so vague; so useful, indeed indispensable, but yet not satisfactory; because, for the most part, it represents only a haze and not an outline.

But I must pass on to notice the changes in one other branch of pathology. About forty years ago the diseases of the nervous system were very little known. The great discoveries of Bell, and the physiological and microscopical observations of Germany were gradually clearing the subject. At the commencement of the period Marshall Hall was completing his observations on reflex action, and launching into that bitter sea of controversy which poisoned his own happiness, and overshadowed the fame which was justly due to him. That he owed much to his predecessors; that he was not careful enough to acknowledge it, must be admitted; but the work which he did was yet real and true work, and his name can never be deposed from its honourable niche in this part of pathology. Then followed in quick succession the discovery of the governing power of nerves over contraction of vessels and over the work of the glands and the secretions of membranes. Then microscopes and experiments together paved the way for a proper understanding of the parts of the chord, and the effect of section or injuries. The recognition of nervous centres; of the comparative independence, so to speak, of ganglia; of the effect produced on these centres by reflex irritation and by direct irritation by the circulation of poisoned blood; all these and other similar discoveries have occurred

in thirty years. Consequently, with much that is still vague, nervous diseases are no longer the hopeless medley of my student days. The recognition of locomotor ataxy and of other paralyses is a step of immense magnitude; but far more than the mere diagnosis of any pathological state, is the fact that the physician has now the condition of the nerves ever in sight, and can to a certain extent explain that heterogeneous group of symptoms which, under the name of sympathies or sometimes metastases, were so great a puzzle to our fathers, and can also see to some extent the cause of those convulsive affections which are attended after death by no physical change we can at present appreciate.

In many other directions practical medicine has also made progress; diseases of the larynx are now seen and not guessed at; internal conditions of distant organs like the kidneys may be disclosed by an examination of the eye; the microscope in many ways gives us information about blood, sputa, urine, which one wonders how our forefathers could do without. Instruments to extend or perfect the senses, to aid touch like the thermometer, or sight like the microscope or laryngoscope, or to show movements like the sphygmograph, are now in constant use, and the senses are multiplied a hundred or thousand fold by their aid. Precision and mechanical accuracy are the aims of everyone, and exactness and thoroughness are becoming more and more the rule from year to year.

Here, then, I must bring this part of my long, but yet too brief, review to a close; it chronicles, I cannot but think, an immense forward movement in practical medicine, but if time had permitted me to go into details, or into a fuller examination of certain parts, I should have been able, perhaps, to bring out the matter more clearly and more completely. But I have said enough to show that we have not stood still, that few subjects can boast more original investigations, and that, in spite of great difficulties, and oftentimes of great differences of opinion, the general knowledge of practical medicine has advanced continuously and has advanced greatly.

But now will occur to all, the question which is the touchstone of all progress. Have we gained in useful power by this knowledge; do we cure, do we prevent disease more easily and more perfectly than our fathers, or is this knowledge barren, a false light, like that pictured by Milton, making only darkness visible, and showing us only that we are helpless?

We must all, I think, acknowledge that therapeutics form the most difficult part of our work, and that it is only slowly that the discoveries of pathology become worked into our daily practice of healing. At first, indeed, pathological discoveries may even perplex therapeutics, and many of us can remember what scepticism (scepticism which was untrue and hurtful) seized many people when the profound alterations of tissue produced by disease were first clearly seen. The reparative powers of nature, the wonderful agencies of drugs, were alike thought to be useless in the face of such profound disorganizations, and at one time it seemed as if the physician's art was to be reduced to a useless diagnosis; useless because sterile of results. But this was a phase merely, and no period has witnessed so many new and useful drugs added to our pharmacopoeia, and so much more knowledge of their use, as the last twenty-five years. The essential distinction, however, between the old and the new practice arises, I conceive, from a difference of method. Forty years ago it was only in a comparatively small number of cases that a practitioner could make an accurate diagnosis. What was to be done when the exact nature of the disease remained uncertain? For the most part he took note of the prominent symptoms and treated them; and looked especially to the general condition. The first thought of many men was whether the patient was plethoric or the reverse; whether he was to be reduced or sustained. I knew intimately a physician who was most successful in his treatment, and who always, when he could not determine the disease, put this question to himself: "Which of these two courses must I take?" and, if he thought the patient required reducing, he bled and gave aperients and diuretics, and restricted the diet. If he thought the patient anemic and in bad nutrition, he gave good food, bitter tonics and iron. It was astonishing how many of those ailments, which we all know are difficult to bring under a determined category, were cured by this simple plan when judiciously carried out, and how much benefit was done even when no diagnosis had been made out.

Other men, when a diagnosis was difficult, invariably followed the eliminating plan, giving aperients and acting on the skin and kidneys, and then, after a time, changed the plan and gave tonics and iron;

dropsies were treated by digitalis or purgatives or diuretics, without reference to their cardiac or renal cause; cardiac palpitation was treated by rest, blisters and opium, no matter whether it owned neurotic or organic cause; dyspeptic symptoms, however arising, were treated by prussic acid (then lately introduced by Granville and made popular by Elliotson); vague, uncertain symptoms which could not be referred to their source were often combated by a succession of remedies termed "alterative," the main drugs being purgatives and then mercury, iodine and antimony, and neutral salts. On looking back as well as I can to what I can remember of the practice of my early student days, it seems to me that a vast amount of good was done by men whose diagnosis we should now look upon as very incomplete. That much was left undone we must allow; but even now there are many cases in which we have to fall back on such a general plan as I have referred to, and often find our cases benefited.

There is, of course, no doubt that, among the measures resorted to in those days, depletion was far more commonly practised than it now is. It was of daily occurrence to bleed and often to bleed largely, and there can be little doubt that the plan was pushed to excess, especially in the period from 1820 to 1840. But I think it would be a mistake to suppose that all practitioners used depletion so largely as is commonly supposed. The generality of practitioners practised small bleedings and seldom carried them to excess; in fact, at one time bleeding was so little used that the head of the Naval Medical Department issued instructions to his surgeons to make more use of the lancet. A great change has now taken place, and the lancet is seldom used, and the time-honoured practice of cupping is almost a thing of the past; and this, in my view, has not arisen from any change of type, of which I can see no proof, but to an improvement in diagnosis and a more direct mode of treating the disease. But I am disposed to agree with some of our best practitioners, who believe that we have too much abandoned an agency which, when well used, is often powerful for good, and that it is not unlikely the pendulum may soon commence to swing the other way, though not, we may hope, ever to reach the extreme point which some of us can remember.

In the present day our practice is, I conceive, differently conducted. Our first thought when we investigate disease is to know precisely the parts affected; to estimate the amount of local injury, and to determine the effect produced on the constitution at large by the abnormal condition. We aim at a diagnosis as accurate and large as possible, and, though this is not always practicable, I think all will allow that there is a considerable degree of certainty. Then, being better acquainted with the course and tendencies of the special condition, we are able to form a better judgment of what is likely to take place, and how it is to be combated. Of course, a vast deal of our treatment is still empirical, and no doubt will be so for many years to come, and oftentimes we must fall back on general rules and treat a constitutional condition without recognizing its cause. But, on the whole, we diagnose, I conceive, fairly, and have a tolerable knowledge of how the state we discover can be best dealt with.

If, as I believe, the art of cure has really advanced greatly in the last forty years, the art of prevention has also made great progress, and this has directly arisen from the improvement in diagnosis. The recognition of a disease, and its reference to a particular category, inevitably lead the mind to probe its causes. This seems an instinct of our nature, probably divinely implanted to impel us in the path of knowledge and improvement. We cannot rest satisfied with seeing the thing; we must know its origin. Hence, during the last forty years, has arisen the School of Sanitarians, whose creed is that every disease, as we see it, has its antecedent, and that the problem they have to solve is to reach this antecedent, and to prevent the seed from bearing its fruit.

Either in the action of external nature, or in social habits, or in nutritive conditions, or in conditions proper to the individual, and arising from his mind or mode of thought, the seeds of the diseases are sown, and by degrees the conviction is gaining ground among all classes that we have ourselves to thank for a large number of those maladies which destroy health, embitter life, and rob us of the blessings which we feel ought really to be ours. I need not say to what proportions this belief has grown, and how it is beginning to affect every class in the community; but it is only right to point how directly it springs from the progress of medical science. Let us hope that, as preventive medicine is really the child of curative medicine, and is indissolubly linked to it, those who are conducting the vast plans which the Legislature has devised for improving the national health may remember that the profession which has so far searched out the causes of individual and national ill-health must be entrusted both with the execution of the plans and with the continued search into a subject which is yet almost in its infancy.

And now, gentlemen, I have passed in review, far too briefly, the points which appear to me most interesting when the eye glances back over the varied, smooth and rugged, light and dark, fertile and sterile regions which a man passes over as time carries him, but too quickly, from youth to age. To me the retrospect is cheering; it has given me fresh hope for the continued advance of our knowledge and for the progressive usefulness of our profession. I feel, as I have lightly passed over the records of the profession's work and gains in the last forty years, that we have played no unworthy part in the great drama, and that among the restless activity of modern times and the marvellous growth of newly born sciences, an old art has not stood still, but with ever increasing power is still, as it has always been, the Friend of Man, and a very present help in time of need.

ADDRESS IN SURGERY.

BY

JOHN WOOD, F.R.C.S., F.R.S.,

Professor of Surgery in King's College, and Surgeon to King's College Hospital.

MR. PRESIDENT AND GENTLEMEN,—The responsible duty of delivering to so important an audience an address upon a subject well worthy of more able powers, has come upon me at short notice as the "proximè accessit" to one whose reputation as an author and teacher of surgery had entitled him to the first place in your consideration. The indisposition which led to this, I fear, somewhat unsatisfactory alteration in the programme of our proceedings has been, I am happy to say, but temporary in its nature. I trust that it will entail upon him no consequences more painful than your disappointment and his own, and upon me, nothing more disadvantageous than those comparisons which you may not be able to repress, and which the short notice I have had has not enabled me to diminish, except by an appeal to that liberality which is rarely wanting in our profession. A stimulus to increased mental effort (of which your professional experience will well enable you to estimate the value in critical cases) was supplied to me by the knowledge of the place in which we were to assemble, and the feeling which I entertained of the great worthiness of the occasion. Within these walls and under these auspices I could not refuse to tax my powers, and even to risk that suspicion of temerity which may be attached by some to the undertaking.

The present state of surgical knowledge indicates quite as much as that of any department of human progress that thorough movement in the dry bones of systems, which, we may hope, is the prelude to more perfect constructions, to an advance in directions more likely to lead to the attainment of that satisfaction which comes from a clear knowledge of what we can and ought to do. As our notions are at present, we require the exercise of a shrewd judgment, acting upon an extended acquaintance with facts, and in many cases a very delicate balance of opinion indeed, to determine what is the right thing to do even in the commonest cases. The prime wisdom is now, even more than in Milton's days—

"Not to know at large of things remote
From use, obscure and subtle, but to know
That which before us lies in daily life."

The multitude of counsellors and the diversity of counsel is so great that a surgeon can find authority for almost every variety of opinion and practice. And I believe that no opinions which are honestly advanced, with due regard to the elements of truth and probability, will remain long without supporters even in the living generation.

In medical science, gentlemen, we have no Pope and no Syllabus. Our councils are liberal assemblages such as that we form to-day, and our appeal lies to an educated jury,—the public opinion of the profession,—and this jury, moreover, is fortunately by no means compelled to be unanimous in its decisions. And if, by reason of great originality, or by that sort of miscarriage which is not uncommon in the production of men of genius—viz., that of being born before his time—a man's views and deeds are not rightly estimated by his contemporaries, there still remains that ultimate appeal to the judgment of posterity which the possession of a free press and the facility of publication places within the reach of every one.

It is no wonder if those who have lived to see the rise and fall of many theories and many systems are tempted to become converts to

the doctrines of Finality, and to consider it very probable *a priori* that whatever is new is therefore not true; and, if by any chance it should happen to be true, it would certainly prove not to be new. When this frame of mind grows upon us, it is well to consider that the Past, of which we think so highly, was once a Future, and had a more undeveloped Past before it, and that the old ways have been led up to by ways still older and, no doubt, worse to travel over.

The study of pathology and the natural history of disease have led to a simplification of medical treatment which in some quarters has advanced to the extreme phase of the "expectant" system, which prescribes little beyond the primary necessities of food and drink, with a regimen which allows the patient ample scope to be comforted by faith, and supported by resignation. In the present condition of public intelligence, deplorably wanting in the knowledge of the laws of health and disease, there is required an amount of natural gifts which is not conferred upon every man, to inspire in the patient such a robust quality of the former blessing as to enable him to nourish the latter upon so simple a thing as orange-flower water. While we are looking for the coming rain-cloud, which brings relief to, or release from suffering, by the operation of laws of which we know more or less perfectly the course and certainty, but which our patient cannot see, it is but natural that he should speculate, from his observation of our conduct, upon the perfection of our eyesight. The talented author of *Middlemarch* has fairly recognised the ideas which prevail in what truth compels us to call the greater portion of our population in Mrs. Mawmsey's remark upon the new medical light who had appeared in her native town, and who, as she was told, went about saying that physic was of no use. "Does he suppose that people will pay him only to come and sit with them, and then go away again?" Such are the intelligences that a doctor has now far more frequently to deal with than those of the calibre of Mr. Trumbull, who characterised himself as "one who was not altogether ignorant of the vis medicatrix," who went without shrinking through his abstinence from drugs, much sustained by the application of the thermometer which implied the importance of his temperature, by the sense that he furnished objects for the microscope, and by learning many new words which seemed suited to the dignity of his secretions."

In the practice of surgery we meet happily with fewer difficulties of this kind than in the sister art of medicine; but occasionally, in obtaining the advantages which result, especially in cases of joint disease, from the intelligent application of the principle of "rest" so conclusively set forth by our distinguished President of Section, Mr. Hilton, we have to contend with the impatience of the patient or his friends, and perhaps may even fall into the error of giving too much of a good thing, and thus may reach, not the "be thankful" stage, but that of fibrous ankylosis. Here we may have the ill-luck, too, to leave our patient open to the temptations of the quack bone-setter, lately subjected to the serviceable exposure of Dr. Wharton Hood. That last infirmity of long-suffering patients applies his material force upon the hit or miss principle, and, straight, the bone which had been "put out" is set with an audible snap, which proves the evident correctness of the remarks upon the numerous fallacies of the faculty with which the operator improves the occasion, and piles up the agony of his *écclat*.

In face of the latest developments of surgery, it becomes more and more difficult to endorse the opinion of the eccentric veteran surgeon Vincent, that it was doubtful whether the human race would be worse off than it is if there were no doctors, no accoucheurs, no physics, and no instruments at all. The utter extinction of the weak and sickly might indeed improve the race physically, if not numerically, as is said to be the case among savages; but, as in them, it would in the meanwhile press very hard indeed upon individuals, and ultimately improve the whole tribe off the face of the earth. To a civilised community, hard-heartedness and cruelty are so abhorrent, and the instinct to heal and to relieve pain is so deeply inrooted, that a reaction against such a law of neglect would infallibly reproduce that kind of superstitious remedy which has already caused in the world's history more suffering than it has relieved.

In this respect this innate feeling resembles that instinct of religion with which it was so closely interwoven by the greatest Exemplar of both. We could no more prevent the growth of doctors than of preachers and moralists.

The noblest function of the wisest among us is to enlighten and guide this innate impulse, to keep it under the control of the calm, reflective intellect and of the tender conscience, to prevent the crystallization of ideas into fixed dogmatic formulae, which hinder development in science and art, as well as in language and literature, and to maintain the honour and true interests of the healing art. There is no better way of doing this than by the promotion of friendly inter-

course among the members of the profession; and this I take to be the aim of the great Association under whose auspices we now meet.

On the occasion of the visit of so many leading provincial surgeons to our great metropolitan centre, it would seem to be incumbent upon me to allude especially to subjects which chiefly occupy attention at the present time and upon which the foremost minds throughout our own country and the civilized world are now employed, and I do not hesitate to say, as successfully employed in the provinces as in London, and in our own country as in any part of the world. Time will not permit me to give more than a glance at some of these topics, several of which are dealt with in papers read in the Surgical Section much more in detail than I can hope to do.

In their selection I am naturally disposed to take those to which my attention has been most practically directed during the past year. I shall thus speak, and I trust that my audience may listen with that interest which attaches itself to subjects of actual experience.

Pyæmia, septicæmia, and erysipelas are undoubtedly the greatest troubles of modern surgery. Without their baneful influence the success of our improved methods would be enormously increased. By their occurrence the best laid plans go wrong, and may result in the death instead of the restoration of the patient; and this is more deplorable when, as often happens, the operation is one which is not absolutely necessary to save life, but to remove a disability which might be an ill "better to bear than fly to others that we know not of." When, therefore, a system of dressing wounds is brought before us, sanctioned by worthy names and supported by the results of cases, offering a means of escaping these terrible enemies, it is our bounden duty to give it a fair and full trial.

Such is the antiseptic system of dressing wounds originally developed by Le Maire in 1860 and 1865—in the use of coal tar, and its derivative carbolic acid, as an application to wounds. As long ago as 1815, French chemists had proved the antiseptic qualities of oil of tur. As long ago as 1834, Runge discovered carbolic acid and its properties. So slow is the growth of improvement. Coal tar itself, made into an emulsion with saponine by Le Bœuf, and combined with plaster of Paris by Corne and Demaux, in 1858, has continued to be used by French surgeons, and has lately been employed in combination with charcoal by Beau, of Toulon.* A great impulse was given in this country to the use of carbolic acid by Professor Lister, in February, 1867, well known to the Association from the exposition of his method by that talented surgeon to the meeting at Plymouth. Since that time I have given his system, I believe, a fair trial at King's College Hospital. At the same time, and under the same conditions as far as could be obtained, I have employed the solutions of carbolic acid in oil and water, and those of metallic salts, as well as other antiseptic substances, such as chlorozone, &c., but without the elaborate attempts to exclude the unpurified atmospheric air which Lister deems essential.

I shall not attempt, gentlemen, to discuss the question of atmospheric germs, or of indwelling bacteria-like bodies and their influence upon disease. This question is one of a far wider nature than can be conveniently discussed here, and it involves other departments of medical science besides that of surgery. In common with, and in relation to, the question of suppuration in general, and its connection with tubercle, it can only be solved by the prosecution of those lines of research in pathology and medicine which have been followed so skilfully by Drs. Burdon Sanderson and Wilson Fox, and which may prove to be converging lines towards an important discovery. As an experimental and scientific mode of research, which may turn out to be also a converging line in Surgery, I have the highest possible respect for Professor Lister's system of treating wounds.

Upon his theory of germs, it is consistent and simple enough; but it is as a practical method of treating open wounds, available under ordinary circumstances in hospitals and private practice, in emergencies, and on the battle-field, that it must be estimated and will ultimately take its place; and it is with that view that I have put it, as far as possible, to the test. I began it at a time when the hospital was in a good hygienic condition, and the cases for that time did admirably. I had some cases quite equal to any described by Professor Lister himself. I, at the same time, tried the application of dry lint, without any moisture whatever, to the wound, and in many cases, especially in breast cases, the results were also perfect. In one breast case union by adhesion occurred throughout the wound. I also tried the application of the chloride of zinc solution in the manner originated by Mr. De Morgan, and very good results ensued, viz., healing with the formation of little or no pus. After about six months, there came into the hospital a very unfavourable change, and, from inquiries made at the

time, I concluded that a similar condition prevailed in not or all the London hospitals. Erysipelas and its concomitant pyæmia began to show themselves, the former not springing up in the hospital itself, but imported with patients. The wounds now began to suppurate more, primary healing was less common, and the erysipelatous flush appeared with blameworthy impartiality in cases treated in all kinds of ways, and almost as impartially on my own antiseptic side of the hospital as on my colleague Sir William Fergusson's non-antiseptic side. But this I feel bound to say, that there was little or no putrefaction, as evidenced by the odour, in any of my cases, which my eminent colleague shrewdly attributed to the carbolic smell overpowering all others. Upon this point, however, I must say I did not agree with him. I had one case of amputation of the thigh for a tumour of the lower end of the femur, in a man about 60. I treated it by Lister's method, carefully carried out, and, from beginning to end, there was very little discharge and no putrid or offensive smell whatever; but the wound did not heal, the end of the bone remained unadherent and devoid of granulations, and the man lingered for two months in a declining and emaciated state, and finally succumbed to chronic pyæmia with secondary abscesses in various parts. The occurrence of many other cases similar in character to this has convinced me that the agencies, whatever they are, in pyæmia, operate in the general system, or, if through the atmosphere, in other channels besides the wounded part, as in cases of pyæmic poisoning from deep internal glandular pus deposits and in other acute and chronic tubercular affections.

Some time afterwards I had a case of compound fracture of the tibia and fibula, with a limited aperture in the skin, in a man nearly 70 years of age. I put it up carefully in Lister's method, carbolic spray, prepared gauze and jaquinette, complete. On dressing it several days afterwards, suppuration was found to have occurred, and the pus had accumulated considerably in the dressings. The treatment was continued, and kept the wound free from all unpleasantness, but still the amount of suppuration was very considerable. There was burrowing of pus along the muscles and bones, and a total want of union. In this case I was ultimately obliged to amputate below the knee. The amputation wound was also treated antiseptically, but still the amount of pus was considerable, and, although from the man's age and reduced condition, the progress of healing by granulation was slow, the case did ultimately exceedingly well, and made an excellent stump.

In some cases of psoas abscess treated by Lister's method we had marked success so long as the hospital was healthy. When erysipelas and pyæmia appeared, however, we had others in which the pus in the abscess became putrid and offensive after the first evacuation under the spray and with all the precautions, and I was obliged to make free openings and introduce drainage tubes through which the abscess could be washed out thoroughly with antiseptic. Such cases show that we cannot without danger depart, in the generality of wounds, from the old rule of providing a free exit for all purulent and offensive discharges, and, for the want of this, the exclusion of air is not a sufficient compensation. I cannot, consequently, approve of the plans originated by Baron Larrey and followed by Gosselin,* and, more lately, by J. Guérin and Maisonneuve, of "occlusion pneumatique"†, the amount of resemblance to which, in Lister's method, constitutes, it seems to me, some part of its deficiencies. To a great extent, this objection also exists to the plan followed during the second siege of Paris by Alphonse Guérin, of using thick investments of compressed cotton wool after washing the wound with alcohol, and then leaving it, without disturbance or removal of the deeper layers, for periods varying from a fortnight to two months, or even more. This plan for keeping from the wound injurious atmospheric influences seems to have been deduced from Professor Tyndall's experiments upon the purifying results of the cotton filter of Pasteur. It was shown by Hervey‡ that, as used by Guérin, it neither prevented putrefaction and fætor in the wound, nor the formation of abundance of microzoa therein. Here again, we have instances of the propriety of that regular and systematic inspection of wounds which the practice of hermetically sealing them up prevents us from obtaining.

With respect to the employment of cotton wool combined with due drainage, I look forward with interest to the paper promised for this section by Mr. Callender, who has, he informs me, obtained much success from its use combined with his own form of drainage tube. Cotton wool has one great advantage as a dressing in cases of emergency. It is usually easily to be obtained in the necessary quantities after battles and railway accidents, when it is necessary to remove patients directly

* *Des Pansements Révers.* 1851.

† *Gazette Médicale*, 1866, p. 7.

‡ *Archives Générales de Médecine*, December, 1871.

after injuries or operations; it provides better than most other methods for the protection of the wound or stumps from injury. Tanned oakum possesses all these advantages to an equal degree, and has the superior quality of being also cooler and more antiseptic. Mr. C. Heath, of University College Hospital, tells me that he prefers it to any other dressing, and, in the cases in which I have used it, it has answered admirably. In the free use of cotton wool as a dressing during hot weather, I have found patients to complain of the heat of the wound or stump. At these seasons I believe oakum to possess a greater advantage. In cold weather cotton wool is comfortable enough, and affords an admirable elastic support and due compression to the wound; but, in my opinion, it has, if used without antiseptics, one great disadvantage which is shared by charpie and other absorbent applications, and which is increased tenfold when used, as in the French hospitals, for stuffing the interior of wounds and stumps to prevent union by adhesion and to absorb discharges. While kept in the wards in readiness for the dresser, these substances, as proved by the experiments of Chalvet and Revel, as well as those of Eiselt and Kallman, absorb the infective and putrefactive particles which float about in times of epidemic influences, or as exuvie in a crowded aggregation of wounded patients, and so may become direct vehicles of communication of local infection. The same may also be said of the water and lint used in the wards for the simple water dressing. Warmth and moisture without antiseptics are very favourable to the diffusion of contagion. And the risk is increased by the carelessness or thoughtlessness which you cannot entirely eliminate from nurses and dressers in passing from one patient to another.

Professor Humphry has informed me that he is quite satisfied with the plan of leaving wounds and stumps uncovered by dressing, and entirely undisturbed, having only the discharges wiped or washed away. I am informed by Dr. Weil, late assistant to Billroth, that this plan is uniformly followed in the large hospital at Vienna. Here atmospheric influences have full local play, aided by the accidental contaminations of water, sponges, or tow; and yet, in the spacious and well-ventilated wards and pure air of Addenbrooke's Hospital at Cambridge, the results are far from being unsatisfactory. In a time of bad hygienic influences, epidemic erysipelas, pyæmia, or of an accumulation of wounded patients in a London hospital, it is probable that this would not be the case.

After frequent trials, I have come to consider that a plan comprising the free use of Chassaignac's drainage tubes passing from the surface of the wound, or from its interior if deep and sinuous, and with their outer extremities imbedded in cotton wool or oakum, well permeated with MacDougall's or Calvert's powder, or other disinfectant and absorbent of discharges; the surface of the wound washed over after bleeding has ceased with a mixture of solutions of chloride of zinc and carbolic acid or sulpho-carbolate of zinc; the same solution to saturate the lint, applied in the same way as in water dressing, and enveloped in thin gutta-percha tissue, the whole supported by strapping and a light bandage, affords the readiest, lightest, coolest, and the most generally useful application of the antiseptic method. An outer envelope of cotton wool or oakum, and dressing every day after the first opening of the primary dressing, complete a method from which I have obtained as good results as from any other that I have tried, and, what is perhaps important, I have found it less difficult to ensure its being properly carried out.

From this you will gather that I agree with Mr. Lund's view, as expressed in his able paper of "Observations" as to the general efficacy of antiseptics, and in his position with respect to the germ theory explanations, although I do not consider the great elaboration of the carbolic or other dressings to be so necessary as he appears to do. I hope to learn somewhat more from his forthcoming paper on the same subject.

In clean incised wounds, where the formation of pus is not likely to occur, as in some plastic operations, the hermetically-sealing plan will no doubt maintain its position in general use in its most useful form of collodion. But, when suppuration ensues, it must be got rid of. Its absorption by dry earth, as advocated by Dr. A. Hewson of Pennsylvania,† has the disadvantage of being dirty and offensive to the patients, and of obscuring by its colour the natural appearance of the wound when in contact with it, but as a substitute when better absorbents cannot be obtained, it seems to be of some value. Much the same may be said of charcoal. When this substance is combined with coal-tar, however, as in the way advocated by Dr. Beau, it would seem that a great part of the antiseptic vapour would be absorbed by the charcoal, and the two remedies to some extent thus neutralise each other.

Erysipelas does not seem to be much influenced by antiseptic measures. Such cases as are recorded by M. Chédevergue* as an instance of the detergent power of alcohol as a topical application—viz., of erysipelas appearing upon the body of a patient, but not at all invading the wound itself—have several times occurred to me, and I dare say to most surgeons; and it proves no more than that erysipelas is a constitutional disease; and that, though usually, like scarlatina, when happening to wounded patients, showing itself first at the wounded part, it does not invariably do so. But when

"The life of all the blood
Is touched corruptibly."

and pyæmic symptoms force upon us the momentous question, "What should we do to save the patient? and can we do anything?" the answer which was made to me by a surgeon of experience in a case in which the patient got well, "You can do nothing, it is useless trying," would, I suspect, be given by many. In at least four cases of undoubted pyæmic infection, as evidenced by rigors, exacerbations of temperature, secondary abscesses, and lobular pneumonia, the treatment to which I subjected my patients, with little better hopes at first than those which drift into the law of neglect I have alluded to, was attended with success. They were far from being slight cases; and I had not the advantage of being able to send them away to the benefits of purer air and beyond the reach of hospital influences, as so powerfully inculcated by the teaching of Sir James Paget.

Besides persevering in the antiseptic local treatment, and giving free access of fresh air, I surrounded my patient with a highly antiseptic atmosphere, by placing muslin bags of McDougall's powder around and within the bed, and in abundance about the wound, so that he should both breathe the carbolic and sulphurous vapour, and imbibe it as far as possible through the skin. If the stomach were not feeble or irritable, but able to take abundant nourishment (the primary element of restoration), I also gave three to six grain doses of the sulpho-carbolate of iron, with a view of testing the practice so ably advocated by my friend Dr. Sansom.† I took care, as far as possible, not to give the drug soon after nourishment was taken, so as not to interfere with the first stage of digestion, and I discontinued it at once if the appetite fell off, or there was pain after taking it. Three of the cases showed in from a week to ten days' time, that peculiar slate-coloured or olive green colouration of the urine, the cause of which was attributed in a description given by me of one of these cases (in 1869), after a chemical examination by the late Professor Miller, to a modification of the yellow colouring matter of the urine by the action of the carbolic acid upon it. This curious change was first observed, it is said, by Mr. Berkeley Hill, and has been noticed by Drs. Fuller, Stevenson, and Wallace. These four cases completely recovered; but I am bound to say that in some others, not apparently more serious, but perhaps more insidious, the patients died quite as comfortably as under any other plan, whether officious or let-alone in character.

I believe that cases of recovery frequently occur under other methods, or no methods, and that at least as much depends upon the age and reparative power of the patient, the amount of blood poison formed or absorbed, and the general conditions of the atmosphere as upon any system of treatment whatever.

I attach much importance, as I have said, to free drainage in dressing wounds, and when these are made by the surgeon a good deal more may be done to favour this by a judicious choice of the direction of the incision in resections, etc., and the position of the flaps, etc., in amputations. The plan of making a puncture in the popliteal space, proposed by Mr. Jonathan Hutchinson in excision of the knee joint is one which illustrates my meaning. The wound should if possible be made to slope towards that part which is most dependent when the patient is laid in bed. In amputations of the thigh, I think for this reason that the circular operation is most objectionable, on account of its forming a hollow funnel-shaped wound, which, in the necessarily raised position of the stump upon a pillow, holds the discharge like a bucket slightly tilted. Very good drainage is accomplished in the late Mr. Teale's excellent plan of a single square anterior flap. I have practised Mr. Teale's method with the best results in the leg and forearm; but for other reasons, I prefer in the thigh an oblique double flap, with the outer end of the incision placed lower than the inner, and the front flap placed somewhat outside the limb, and longer than the hinder. After many trials, I am quite convinced that this both gives the most complete drainage, prevents the bone protruding, and makes a very shapely and serviceable stump, with the cicatrix placed well behind the point of pressure. Another important point bearing on this matter in

* Printed in the *Manchester Medical and Surgical Reports*, 1870.

† *Earth as a Topical Application in Surgery*, Philadelphia, 1872.

* *Bulletin Général de Thérapeutique*, 1864, p. 240.

† *On the Antiseptic System*, 1871.

favouring the escape of discharges from the interior of a wound, lies in the manner of securing the arteries. When an artery is twisted in, as in the ancient Roman system, revived by Amassat and Velpeau, and lately tried by Mr. Cooper Forster* and Mr. Bryant†, or when it is secured by a pin or wire, as advocated by the late Sir James Simpson, and practised at Aberdeen and elsewhere; or when it is secured by an antiseptic catgut ligature, cut off short on the vessel, as revived by Professor Lister, and tested by Mr. T. Holmes, the theory is, that the wound should heal in the deeper parts as well as in the more superficial, by the direct adhesive process. But this, in the amputation of an extremity, or a large resection, is not the rule, and, moreover, in large cities is not usual. Now the parts that are most disposed so to heal are the smoothly cut, self adapting and vascular tegumentary structures, and these sometimes close up by adhesion, leaving interior cavities, especially about the bone, and between the muscles, containing decomposing blood or pus, which afterwards accumulate, burrow, give trouble, and delay the cure, or cause by pyæmia the death of the patient. To prevent this subsequent inconvenience, after experience of it, seems to be the only rational explanation of the continental method still employed of stuffing the whole wound with charpie, so as to ensure healing from the bottom, which seems so strange to our notions. If we could be quite sure that by torsion, metallic or antiseptic ligatures, we could secure complete adhesion throughout, the case would be made very much stronger in their favour. But this is certainly the exception, and not the rule. There are other elements at work influencing this, even more powerful than the local treatment. Now I believe with my colleague Sir W. Fergusson, that so long as we have this want of entire union, ligature threads may have the advantage of keeping open channels for the escape of discharges from the close neighbourhood of the tied arteries, the accompanying veins of which are frequently the sources of effusions of blood after the wound is dressed, and these afterwards clot, and may putrefy. The ligature threads I usually have well steeped in carbolic oil, and saturated so as to be unable to absorb discharges, and so utilised to spread around an antiseptic influence. Sometimes in deep narrow wounds I place them within or alongside of a drainage tube. They can thus be made into channels for the introduction of antiseptic agents to the deeper parts, and this consideration may add to the much greater sense of security given to the surgeon's mind on leaving his patient, arising from the use of a safe knot and a string to remove it by when it has performed its work. There is one point in the section of flaps which may I think have influence sometimes upon the introduction of pus or septic matter into the cut veins. When these are cut obliquely with the face of the flap, they are opened in a large conic section in the shape of a pen, and left, when placed on the underlying flap, in an attitude well adapted for receiving and conducting into their interior pus and putrid discharges which gravitate from the surrounding hollow and often funnel-shaped sides. To obviate this, I invariably, after a flap amputation, cut off the larger veins transversely.

The next subject I shall touch upon, belongs to one to which I have directed attention for some years; viz., the radical cure of rupture. I have long thought that we might, in favourable cases, safely do more than we now attempt, to prevent a return of the protrusion after the operation for the relief of strangulation. After performing operations for the radical cure more than two hundred times, I had grounds for the belief (which other operations on the peritoneum also favoured) that in a healthy subject, the peritoneum might be dealt with as freely and as safely as any other tissue; and also, that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in strangulation, rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided that due drainage be secured. In cases where the bowel and omentum are congested only, and most likely to recover when placed into their natural cavity, especially in young and healthy subjects, I concluded that the attempt would be justified, and would probably be successful. If so, the advantage of preventing a lifelong trouble by the operation which relieves strangulation is obvious. The kind of cases I selected for such an attempt, and the nature and results of the proceeding will be best conveyed to your minds by a short *resumé* of the three cases where I have had the opportunity of carrying it into practice.

On June 29th, 1868, was admitted into King's College Hospital, a young man, Alfred Fuller, aged 21, 61, Warden Road, St. Pancras, with a strangulated right oblique scrotal hernia. The tumour had occurred suddenly from lifting. It was of the size of the fist, and had been strangulated twenty-four hours. He had constipation, violent

retching and vomiting (not fecal), a quick pulse, and anxious face, pain in the epigastrium, and much pain and tenderness in the tumour, upon which several ineffectual attempts at taxis had been made. I put him well under chloroform, and made a fair and full attempt at reduction by the taxis, but in vain. I then made an oblique incision over the tumour, dividing the layers in the usual way, and laying open the sac to the extent of three inches. The sac contained a moderate amount of omentum, covering a knuckle of bowel, all congested, and the bowel slightly ecchymosed, and there was about an ounce and a half of bloody serum in the sac. The point of strangulation was, at the deep inguinal ring, and it was divided by an upward cut. The bowel was then drawn down slightly, and carefully examined. It presented the usual indentation, but was smooth and shining. It was then returned, and after it the omentum; the latter being carefully spread over the deep opening. The sides of the sac were then brought together, so as closely to embrace the cord over the whole length of the canal. The handled curved hernia needle used in my operation for the radical cure, armed with silvered wire, was then employed to bring together the sides of the sac, together with the aponeuratic structures along the whole length of the canal. A good view of the conjoined tendon was obtained, and the wire fixed in it in two places. The loop and ends of the double wire were then brought out at the upper and lower ends respectively of the incision. Four interrupted wire sutures were then placed through the skin between these points. The wound was dressed with carbolic lotion, and covered with gutta-percha skin, and cotton wool powdered with McDougall's powder to absorb the discharges. The interrupted sutures were removed on the fourth day, primary union having been by that time obtained throughout, except where the thick wires passed through the extremities of the wound, and effectively kept up the drainage. These were kept in for ten days. There was not the slightest sign throughout the case, of the peritoneum being inflamed, and the abdominal tenderness which was present at the time of the operation, passed away entirely. The sickness ceased directly after the operation, and the bowels were opened naturally two days afterwards. Erysipelas being present at this time in the ward, the patient was attacked by it on the sixth day. A partial reopening of the wound was the consequence, together with suppuration in the fundus of the hernial sac. The pus passed freely along the wires, and there was no burrowing. The suppuration in the sac caused obliteration and shrinking of that structure, and the testis was drawn by the subsequent contraction into the upper part of the scrotum. The patient was discharged wearing a light truss, August 15th, 1868.

During the first year after the operation, I saw him twice or three times. There was no cough impulse whatever when last seen; all the parts being very firmly traced up in the groin and around the cord. As he was repeatedly enjoined to show himself at once if any pain or weakness showed itself, and seemed fully impressed with the danger from strangulation which he had escaped, I have, I think, some right to conclude that there has been no return. The difficulty of following cases for a number of years in the nomadic habits of that part of our population which furnishes the most numerous favourable cases for the radical cure is one which I experienced in this case.

The next case was in a patient who had wished much to be operated on for the radical cure before the rupture became strangulated, in consequence of the impossibility of keeping it up with a truss, and the consequent disability from following his employment. I had refused to do so because of his age and the direct nature and great size of the openings.

Martin Webster, aged 52, had suffered from a large right direct inguinal rupture for twenty-six years, which, though at first entirely reducible by rest and the recumbent posture, could not for many years past, on account of the large size of the opening, be entirely pushed back or kept up by any of the great number of trusses which he had tried. He was admitted April 14th, 1872, had been vomiting for eight hours, and was very weak and low. The tumour filled the scrotum, was of the size of the two fists, and was tense, tender, and painful, with the skin of the scrotum red and inflamed from handling. A somewhat prolonged trial of the taxis being made under chloroform, and after the application of ice for three hours and by inversion of the patient without success, the operation of herniotomy was proceeded with by a single oblique incision four inches long. On opening the sac, a very large mass of omentum was found adherent at the neck, but not elsewhere, and covered by it was a large fold of small intestine, dark and congested, but still smooth and glistening. After division of the strangulating band at the deep opening, the bowel being found not much damaged at the strictured part was easily reduced. The omentum was congested, but not gangrenous, and, on account of its size and the adhesions somewhat recent at the neck could not

* *Trans. Clinical Society*, 1870.

† On the Torsion of Arteries, *Medico-Chirurgical Transactions*, ii, p. 199

be fairly reduced or retained in the abdomen. The mass of fat, about three quarters of a pound weight, was then cut off close to the adhesions at the neck of the sac. Such vessels as bled were tied separately, and, the stump being enclosed between the sides of the serous sac, four interrupted sutures of carbolised hemp were applied through the sac and tendinous parietes, and tied up so as to embrace the cord pretty closely. The two uppermost sutures were passed through the stump of omentum itself. These and the ligatures upon the arteries were then tied up in one knot and left hanging out of the lower angle of the wound to act as a drain for the discharges from the face of the omental stump. Lateral pads of lint and a spica bandage were applied, and the patient placed with his knees drawn up and shoulders raised, and five grains of *pilula saponis cum opio* given every four hours. The vomiting and distress at once ceased; there was no tympanitis and but little tenderness, and the bowels were freely acted on the third day. An abscess subsequently formed in the lower part of the enormous sac, and a small slough formed in the scrotum over the testis. Through the aperture left by this, the gland showed some tendency to protrude, but was easily kept in place by strapping and pads. By the use of a drainage tube through the lower part of the primary incision and out at the aperture left by the slough, the matter flowed away freely, and there was no tendency to burrow. The ligatures and sutures had all come away by the 29th April, and on June 22nd he left the hospital with the parts much thickened, firmly braced up, wearing a truss with a large ring pad. I have seen this patient several times since then, once in this present year. There was then a bulge felt in the groin when he coughed (and he has always a bad winter cough), but there was no sign of any descent into the scrotum, and a light truss kept him very comfortable and able to do a good day's work without inconvenience. He also promised to come to me at once if he had any more trouble with it.

The third case was that of Edward Brown, a waiter, of 14, Surrey Street, Strand, aged 21, in whom the rupture, a right oblique scrotal one, had not been observed till the day before his admission, when, after lifting a heavy box, he felt pain and sickness, and felt a lump in his scrotum. A doctor to whom he applied gave him an aperient, after which he began to vomit, and pain was worse, and the tumour increased in size and filled the scrotum. This rapid appearance and increase of the rupture were afterwards explained by its proving to be a congenital hernia with the sac formed by the tunica vaginalis, of which these peculiarities are very characteristic. On the 28th March, twenty-four hours after the occurrence of the rupture, the symptoms were very intense, and the taxis, with inversion and chloroform, having been fairly tried after two hours' application of ice-bags, I performed herniotomy exactly as in the first case I have described. The omentum and bowel were found in the tunica vaginalis, both congested, and slightly echymosed, with some effusion of bloody serum. The knuckle of bowel was strangulated, not only by the deep ring, but also by a band of the omentum, necessitating the drawing down of both until the constricted part could be seen and released. It was a case in which the bowel might easily have been passed into the abdomen with the stricture undivided. After the operation the patient was at once relieved; the bowels were opened normally on the third day; no tympanitis or tenderness became apparent. The central part of the incision healed by adhesion; a little discharge passed along the wires, which were withdrawn on the fourteenth day after the operation. He was sent out of the hospital April 26th, 1873, with a firm adherent cicatrix, and no bulge whatever. On the 12th May he showed himself, wearing a light horse-shoe pad truss; not the slightest sign of a return was evident. This patient is, I expect, in attendance here to-day.

It has been said with respect to this operation, that evidence is wanting as to the permanency of the cure, and I am free to confess that it is exceedingly difficult to watch a couple of hundred cases for the space of ten or eleven years. The constitution of human nature is such that you cannot hope for the generality of patients to show themselves occasionally for such a length of time, or even to write reports to the surgeon if they are not further troubled with the ailment of which he has cured them. It requires that powerful spring to gratitude which was said by the cynical French philosopher to consist in "a lively sense of favours to come," which is wanting in a case where there is no more for the doctor to do. I have found that the unsuccessful cases are more likely by the law of gratitude just enunciated to return upon your hands than the successful ones are, as a bad shilling expects to be replaced by a good one. I think, therefore, we have the better right to the position of reckoning in the same proportion of failures and cures cases which have not been seen twelve months after the operation, as those which have been examined after that time.

Now, out of 188, most of them unselected cases of inguinal hernia of which I have notes (including 7 females and 4 cases of double rup-

ture, both operated on) in 107 cases, the results are pretty perfectly known. I find that 51 of these were more or less unsuccessful; 42 returned in the first year after operation—that is, the patient could not do without wearing a truss after the first year. Of these, by far the greater number were so much improved that they were made comfortable by a truss, which was not the case in most instances before the operation. Some, but not many, were as bad as before the operation. Mr. Kingdon, of the City of London Truss Society, has kindly forwarded to me the names of twelve of those who had applied to that institution for the supply of a truss after an operation at my hands.

56 out of the 107 were cases which continued to be successful subsequently to a year after the operation, as ascertained either by direct examination by myself, other surgeons, or satisfactory to the patient himself, and either wearing no truss at all, or only occasionally, as a precaution, after the first year from the operation. Of these—7 were noted from thirteen to twenty-one months after the operation; 7 two years; 7 three years; 7 from four to six years; 7 from six to eight years; and 4 from nine to eleven years after operation. Reckoning operations on both sides and repetitions of the operations, I have done the operation more than two hundred times. Out of these, I have had three deaths: one from pyæmia, one from erysipelas, and one from peritonitis. These have been made public to the profession on more than one occasion, because I judged it right and fair that in an operation of this kind the facts should be made known as far as possible. In the last case, as shown by the *post mortem* examination (published in the *Medical Times and Gazette* in 1866), the peritonitis was found not to have originated in the parts operated on, but in a knuckle of bowel which had been lodged in the hernial sac before the operation, while the patient was wearing a strong truss. The cases in which any signs of peritonitis were observed were not more than about twenty in the whole number. One and a half per cent. is not a high average of deaths from surgical accidents, and there are very few operations of like kind, as, for example, for the removal of deformity, the cure of prolapsus of viscera, or of hæmorrhoids, which could show more favourably either in this respect, or in respect to the somewhat severe test of the length of time in which they have been known to be without a relapse after the operation. And since 42 out of the 51 known unsuccessful cases proved to be so within the first year after operation, and most of the cases were examined once or more at various intervals of time after the operation, I think that, in respect to this point we have a right to claim the probability of more and the certainty of at least as many good results for the 81 of which I have not been able to get notes after the first twelve months, as for the 107 in which I have done so. Under the age of twenty-one years the results in known cases are much more satisfactory. But of dry statistics you will think that I have given you, perhaps, more than enough.

The determination of the question as to whether the operation for the radical cure is an appropriate alternative to a life-long wearing of a truss, and a valuable supplement to the slow and very uncertain cure by truss pressure, will continue to depend upon the age, habits, circumstances, mode of life, and, to some extent, the cruel experience of trusses and wish of the patient after having the matter fairly put before him, and, perhaps nearly as much, upon the anatomical knowledge, skill, energy, and experience of the surgeon, or his disposition to that finality frame of mind to which I have alluded. In any case, whether universally or only occasionally resorted to, it forms, I think, a valuable addition to the resources of surgery.

Cases of *Ectopia vesicæ* and *Epispadias* possess an interest for surgeons who have a tendency to plastic efforts which results partly from the well-known futility of all operations to relieve them until recent years, and partly from the frequent appeals for relief from the very miserable condition to which the unfortunate patients labouring under this deformity are reduced. During the last ten years that my attention has been directed to this deformity, I have met with between forty and fifty cases, and more have been recorded by my fellow-labourer in this direction, Professor T. Holmes, who first practised successfully in this country in March, 1863,* the plan followed by Paucoast and Ayres in America in 1858. It had been suggested, apparently, by M. Richard's unsuccessful application in 1853, of Nélaton's principle of laying a flap upon the parts to be covered, with the skin surface downwards, and covering it with another. Other cases have been operated on in various ways by Messrs. Simon, Lloyd, Sydney Jones, and Thomas Smith, with, I believe, but little success. I have operated, up to the present time, for the relief of sixteen cases. All except three were males. Of the three females, one, aged 9, died from

* See *Lancet* for June 27, 1863, and his work on *Surgical Treatment of Diseases of Children*.

uræmic poisoning, the kidneys being found extensively affected with cystic degeneration, one being entirely converted into a membranous sac. The other two unsuccessful cases were operated on at too young an age for the extent of the deformity which was present, the constant efforts of crying after the operation acting upon the very protruding bladder and causing entire separation of the flaps after they had partially united.

My first case was operated on by lateral flaps only, not reversed, in October 1863; and was, after two supplemental operations, entirely successful. The boy died afterwards from erysipelas of the head and face; and I had an opportunity of preserving the parts operated on, which may be seen in the adjoining museum of preparations collected for the purposes of the present Association. It is interesting, as showing the formation of a smooth serous membrane on the deep surface of the enclosing flaps.

All my other cases were more or less successful. Two were shown in the course of last year at the Pathological and the Medico-Chirurgical Societies, in one of which the artificial covering was so complete and perfect that for a short time the boy could be made to hold his water by the application of an India-rubber ring around the penis and including the newly formed preputial covering of the urethra. All the thirteen successful cases could be kept dry and comfortable by the application of a guard and India-rubber tube and bag, as in a railway urinal. Eight cases (seven male and one female) were published in the *Medico-Chirurgical Transactions* of 1868 (vol. lii). Eight more (six male and two female) have been operated on since that date.

Time will not allow me to give further details of the various methods I have employed to obtain these results. Some of these had been previously employed by Nélaton and his pupils, Richard and Follin, and followed by Pancoast, Ayres, and Holmes. A full description of my methods has been published in the *Medico-Chirurgical Transactions* just alluded to.

I am able to give the members of the Association an opportunity of seeing in the neighbouring wards of King's College Hospital, three cases, one of which has not been operated on unsuccessfully, one in which the first stage of operation has been reached, and one in which the operations are completed. From these, they can judge for themselves of the value and utility of the work done.

For the analogous but less disabling condition of *epispadias*, I have operated twice by Nélaton's method with favourable results. For *hypospadias*, in which the urethra was deficient below as far as the scrotum, I have operated three times, upon a plan somewhat similar—viz., a reversed flap from the side of the opening, with another from the scrotum superimposed upon it. In one case—a boy of 1½ years—which had been interfered with considerably by a former unsuccessful operation, the result was an entire failure. In another, a boy of 6 years, the result was so far successful after one operation, that another slighter one will complete it. In a third case, that of an adult male aged 24, the result after two operations was an entire success, enabling him to pass his water comfortably over his trousers, and giving to some extent the power of sexual connexion.

A similar plan, combined with internal section and dilatation of the strictured urethra, I have found to succeed admirably and completely in two cases of penile urinary fistula communicating with the urethra in front of and close to the scrotum, accompanied with a hard cartilaginous stricture of the urethra. One was a bad traumatic case, which had before been operated on unsuccessfully by another surgeon. Cases of this kind have been long considered to resist all the efforts of plastic surgery; and, before adopting this plan, I have frequently been baffled in attempts to close the fistula.

In connexion with the subject of the treatment of stricture of the urethra, I may mention that among the novelties of the past year is the plan of M. Demarquay, of passing a long flexible hollow bougie through a perineal urinary fistula previously enlarged by the bistoury, and then one end forwards through the stricture and out at the meatus, and the other end backwards into the bladder.

The ingenious plan of Mr. Furneaux Jordan of Birmingham, of treating obstinate impassable strictures by attacking them in the rear through an opening from the rectum into the dilated urethra behind the stricture, is a valuable contribution of the year to surgical resources in troublesome cases.* Mr. Jordan informs me that he has operated in three cases of the kind with complete success.

In other kinds of plastic surgery, much has been done of late years. Since my own successful case of transplantation of skin from the abdomen to the arm for the relief of a frightful deformity of the wrist,†

I have had two more successful cases. A similar operation has been also successfully performed by Mr. Thomas Smith in the wards of St. Bartholomew's Hospital; and my colleague Mr. Henry Smith has quite lately had a very good case of operation upon the same plan, for the relief of an extreme contraction of the elbow after a burn in the left arm of an adult female. In *Rhinoplasty*, in which so much good work has been done by Mr. Hamilton of Dublin, I have had some good cases of restoration of the nose from the cheeks and upper lip. Some of these are found among the photographs laid before the meeting. The last case I have undertaken is about the most difficult one I have ever had to deal with, in the width of the chasm and the extensive loss of substance. The nasal bones, the vomer, ascending process, and a considerable part of the alveolus of the superior maxillary, and the whole of the ethmoid except the cribriform plate, have necrosed away, as the result of scrofulous lupus. A great prominence of the frontal sinus also constitutes an element of difficulty. To afford a basis for the new nose to be turned down from the forehead, I have resorted to the plan frequently followed successfully by Sir William Fergusson, of dissecting off and bringing towards the median line of the whole of both cheeks. To secure the union of these, and to afford a prominence to the point of the nose, I followed a plan that I had before employed in three bad cases with very satisfactory results, two of which are shown in the photographs which lie upon the table. At the same operation, I turned up the middle third of the upper lip, and split it up from its lower edge, turning over the borders, so as to afford a bridge of support and an extended raw surface for union with the apposed cheeks. This was rendered necessary, to enable the cheeks to meet in the median line, as well as to ensure their union to each other. When this was entirely healed, by a second operation I dissected up the mucous membrane from the bridge made of lip-tissue, and reflected it over the gap still left between the eyes, so as to form another bridge of support for the root of the new nose, and to prevent it from sinking into the gap so as to become too much depressed. I then turned down the new nose from the forehead after the Indian method, fitting it on to the raw surface, which gave it admirable support; and kept up the point of the new nose in a manner which one does not commonly see after this operation. This patient is now under treatment in the wards of King's College Hospital.

The very original and ingenious method of M. Reverdin I have practised with advantage in many of these rhinoplastic cases, to eke out any deficiencies of skin in corners where it was desirable to prevent puckering, if possible, from contraction, or to substitute skin-tissue for mucous membrane exposed by reversal of the upper-lip structure. This is rather apt for some time to show its parentage too plainly, unless subjected to more friction than is agreeable or possible upon a newly formed nose. In applying this method to large sores of the leg, or those resulting from burns, where the contraction of cicatrisation is impossible or injurious, only a limited amount of success has been obtained. Perhaps the healing is somewhat expedited; but it is certainly accomplished more by the cicatrisation and contraction of the original edges of the ulcer, than by the increase of the transplanted patches. We have also found a tendency in the resulting cicatrix to ulcerate again readily. I do not think that this method will supersede the necessity for larger transplantations of skin in those severe cases which call most urgently for surgical interference.

Among the recent innovations in operative surgery, I have barely time to notice one which "l'audace" of the French school is applying in a manner which those who have reached the rest and be thankful stage in surgery may call daring, if not rash. I refer to the use of the *aspirateur* of M. Dieulafoy to relieve distension by puncture of the bladder in cases of retention of urine, and of the intestine in abdominal obstruction, and in joints affected with hydrops articulari, and even to evacuate the fluid contents in strangulated hernia. In the first named of these conditions, it is no doubt valuable as an adjunct to other remedies. In intestinal obstruction, Demarquay has not found it of much practical use, because of the rapid re-formation of flatus, which quite corresponds with my own experience of puncture in desperate cases without the aspirator. In the puncture of joints and in the cure of hydatids, I have used it, but not frequently enough to pronounce upon its capabilities. I have not yet arrived at the measure of audacity to use it in strangulated hernia. It scarcely agrees with my own impression as to the importance of avoiding any injury to the bowel in dealing with strangulated or other hernie. The propriety and the limits of the use of this instrument are still *sub judice*, and we must wait for more bad consequences following its employment, than those which have already occurred, before we can pronounce fairly upon its merits. I am glad to see that the ingenious inventor is to give us a demonstration of the use of this instrument in surgery.

* See BRITISH MEDICAL JOURNAL, Nov. 9th, 1872, No. 619.

† Published in the *Medico-Chirurgical Transactions* for 1863, vol. xlv.

In the use of *anæsthetics*, we find now rising a revival of the rivalry between chloroform and ether, which the fame and support of the late Sir James Y. Simpson had decided in this country in favour of the former. We follow but tardily, in this old country, in that combination of pleasure with utility which has led lately the inventive genius of our transatlantic brethren to the association of *æsthetics* with *anæsthetics* in the performance of operations under these agents to an *obligato* accompaniment upon the organ, and an appropriate address by a popular preacher, improving the occasion on behalf of morals. The comparative safety of these agents is unquestionably a most important point, and one that must ultimately decide the matter in favour of that *anæsthetic* the use of which involves the fewest casualties. The chief difficulty in determining this is the natural disinclination to make public such cases. It is less objectionable, however, to do so when a certain lapse of time has occurred after the accident; and it is to be hoped that, in the not very far future, we may arrive generally at that philosophic frame of mind which will consider it as much a duty to publish unsuccessful cases as it is a gratification to achieve the glory of a brilliant result.

In the domain of surgery, gentlemen, are so many regions now undergoing exploration and re-examination, that I may fairly claim an excuse for having led you chiefly over ground which I have myself travelled, and for omitting many equally important territories perhaps more effectively mapped out, and to some of you more interesting. In exploring this domain, many pioneers are required, and many very qualified ones are busily at work. Those who have skill and pluck enough to find a new road of investigation, even if it be only to prove that it leads no whither, deserve commendation for this proof, which is itself good work done. They demand our sympathy, perhaps, more than those who are lucky enough to lead up to the most auriferous diggings. The age we live in is too much given to the worship of success to afford much of this sympathy; and it accords, usually, too little merit to such as have contributed to prepare a way for the honour which another has reached, profiting, it may be, by their mistaken vestiges in travelling upon the same errand. As we advance, our horizon itself extends; the very multitude of objects brought into view perplexes the perception of them; and even our instruments for detecting and examining them become so numerous as to be themselves *impedimenta* to our progress. The difficulty of deciding upon any given point becomes greater as differences become more minute, and proof more complex and further from our standpoint. The use of the imagination in science has already been powerfully justified; and the time may yet come when a complete and logical proof will be as little possible in scientific knowledge as in dogmatic theology. The theory of probabilities will doubtless be more employed to compensate for the imperfection of the record, and may be turned to advantage in archebiosis and the germ-theory, as much as in the Darwinian. It will thus become easier for the critic to fall into the error of asking for more evidence than the nature of the subject admits of—a sure sign of the limited area of his habitual observations. But even this tendency is productive of good. It is merely the redundant energy of a single-minded instinct in this natural enemy of inventors and innovators—sent, doubtless, as hawks to keep down sparrows, to insure proper limits and decent order among the more imitative minds who follow, prove, and sometimes improve, upon originators, and form schools and fashions. They thus accumulate a chastened experience. When weighted by the synthetical faculty, this instinct constructs eclectic systems, more than ever needed in the present chaos of crude ideas and undigested opinions, to which these swift-winged writers are fearsome scourgers. By their keen research they discover when and how things are re-invented and re-discovered, show the limits of their application, give warnings of danger and excess, which, if often falsified, at least inspire an useful caution, or lead to a more insured confirmation. Still more useful are they in deciding when discoverers disagree about priority. Whether right or wrong, they ultimately have the effect of consolidating and rendering more certain a well-grounded reputation. Misled by the Chasles forgeries, they found out that Newton had been preceded in his discovery of gravitation by a French savant, and thus elicited an elaborate and conclusive proof of its great originality. They have lately asserted that Harvey had been forestalled in his discovery of the circulation of the blood by Walter Warner, and have thus given us the benefit of the profoundly learned vindication of the Linacre professor of anatomy and physiology at Oxford.

A still greater influence and responsibility than heretofore will rest upon these labourers in science. The fruition of really great discoveries has been, and will, no doubt, continue to be, postponed by the blind opposition of those who form the scientific opinions of the age, and, though they usually check one another, so as to act, on the

whole, with advantage, yet their neglect or prejudices may undoubtedly prevail, so as to inflict injustice upon individuals, and do injury to science and to mankind, the more lasting in proportion to their position, ability, and conscientiousness.

ADDRESS IN PHYSIOLOGY,

BY

JOHN BURDON SANDERSON, M.D., F.R.S.,

Professor of Practical Physiology in University College.

THE subject on which I have to address you to-day is Physiology, but we are met for the purpose of promoting the progress of medicine. We are, I venture to say, rather a practical than a scientific body, having ends and aims which concern our own good and that of the community, rather than the promotion of science. Yet, notwithstanding, we all feel that we take a great interest in science, not only in those branches of it which have to do with our every-day work, but in those which have little or no connection with our art.

There exists, I doubt not, in the minds of all of us, a conviction that science possesses a certain intrinsic value not dependent on its immediate applicability to useful ends. Every day we, like other men, are becoming more and more convinced that it is a desirable thing to search after truth by the observation of nature—that those who occupy themselves in this pursuit are substantial benefactors of their country and of the human race—that the scientific labours of a few men, who do not set forth philanthropy as their motive, who do not profess to sacrifice themselves for the good of mankind, who live quiet unobtrusive lives, and are known for the most part only by their work, may accomplish more for the material welfare of the community than the efforts of armies of philanthropists. If I were to attempt to illustrate this, I should have to turn to other subjects than those which we have before us, for physiology has as yet done little for our art, and, consequently, little for humanity. I should have to seek for examples among the professors of those sciences which are sufficiently advanced to be brought into practical application. When I think of a life like Faraday's, every year of which brought a new accession of knowledge, and in the end enriched this country to such a degree as ought to secure him the posthumous adoration of all Mammon worshippers, however little they thought of him when alive; and when we compare the results of his life with the life itself, with the contracted laboratory in which he laboured, with the mean salary on which he lived, with his quiet devotion to science, with the constancy of his religious faith, and finally with the end of that life—mind and body exhausted in work—how great in such a man does that insatiable spirit of inquiry seem, which finds its constant and all-sufficient pleasure in the discovery of new truth—in wresting from Nature her secrets by strenuous intellectual effort!

In an address, which I had the honour of giving at the opening of the Physiological Section of the British Association, I endeavoured to combat the now prevailing view, entertained by many men of science, that it is desirable, in the interests of Physiology, that it should be as completely as possible separated from medicine, on the ground that, being founded on experimental research, and using the same methods of investigation as are used in the sciences of physics and chemistry, it ought, for all purposes of teaching and study, to be regarded as part of them. I was then addressing an audience of zoologists and botanists, scarcely any, or at all events few, of whom were medical men. I was, therefore, not surprised that the views then expressed as to the necessary connection which exists between Medicine and Physiology, were strongly objected to, and that my belief in the association of practical medicine with any subject deserving the name of a science was attributed to my own professional bias.

I founded my argument on the natural relation which must always exist between every art and the sciences on which it is founded; maintaining that to try to separate medicine from Physiology would be as unreasonable as to separate telegraphy from electricity, engineering from mechanics, or navigation from astronomy.

When I was called upon to deliver the address on Physiology before this Association, I at once determined to follow out the same line of thought—not going over the same ground, but pursuing it in a direction which was before precluded, and which would have neither fitted the occasion, nor the composition of the audience at Brighton. Then it was necessary to look at the question from the side of physical science, now I propose to look at it from the side of medicine.

The subject is, I think, one of considerable importance both to medicine and to physiology, but also of considerable difficulty. Conscious of this, I should not have made bold to take it up, had I not felt that I could entirely depend on your sympathy and indulgence.

I have no doubt that we are all agreed in entertaining a high opinion of the value of Physiology, and that we are all anxious to promote its progress. Beyond this, I should not be surprised to find very great differences of opinion. There are probably some who think that every physician ought to be a physiologist—that in the selection of remedies and the diagnosis of disease he ought to call in the aid of physiological considerations, and be guided, not merely by experience (or by empiricism as we call it when we want to slight its value), but also by science. Freely admitting that Physiology is scarcely as yet sufficiently advanced in the work of investigation to advise safely on practical subjects, they would look forward to a time when it will be otherwise; believing that, as the science approaches maturity, it will assume an authority in the decision of practical questions to which now it has no just pretensions. I am convinced, however, that this is not the view usually entertained by the profession at large. The opinion certainly most common is that, although Physiology may be a very good thing in its place, conclusions derived from physiological reasoning ought always to give way to the dictates of practical experience, and that science never can be a guide to practice. Those who employ this mode of expression refer, as to a convincing argument in support of it, to the numerous instances in the history of medicine in which the influence of what they are pleased to term *physiological* theory has been injurious.

They refer, *e.g.*, to the overfeeding and overstimulating treatment of disease during the last twenty years; to the unreasonable disuse of venesection; to the neglect of antimony and other so-called antiphlogistics; to the undervaluing of mercurial remedies; to the purgative treatment of cholera; and to other instances in which they say that practical medicine has been injured by allowing *physiological* theory to dominate over experience.

With the exception of the misapplication of a single word I have not very much to object to in the view so expressed. But that word, in relation to the subject of my present discourse, is somewhat important. It is the word "*physiological*!" The cases on which the whole argument is founded are undoubtedly good examples of the injury done to medicine by allowing theory to dominate over practice; but in no single instance can the theory referred to be termed, with any regard to exactitude of expression, *physiological*. Take the example of mercurial remedies as the most familiar, and as having relation to a therapeutical investigation, set on foot some years ago by this Association. What is the state of the case?

Physiological experiment has proved that mercury exercises no influence in increasing the secretion of the liver. Experience had proved ten thousand times that, in certain sufficiently well defined disturbances of the digestive organs, the traditional blue pill and black draught at once relieve the symptoms, and restore the disordered functions to the normal, and the patient from misery to comfort. These are the two facts, the one physiological, the other practical or empirical. Out of these spring two theories; one that mercurial remedies are useless, the other that mercury acts beneficially by exciting the secretion of bile. Both are demonstrably false. The former, certain writers on the subject are pleased to call *physiological*. All I can do on the part of physiology is to repudiate it altogether. It is an inference which practical men, and not physiologists, have with insufficient consideration drawn from physiological facts. It is an example, in short, not of the injury which physiology does to medicine, but of the undeserved discredit which practical men throw upon science, by attempting to apply its facts without any sufficient knowledge of their bearing.

I have entered upon these considerations for the purpose of showing that, in the present position of Physiology and Medicine, it is highly desirable for the welfare of both to draw a distinct line of demarcation between them. On the one side of this line we have what may be properly called the science of medicine; a science in which experiment has no place, its fundamental facts being gathered, not from experiment, but from case-books and the records of *post mortem* examinations. Its method consists in systematising and combining the experience of great numbers of trustworthy persons in such a way as to make them applicable to diagnosis and treatment, and admits of being carried out with quite as much exactitude as those methods which are employed in the so-called exact sciences.

In Physiology, comprising its two branches, pathology and pharmacology, experiment is everything. Just as the science of medicine proper may be described as based on the observation of cases, and in the orderly classification of the recorded clinical facts, so physiological science is built up of experimental results. Its mode of working is that which is now understood by the term research, the nature of which is best ex-

pressed by the well-known words of Harvey, in founding the Harveian oration, in which he declares his purpose to be that the orator should stir up his hearers to search out the secrets of nature by way of experiment.

The distinction between medicine as an empirical, and Physiology as an experimental, science, though easy to state, is difficult to maintain practically. For, between the two regions of experience and research, there lies an intermediate territory of speculation, which is a constant source of temptation even to the most practical mind. Whether he will it or not, he is constantly led by the subjects which occupy his thoughts in practice to speculations on the nature and origin of disease. For every intelligent man—every man who is possessed of that insatiable desire to understand all that he observes, which is the basis of all intellectual effort—has constantly presented to him, in the practice of our profession, facts which furnish the very stimulus required to call the speculative tendency into action. Already practised in the faculty of accurate observation, he is constantly being tempted to undertake the work of investigation; in other words, not to content himself with the appreciation of the facts which bear upon diagnosis and treatment, but to engage in inquiries relating to the intimate nature, the origin and essence, of the diseased processes he has before him.

Is it either possible or desirable to check this tendency to speculation? Certainly not. So long as practical medicine lasts, and the minds of men are constituted as they are, speculation will continue. Practical men will still make excursions into this border land of imagination; will still make advances, so to speak, towards Physiology. Our efforts, therefore, ought to be, not to prevent speculation, not to reject these advances, but, on the contrary, to advance on our side to meet them. For the process by which we get new knowledge is a reciprocal one—theory and experiment, question and answer. The practical mind suggests and theorises; the physiologist doubts, experiments, and tries to answer. Or, putting it in terms more directly applicable to our subject, the clinical observer analyses the facts of disease, separating them from each other, and ascertaining, by the application to the case of the numerical method (the great instrument of his science), which are the most important, *i.e.*, the most constant characteristics of the disease, and in this way sets questions. The experimental man begins his investigations where the other terminates his analysis; and sets to work, not on the whole disease as it presents itself in its complication of phenomena, but on the simpler processes, such, *e.g.*, as fever, inflammation, catarrh, into which the clinician has resolved it. With these he proceeds by the same methods as are used in all the other experimental sciences. Having a phenomenon, he seeks for its cause, directing his efforts to the discovery, among the perhaps numerous conditions to which it may be attributed, of the one on which it is actually dependent, and by means of which it can always be reproduced.

In this way both the speculative and the sceptical faculties of the mind are brought into useful exercise—the function of the one being to set questions on the behalf of clinical medicine, of the other to answer them by experiment. So long as this reciprocal relation is maintained, there is no danger in speculation. The danger to science begins when the practical man not only asks his question, but gives his own answer in the name of science. The danger to practice is when he allows such answers, falsely given, to lead him astray from the safe guidance of experience.

I desire to illustrate this reciprocal influence of empirical speculation on the one hand, and experimental scepticism on the other, by a single example—endeavouring to show how, as I have said, both work together for the progress of pathology.

Before proceeding, however, I would guard myself against a misunderstanding. When I place the two functions of suggestive and experimental work, so to speak, in opposition, I do not mean that the two should not be exercised by the same person. For, although there may be conditions in the recent progress of science which render it necessary now, more than in former times, that there should be division of labour, we have abundant proof in the history of our science that the advances have been made by men who have looked at questions from both sides, in whose intellects imagination and doubt, question and answer, speculation and experiment, have had equal scope.

I now return to my examples. The one that I shall take is that of the Physiology of the Febrile State—a subject which, at the present moment, occupies the attention of a larger number of workers than any other question in pathology. And in pursuance of my plan, I will endeavour, first, to trace the development of the chief scientific theories which prevail on the subject—in other words, the questions which have been asked by clinical medicine and the responses of experimental science, and then to show in what direction permanent progress can alone be made.

I would state to you at the outset, that I shall not have to bring

before you any brilliant scientific achievements. On the contrary, you will see that the more sceptically we test the answers already given, the less considerable will they appear in proportion to the numerous questions which still remain unsettled.

At the present moment, the theory of fever which exercises the widest influence and is most generally accepted is that of Virchow, the main characteristic of which is that it places the *fons et origo* of the febrile state in the nervous centres. To deal with it I must carry you back to the year 1851, which may be considered as an era in the history of this subject, if not in the development of the science of pathology in general, inasmuch as it is from this year that the use of the thermometer as an instrument of clinical observation may be said to date. For it was in 1851 that Traube, physiologist and physician in one, published the earliest systematised thermometrical observations of febrile diseases.

As regards the doctrine of fever, the effect of the introduction of this method was to bring us back to the notion which is expressed in the old Hippocratic word "pyrexia"—a word which implied the recognition of increase of temperature as the essence of the febrile state. For among the earliest results of the observations of Traube and his immediate followers was the demonstration of the fact—which no one had suspected before—that in fever the elevation of bodily temperature is characteristic of the whole process; and that in those fevers in particular in which the cold and the hot stage are most distinct from each other, the condition of the patient is as truly pyrexia in the former as in the latter, however little it may seem to be so to himself or to others; in short, that amid all the varieties in the subjective state of the patient, in the state of the skin and of the circulation, the objective fact of increased temperature remains.

The immediate expression of the impulse thus given to the pathological thought in reference to fever was the development of the theory of Virchow just referred to. Founded directly on clinical observations, it seeks, like other theories of similar origin, to harmonise these observations with each other by regarding them as parts of the same physiological process. The first step in its construction was to bring the two chief components or constituents of fever—viz., pyrexia and increased discharge of oxidation products—into causal, *i.e.*, physiological relation with each other.

Virchow's is essentially a neurotic theory. It points to the functional disorder of a hypothetical nervous centre, the so-called regulation or moderation centre, the exact position of which he does not pretend to determine, assigning to it, however, a place somewhere in the intracranial part of the spinal cord. The normal function of this centre is to preside over the bodily temperature; for it is owing to its agency that the oxidation-processes, which may be said to constitute the life of our tissues in health, are so controlled that the bodily temperature, even in the most internal parts, never rises above 100 deg. Fahr.

In disease—*i.e.*, in fever—the wholesome influence of this centre is paralysed, and the normal oxidation-processes gain the upper hand, as shown by the increased discharge of oxidised products by the lungs and kidneys, and the general wasting of the body, while the temperature rises.

Here I must ask leave to make a digression. While all this was going on in Germany, our own countryman Parkes was observing without theorising in England. So early as 1853, he had made both thermometrical observations and urine analyses in fever, which so far confirmed those of German observers. The results of his observations were published in his Gulstonian lectures on pyrexia. In these lectures, while concurring with Virchow in regarding fever as primarily a neurotic process—a process having its primary seat in the nervous centres—and supporting this view by a variety of convincing arguments derived from clinical observations, he, with characteristic and wise caution, neither followed him into his physiological explanation, nor substituted any other theory for it. It is now twenty years since the lectures were published; and although they are full of facts and observations which at the time were new, I do not think they contain any expressions or statements which the author, if he were to republish them, would find it advisable to retract. The reason is that Dr. Parkes approached his subject in a truly sceptical mind, and refused to give way to the besetting temptation to physiologise. He contented himself with setting questions; not that he failed to see with perfect clearness the theoretical bearing of the facts, but because he knew that Physiology was not at that time in a position to answer his questions with any approach to certainty. Would that other equally earnest inquirers were endowed with the same wise cautiousness!

To return to Virchow. As I said before, he made no pretension to assign any definite position to the supposed regulation centre, either anatomically or by physiological experiment. The first serious attempt to do so was made by Naunyn and Quincke many years afterwards.

The evidence was sought by the method usually followed in physiology. When the physiologist desires to find out what is the value of a particular organ in relation to a particular function, he observes the modifications which that function undergoes when the activity of the organ in question is either disturbed or annulled. In the case of functions of intracranial organs in general, this is a matter of great difficulty; still more is it a difficulty when the organ, like the hypothetical heat-centre, has its seat in the most vital part of the nervous system; for it is not possible to eliminate its activity without interfering with other important activities of neighbouring parts.

These experiments consisted simply in observing the effects of dividing the spinal cord on temperature, under different circumstances, at different heights—viz., at different distances from the medulla. Now ordinarily, when the spinal cord is divided in the cervical portion, the effect on temperature is very marked. The result of the operation is not only (I need scarcely say) to paralyse the voluntary muscles, but to paralyse the vascular nerves.

The consequence of this vaso-motor paralysis is (as has been ascertained by repeated measurement) to retard the circulation, diminish the work done by the heart, and diminish the temperature. The temperature sinks because heat is given off at the surface more rapidly than it is evolved in the tissues—a fact which is proved by the observation that if the animal is wrapped in cotton-wool its cooling is delayed, though it cannot be wholly prevented; while, on the other hand, if its body is immersed in a conducting medium, such as water at the ordinary temperature, so as to favour the loss of heat at the surface, the depression of internal heat is correspondingly accelerated.

The experiment of Naunyn and Quincke may be regarded as an imitation or reproduction of the well known case of dislocation of the lower cervical vertebrae recorded by the late Sir Benjamin Brodie, in which he observed a very rapid increase of temperature with acceleration of pulse before death. Having destroyed the continuity of the spinal cord by crushing at the level of the sixth or seventh cervical vertebrae, Naunyn and Quincke observed that, if the animal were placed in a chamber at a temperature varying from 82 to 86 Fahr., there was always an elevation of temperature amounting to three or four degrees, which, as in Sir Benjamin Brodie's case, was continued until death. This they attributed to the severance of those channels by which, according to the theory of Virchow, the intracranial part of the spinal cord controls those chemical processes by which heat is produced.

Having repeated the experiments of Naunyn and Quincke on one or two occasions, and failed to obtain any warming effect which could not be accounted for otherwise, I was not surprised, and was indeed somewhat gratified, to find that Professor Rosenthal, in an extensive series of experiments, had come to the same negative result—that is to say, had found that in all cases of division of the cord in the cervical region the effect of the operation is to depress the bodily temperature below the normal standard. The error of Naunyn and Quincke was evidently due to their having neglected to compare carefully the phenomena produced under the influence of the agent to be investigated with those which present themselves under otherwise similar conditions. For it is an invariable rule in experimental investigation, that no result can be accepted as proving the parentage of any given phenomenon, until it has been shown by counter-experiments that the effect is not produced under circumstances which, in every other respect excepting the presence of the supposed cause, are identical with those of the original experiment.

With these recent observations of Rosenthal, the history of the regulation centre theory may for the moment be said to terminate. It has not been definitely proved that the encephalon contains no such centre, but its existence has been rendered extremely improbable. For, although a great number of experiments have been planned for the express purpose of eliciting evidence of its action, all have failed. In few words, the history of the theory is this: Framed to account for clinical facts, it was for years accepted by clinical pathologists as a good physiological explanation, until at last its importance claimed for it the attention of experimental physiologists, when it was found not to stand the test of investigation.

I now proceed to other theories having this in common, that while they place the origin of the febrile state in disturbance of the nervous system, they explain the influence of that disturbance in the production of pyrexia by supposing it to be exercised through the organs of circulation. There are two such theories, which are of sufficient importance to merit attention. One of them is endorsed by Traube, to whose clinical researches at the beginning of the present era in pathology I have already made reference; the other has attached to it the name of the distinguished French physiologist with whose presence we are now honoured. Thrown out by him in a lecture, probably rather as a suggestion than as a mature theory, it has received from medical theorists

an extent of application which one may venture to suppose that its reputed author did not contemplate.

Both theories take their start from the ordinary physiological doctrine of the distribution of heat in the bodies of warm-blooded animals. As set forth with admirable clearness by Huxley in his little *School Physiology*, it may be stated as follows. The heat which is communicated to the blood in every living part of the body by the chemical changes which constitute its life, is distributed therefrom to every other part by the blood-stream; but between the external parts—*i.e.*, those which are in contact with relatively cool external media—and the internal parts, there is this important difference, that whereas in the interior all is production, at the exterior the production is far more than balanced by the loss—*i.e.*, by the giving off of heat by evaporation and radiation: consequently, if it were not that by means of the circulation fresh supplies of heat are constantly being brought to the surface from the warmer parts at the centre, the surface would rapidly cool, as indeed it actually does when the circulation is much weakened. Hence; in respect of its function in the distribution of heat, the circulation is rightly compared by physiological teachers to a hot-water apparatus; and they use this similitude, be it observed, not as a representation of the facts, but merely as a diagram or schema. Even for this purpose the ordinary hot water apparatus requires considerable modification in its plan, in order to serve as an illustration. In the first place, we must suppose that the movement of the water is determined, not, as in the ordinary case, by the variations of density due to heat, but by the action of a pump representing the heart; and that the heat is communicated to the water, not at one focus, the stove, but in all parts of the system (as *e.g.*, still following our friend Huxley, by a number of little gas jets arranged at short intervals underneath the pipes); and secondly, we must have our pump placed at the centre of the system, and our water-pipes, some in protected positions close to each other and carefully covered with hay ropes and other appliances for preventing loss of heat, others exposed to the air, divided by repeated branching and kept constantly moist, to represent the conditions of the circulation in the exposed and external parts of the body. So arranged, the apparatus would give us a very true diagram of the circulation in relation to the distribution of heat, and it is not difficult to see what the results would be, both as regards the maintenance of temperature in the whole system, and its distribution in different parts. The temperature of the internal protected tubes would be always greater, that of the external exposed tubes always less, than the mean temperature of the whole apparatus; but, provided that the dryness and temperature of the external media and the relative quantities of water passing to the external and internal parts, and the heat communicated by the gas jets remained unchanged, the mean temperature of the whole system would be constant, just as it is in the animal body. Any alteration of any of these factors would declare itself either in general warming or cooling, which, however, would only go on until a new balance of loss and gain was established. If, *e.g.*, the relative quantity of water flowing through the external parts were increased, either by facilitating the flow in the protected tubes or by hindering it in the exposed ones, this would at once tell in an increase of the general temperature in the whole system, which effect would continue until, by increased evaporation and more rapid radiation at the exposed surfaces, equilibrium was again established. The former condition representing health, this might be regarded as fever.

Out of considerations of this sort sprang the two theories of fever to which we now desire to direct our attention. According to Marey, fever consists in a general relaxation of the vascular system of the external parts of the body; referring to our schema, we find that the effect of this must be to let blood of a higher temperature from the central pump flow more freely into them and warm them up. Hence the hot skin of fever. According to Traube, on the contrary, the surface vessels are contracted. Consequently the flow of blood through the exposed parts is hindered, while that through the internal organs remains unimpeded. Hence, again referring to the schema, the general temperature of the body rises, and you have fever. Is it not strange that on the same physiological scaffolding such opposite structures should be erected?

The vaso-motor theory of fever in either of its forms is not only defective as leaving the collateral constituents of the febrile state (*viz.*, those which relate to nutrition and secretion) unaccounted for, but fails to explain even the very phenomena (those of circulation and bodily temperature) on which it is constructed. It is perfectly true that in the animal body as in the schema, if we alter the relative quantity of blood flowing in external and internal parts, or vary the velocity of the blood stream, we produce corresponding variations both in the distribution of temperature and in the mean temperature of the body. But experiment shows—1, that the maximum effect thus produced is not comparable in quantity to the elevation of temperature actually observed in fever; and

2, that the direction in which the effect manifests itself varies, being determined by complicated combinations of circumstances of which neither theory takes any account. These are, among others, the external temperature at the time, and the vigour with which the heart responds to the increased resistance. Considering that we can produce much more decided vaso-motor effects experimentally than any which can be supposed to exist in fever, and can graduate those effects at will, we may consider it as proved, at all events as regards vascular contraction, that this condition is quite inadequate to account even for the temperature result attributed to it.

The notion that the heat of skin in fever is dependent upon what may be called a determination of blood to the surface, is in like manner negated by the fact previously referred to in relation to the regulation theory that under all varieties of condition the invariable effect of vascular relaxation is the contrary to that which the theory supposes, *viz.*, to depress the bodily temperature, and that this cooling takes place even when the animal is protected as much as possible from the influence of external media by packing it in cotton wool and so forth. A more striking, though not to the physiologist, a more conclusive proof of the inadequacy of any conceivable change in the distribution of the blood to produce pyrexia is to be found in an experiment of Liebermeister's, of which I will now endeavour to give an account. It is an experiment not made on dog, cat, or rabbit, but on a willing human subject. It can, however, be substantially repeated on the lower animals with a similar result.

If you take two ordinary warm baths at the temperature of the body, and, after careful agitation of the water, put a healthy person in the one, leaving the other unoccupied, the mass of water in each being the same, and then after a time remove the subject of experiment, and again measure the temperature of the water after agitation, it is found—1, that, whereas in the unoccupied bath the temperature of the water has sunk, the occupied bath has either remained at the same temperature, or at all events has lost less than the other; and 2, that the subject's body has become warmer, because, being surrounded entirely with a conducting medium neither cooler nor warmer than itself, no heat whatever has been lost at the surface; so that all the internal heat produced during the period of immersion has accumulated, that is to say, has gone to the good of the bodily temperature.

This is the experiment. Its value lies in the information it gives us as to the maximum result which can possibly be attained by complete suppression of the surface discharge by mere accumulation of the heat normally produced. The thermometrical results of the experiment as compared with temperature measurements, *e.g.*, in intermittent fever during the period of fervescence, show that the rate at which the temperature rises in the accession of ague is at least four times as great as the maximum effect of accumulation.

I need scarcely say that I have not exhausted all the theories of fever in the sketch I have attempted to give of those which propose to explain its phenomena by attributing them either to vascular disturbance on the one hand, or to paralysis of a supposed regulating centre on the other. I now proceed to the second use that I wish to make of my example, to try to show what is the true method of investigation in pathological questions.

How must this question of fever be attacked? It seems to be too strong a position to be carried by assault, and must be got at by a combination of well directed approaches. The questions must be taken as they present themselves, one by one. This done, the combining of the results into a theory will require as little genius as the taking of a fortress requires military skill from the moment that all the commanding positions are already in the hands of the besiegers.

The first step is to select among the constituent phenomena of fever those which are the most important—in other words, to classify the characteristics of the febrile state according to the greater or less degree in which they are essential. This can of course be done on one principle only, that according to which those phenomena are regarded as most important which are most constantly present. On this principle we have no difficulty in placing pyrexia first; next comes, probably, loss of weight; next frequency of pulse, and after these other concomitant phenomena more or less dependent on them.

Taking pyrexia as a phenomenon by itself we want to know how it can be produced. We have but two certainties to start from; first, that in the animal body heat is produced exclusively by chemical change; secondly, that in the particular case to be investigated the rate at which the body is warmed is greater than can be accounted for by any mere accumulation. The first of these propositions is axiomatic, being an almost immediate consequence of the law of conservation of force; the second arises from experiments like that of Liebermeister on the human subject, as well as from others more exact on animals. By the combination of these two propositions we come to the conclusion that such an

increase of temperature as occurs in fever must depend on increased oxidation.

The next question relates to the seat of the process—where does such increased oxidation occur? Here we have no sufficient information. Admitting that the most probable answer is—everywhere, that is, that just as heat is produced normally in every tissue it must be so produced in fever, it would be most unjustifiable to assume that it is so.

Of the three or four tissues of which the mass of the animal body is composed—the nervous, the glandular, the connective, and the muscular—there is one only which has as yet been sufficiently investigated in its relation to ordinary heat production, viz., the muscular. With respect to this tissue, it cannot be shown that it is the special seat of the increased chemical activity which produces fever, but it can be shown that even if every other source of heat production were excluded the variations of intensity of which muscular oxidation is capable would be sufficient quantitatively to account for the variations of bodily temperature which occur in fever. In this respect, therefore, I propose to refer to some of the experimental facts known to physiology as to this heat-producing function of muscle.

I will first mention an experiment which belongs neither to the laboratory nor to the hospital, our two ordinary sources of information. A man works in an extremely hot place, for example the stoke-hole of a tropical steam vessel, where he is subject to a temperature of perhaps 120 to 130 degrees F. Under such circumstances a dog would soon die, but so efficient is the apparatus for the discharge of heat at the surface in the human body, that not only life but continued muscular work is possible. If now we place the same man under slightly altered circumstances, and set him to work in what is termed a "dead end" in one of the so-called "hot mines" in Cornwall, where not only the air is heated, but the workman is rained upon by the incessant dripping of water at a temperature of say 105 degrees F. so that the air is constantly saturated with moisture, we find that, although the temperature is nothing like so high as in the stoke-hole, he suffers so much more from the effect of it that continued labour is impossible. After remaining by a great effort of the will for ten minutes at the most, he can endure the distress no longer, but rushes out to cool himself, and after a few minutes' rest in a well ventilated gallery is himself again.

To understand the difference between the two cases, all we have to do is to compare the man's bodily temperature as he escapes exhausted from the hot working with that which he possesses while labouring in the stoke-hole. In both instances there is excessive production of heat, and as we know from other experiments excessive discharge from the body of carbonic acid, but in the one the over-production is balanced by the surface cooling, in the other such cooling is impossible, the man's body itself receiving the surplus, which goes on accumulating until, if I may use the expression, he is warmed up into fever—a fever which although transitory, yet so long as it lasts shows all the characteristics of the febrile state—the quick pulse, the muscular and nervous prostration, the increased temperature, and increased discharge of oxidised products.

The experiment I have been relating is a ready made one, and may be called a rough one; it exemplifies the physiological fact that the excessive heat production which is determined by muscular exertion, if not compensated for by increased discharge, raises the bodily temperature and thus produces functional disorders which closely correspond to those of fever.

The same thing may be demonstrated with greater exactitude by experiments on animals. Nothing, *e.g.*, could be more striking by way of illustration of the heat-producing function of muscle than the comparison of the effect of the two well known poisons, curare and strychnia, on bodily temperature—curare by paralysing the muscles, cooling the body so effectually that, as every experimenter knows, it is impossible, with the utmost precautions, to prevent the temperature from sinking; while, under the influence of strychnia, the heat produced is so much increased that the temperature rapidly rises to that of fever.

I trust that, after what has been said, it is scarcely necessary to observe that I am not drifting towards a new theory of pyrexia. My object is not to show that fever has its seat in muscle, but that any process by which vital activity can be increased in a relatively large mass of living tissue is capable of producing a pyrexia which is, in every respect, excepting its cause, a counterpart of that of fever. Of the bearing of this conclusion, we can judge better if we put it into another form; for in other words it amounts to this, that pyrexia may be produced by any agent, whether originating in the nervous system, as in the case of the man working in the hot mine, or in the blood, as in the case of the animal poisoned by strychnia, which stimulates a great mass of living tissue to increased action. In this way we come back to a very old definition of fever—that fever is the reaction of the living organism against a stimulus. This definition is of value merely as a finger-post,

as an indicator of the direction in which we must work. I understand it to mean that, if I am to seek successfully for the proximate cause of fever, I must look for it among agents which act either directly or indirectly as exciters or irritants of living tissue. Examples of indirect action I have already given. I now proceed to submit to your consideration a third example, which I conceive to be one of direct action.

It has now come to be an extremely well-known fact in pathology that if the exudation liquids of certain acute inflammations are mixed even in extremely small quantity with the blood-stream, the inevitable result is the production of a pyrexia, which in its development, progress, and concomitant phenomena, so far as they have yet been studied, exhibits all the characters of the febrile state. I have no intention of entering at all into the consideration of this remarkable process, and refer to it here merely by way of illustration. I am altogether unable to state on what tissue mass the poison in question exercises its influence; all I want to do is to point out that whatever answer is eventually given by experiment to this question, the only possible conception that can be formed of its mode of action is that which regards it as a direct tissue stimulant.

I have not time to enter upon the other constituents of fever, each of which requires as careful and separate investigation as that of pyrexia—the phenomenon of shivering and the changes which accompany it in the circulation, affecting the arterial pressure and the distribution of the blood to different parts; the changes which occur in the hygrometric condition of the skin and mucous membrane, and in the glandular apparatus connected with the latter; the changes which occur in the tissues in fever, so well investigated by Dr. Beale in the fever of cattle-plague; and last, but not least, the chemical changes which occur in the blood. Each of these requires to form the subject of a separate and detailed investigation, and until this is carried out it is premature to go any further in theorising than is necessary for the purpose of obtaining what I have already indicated as finger posts.

I have now come to the end of my time if not of your patience, and I must attempt what I feel myself singularly incompetent for—I must appeal to you to use all your influence to promote the prosecution of pathological research in this country.

Having this in view, I chose the subject of fever, partly because I am myself deeply interested in it, and partly because fever and inflammation have always in the history of medicine been the pivots on which pathological teaching has turned. If therefore pathology is of any value at all, if it is of use to know not only the external characteristics on which we base our diagnosis of disease, but the internal and hidden processes which constitute its essence, the question of fever cannot fail to interest us. But it is not in support of this or that line of inquiry in particular that I would appeal to you. What I would urge is that this Association ought to help forward pathological research as a thing distinct from, though highly serviceable to practical medicine and surgery; that we should support it, not merely on the ground of its immediate utility, or of the direct applicability of the results to be obtained, but on the broad principle of its scientific value.

As regards the eventual utility of scientific research in general it is not needful for me to address you. You have heard the subject argued, and probably read the numerous publications which have recently appeared in connection with the work of the Royal Scientific Commission, the result of whose labours I earnestly hope may be to obtain from our legislature a permanent recognition of the national importance of research. As regards physical science in general, indeed, there can I think be no doubt that eventually, and it is to be hoped at no very distant period, this country, which owes its boundless wealth no less to its scientific men than to its statesmen, will tardily but freely and fully acknowledge its obligation.

It is quite possible that our science will not at first participate in the advantages of this change. The question whether it does so or not will, I think, much depend upon the medical profession, of which this Association is the representative body.

By the earnest and energetic pleading of men belonging to our profession, the public ear has been successfully gained for the claims of other branches of physical science not immediately connected with medicine. At the present moment we have a scientific inquiry in progress on a large scale at the public expense which has for a principal object the investigation of a physiological question, viz., that of the physical conditions which govern the distribution of living beings at the bottom of the deep sea. Many of us, I do not doubt, take a deep interest in the success of this undertaking, for the carrying out of which the best instrumental appliances have been provided, and the most skilful and carefully trained observers selected.

I do not refer to this expedition because I think that the magnificent preparations which have been made are at all out of proportion to the

importance of the objects. I refer to it for the purpose of making a comparison between these inquiries and those in which we as pathologists are interested. The able staff of naturalists on board the *Challenger* concern themselves with the animals which inhabit the depths of the ocean, and with the conditions which affect their life—we occupy ourselves with human beings and the physical agents which affect their life. These agents are altogether similar in their nature to the others, and require the same methods for their investigation.

We do not for a moment doubt that the care and thought which has been spent in the case of the Challenger expedition in the selection of competent persons as observers, in organising them under a man of science of acknowledged ability, in dividing the work of research among different individuals, in providing them with proper places to work in, and proper instruments to work with, has been wisely spent.

Let us, if we desire to promote efficient research in our own province, follow the same principle. Let us not suppose that because in the past history of medicine the employment of an hour here and an hour there, of weary leisure stolen, as it were, from the practical duties of a laborious profession, has accomplished great things, that this is the most efficient way of proceeding now. It must be admitted that circumstances have changed, and that as we possess resources which before did not exist we ought to use them. In the first place we have young men trained in the methods of chemical and physical work, who no doubt would show themselves as zealous and devoted to experimental researches in physiology and pathology as the young men now on board the *Challenger* in their several lines of inquiry; we have long had hospitals as fields of investigation, and now we have laboratories for the proper carrying on of our work. What we chiefly require is organisation, a clear definition of the purposes to be attained, and a combination of the various agencies at our disposal towards their attainment.

I venture to think that it is an object in every respect worthy of this great Association to further and promote the organisation of physiological and pathological research, by fixing on the questions to be investigated, by appointing persons of acknowledged scientific ability to take the direction of the inquiries, by encouraging young men of the highest ability to devote the earlier years of professional life to research, and by providing the necessary funds.

GALVANISM IN POST PARTUM HÆMORRHAGE.

THE following case may be considered of interest, as furnishing an instance of the efficiency of a mode of treatment for the great opprobrium of obstetric art, which, if not new and little known, is at any rate far from being so widely employed as its numerous advantages would appear to indicate that it should be.

The patient was in an extremely feeble state of health, and subject to epileptiform seizures. Convulsions came on during the first stage of labour, and could only be checked by keeping her under the influence of chloroform for some time. Failure of uterine action occurred before the os uteri was fully dilated; but as it was sufficiently dilatable, forceps (Beattie's) were introduced, and delivery was accomplished. Still, the uterus did not contract, and, after the placenta was removed, hæmorrhage could only be restrained by keeping the hand within the uterus. Grasping and kneading the uterus, cold affusion externally, and injections of cold water *per vaginam*, produced no effect. A dilute solution of perchloride of iron was freely injected into the uterus, but proved ineffectual. The employment of galvanism was then suggested as a *dernier ressort*, and one of Stöhrer's portable coil machines was procured. An interrupted current of considerable intensity was directed through the uterus, one pole of the battery being applied to the abdominal walls immediately over the fundus, by means of a curved plate of copper, and the other placed in the cervix. Almost immediately firm contraction took place; and when the current was discontinued after a short time, the uterus remained securely contracted, and no further hæmorrhage took place. The patient made a good recovery.

To those who have often witnessed, as it has probably been the lot of most general practitioners to do, the bustle and confusion and other disagreeable accessories of a case of obstinate hæmorrhage after labour, any means that tends to diminish these inconveniences must be most acceptable. The use of galvanism as a means of treatment in these cases, besides its remarkable efficiency, as shown by the foregoing case, and which might naturally be expected, judging from its action on contractile tissues generally, possesses many other advantages over the means usually employed; for instance, the cleanliness and simplicity of its mode of application, and the avoidance of those evil consequences in the puerperal state which are so apt to result from the irritation of the uterus, and the exposure and deluging with cold water which usually take place. Therefore it is to be hoped that its efficiency may soon become established beyond doubt, and its employment become as general as it deserves to be.

R. C. MACKINTOSH, M.D., Doncaster.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE

At the Annual Meeting of the British Medical Association,
in London, August 1873.

By FRANCIS SIBSON, M.D., F.R.S., V.P.R.S.,
Consulting Physician to St. Mary's Hospital, President of the Section.

GENTLEMEN,—Ten years have passed away since the Association met in London, under the distinguished presidency of Dr. Burrows; and during that brief period our numbers have almost trebled themselves, and the science of medicine has made a remarkable and solid advance. This Medical Section, and the various sister sections into which our Association, obeying the true laws of evolution, has divided itself, have come into being since our former meeting in this metropolis; and this, you will agree with me, is a fitting time and place to take a brief glance at the past, the present, and the probable future of medicine, and at the past, the present, and the possible future influence of this Medical Section on the science of medicine.

When I was a student in Edinburgh more than forty years ago, Dr. Home gave us eleven wearisome lectures on the treatment of fever and how to cut fever short; and his ninth lecture begins thus in my notebook: "Exanthematous fevers cannot be cut short." You will not find one word on the method of cutting fevers short in the whole of Dr. Murchison's recent great work on *Continued Fever*. Sir Thomas Watson's masterly letter on the cattle-plague gives expression, in a few brief and clear lines, to our present knowledge of fever and its treatment. Every physician now knows that fever cannot be shortened by one day; and his efforts are directed, like a skilful pilot guiding his boat down the rapids, to the treatment, not of the fever as such, but of the effects of the fever through which the patient must pass. It has been well suggested to me that the physician, in the treatment of a case of fever, resembles the accoucheur in the management of parturition. The labour may advance favourably, and require little aid; but difficulties may occur during its progress that would be fatal but for the aid afforded by the obstetrician.

I will not revive the bloodletting controversy—a subject brought before this Association with admirable force by Dr. Stokes on the one hand, and elsewhere by Dr. Hughes Bennett and Dr. Markham on the other. I feel, however, that many of those patients into whose arm a lancet is now never inserted, would have been freely bled if they had been treated in the bygone days of which I have just spoken. During the many oscillations in the type of disease that have taken place during the last thirty years, the lancet has not been brought into use in this country. It is otherwise, however, in Italy and in Spain, where, I am told, bleedings from both arms, and leeches elsewhere, are the usual practice in acute diseases.

At the very time of which I have been speaking, Dr. Alison in Edinburgh, whose memory is cherished by every student of that day, and Henlé in Germany, and soon afterwards Dr. Sharpey in London, were, by their physiological labours, laying the foundations for that more secure knowledge of disease and its treatment that now prevails.

It is a remarkable illustration of the present direction of the medical mind, that the admirable Address in Medicine by Dr. Parkes, to which we have just listened with such advantage and close attention, and the coming Address in Physiology by Dr. Sanderson, are, or will be, the contributions of two of the physicians who, in this country, have done more than any others to bring physiology and exact inquiry to bear on our knowledge of disease and its treatment. This spirit of exact inquiry into the most intimate functions of life during health and disease, and under the influence of treatment, by means of self-recording instruments of precision, of volumetric analysis, and other agencies, is the spirit of our time. Ludwig, by applying the kymograph to the hæmodynamometer in 1848, enabled the pressure of the blood to write its own story; and Dr. Sanderson relates that "the notion of the kymograph is said to have been suggested by a contrivance of Watt's for registering the pressure of the steam-engine."

Investigation and action—the investigation of each case of disease, and prompt action in its treatment, give life and zest, with its mingled care and hope, to the daily work of every physician. The more complete study of disease and its treatment can, however, only be carried on in the ward, the mortuary, and the laboratory. For this purpose, however, the laboratory ought to be transferred to the ward. The cardiograph of Marey, the recording stethometer of Dr. Sanderson,

and volumetric analysis, ought to be added to the microscope, the sphygmograph, and the urinometer, and the instruments for employing the direct and the interrupted current. By these means, which would require a small knot of good clinical workers, with full time at their command, the investigation of disease, and the action of medicines and other means of treatment, might be steadily investigated, and the foundation might thus be laid for a complete knowledge of disease and of the action of the means employed for its treatment.

Recent inquiries tend to show more and more that many or most other diseases besides the fevers are diffused through the system, and not limited to the single organ in which they show themselves. The affected organ is often the mere local mouthpiece that proclaims the general malady. I would refer here notably to the inquiries of Dr. Sanderson and of many other physicians in Germany, France, and England, into the inoculation of tubercle. This adds to the argument against specialism in the treatment of disease, so forcibly put before the Association last year by Dr. Wilks in his address. The tendency of specialism is to limit the view of the specialist to the favourite haunt of disease by which he has made himself known; and he thus cramps or even loses his power to take a just and broad view of the very disease that he has made his own. I do not here, of course, speak of a true hospital physician who studies disease in the larger sense, and who, from accident or bias, has given greater attention to some diseases than to others. This must happen more or less to every clinical worker who is in earnest and attached to his pursuit. These are the very men who unravel and throw additional light upon individual diseases; but they do so because their keen perception has been quickened and heightened by their large clinical knowledge. The special hospital is one of the foes to clinical inquiry.

It has been well remarked that every great advance in the knowledge of disease, and of its proper treatment, has been preceded by a parallel advance in the knowledge of physiology. Sometimes, as in the instances of John Hunter, Sir Charles Bell, Sir Benjamin Brodie, Marshall Hall, Du Bois Reymond, Claude Bernard, Brown-Séquard, Duchenne, and others, the physiologist who has added to our knowledge of the laws of life has been the physician who has added to our knowledge of the laws of disease. More frequently, the discoveries of the pure physiologist, or of the philosophical chemist, such as Davy, Faraday, Daniell, and Graham, have given light to the physician, and have enabled him to see with clearness, that which he was before struggling in a kind of "clear obscure" to comprehend. He must, however, have been previously at work, in the true spirit of clinical inquiry, upon the very point of coming advance; the door must have been almost opened, light must be struggling in, and he must have been working in the right direction, or the additional light that has been given by the physiologist will not be given to him. He must, so to speak, have almost reached saturation point, and a little stir has been able to crystalize into form what was almost ready to take shape.

It is evident, when we look at the immense field that is now occupied by experimental physiology, that the clinical worker can easily devote himself to physiology, but, if he is to be successful in his own field, he must be a true physiologist.

The physiology of the present day obeys truly the law of evolution; and, while it advances from simplicity to complexity, it advances from confusion to order. The nervous centres are no longer limited, in idea, within the cranium and the spinal cord, but are diffused over various organs. The forces of the circulation are no longer limited, in idea, to the heart, but are diffused over the whole of the arteries, even the most minute; the heart responding to arterial pressure as completely as the circulation through the arteries responds to the contraction of the heart. The respiration is not carried on merely in the lungs, but is diffused through the vessels which carry the oxygen from the lungs. Then the nervous system, the circulation, and the respiration, all work interchangeably upon each other. All the parts weave themselves into the whole, each part working and living in the other.

We thus see that our present larger views of disease correspond to our present larger knowledge of the laws of life, and we can foresee with precision that the medicine of the future, obeying the law of evolution, while it will perhaps advance from comparative simplicity to complexity, will certainly advance from comparative confusion to order.

I will now touch briefly on the past, the present, and the possible future of this medical section of our Association, and will give you, I trust, reasons for the opinion that this Branch of the Association contains within itself the potentiality of adding solidly to our knowledge of disease, and that which is the end and aim of all our inquiries, the treatment of disease.

In the early years of the Association, when it formed, as it were, a single medical section, it was of great service in the advance, as well as in the diffusion, of medical knowledge. Many of the best medical

minds in the provinces came together, with the high object of promoting medical science, and the welfare and unity of the medical profession. I have always been of opinion that, in each great provincial centre, there are several men, or at least one, who stand in parallel ranks, as regards the possession of a high medical mind, with the leading metropolitan physicians of England, Scotland, and Ireland. In each provincial centre there are hospital physicians and surgeons who are appealed to in every case of difficulty by the medical practitioners of the neighbourhood, who, owing to the character of their minds, and their varied intercourse with such cases, see disease, not with the limited vision of the specialist, but with the large view of the true physician.

When men of this high, mental, moral and social standard came together, the knowledge that had been hitherto silent in them, and therefore not adequately developed, received development and expansion and took form and shape. The medical mind of the provinces was effectually stirred, and a series of papers and addresses were delivered before this Association that in their time advanced and diffused the knowledge of disease. Many important communications on the medical topography of the various parts of the country, and several memoirs of great value, were published in our *Transactions*. It will be sufficient if I here name the notable communication of our distinguished associate Mr. Ceely, on vaccination.

The diffusion of medical knowledge, as well as its advance, was eminently promoted by the Annual and Branch Meetings of the Association, where men came together communicating to and receiving from each other sparks and seeds that kindled and ripened into a larger medical knowledge.

The recent establishment of sections—and in detail I reserve myself to this section—has given solidity and more definite expansion to the culture, advance and diffusion of medical science. I would here simply refer to the important communications of Dr. Brown-Séquard, Dr. Bennett, Dr. Gairdner and Dr. Sanderson.

It is however not my intention to give you a history of the work done and doing in this section, but to ask your serious attention to aid in an endeavour to add to the value of this section, and indeed of other sections also, by taking definite and early steps to increase our labours for the advance of the knowledge of disease and of its treatment.

The British Association distributes annually a sum of money, which in 1866 amounted to more than one thousand pounds, in the shape of grants to various workers and committees to enable them to carry on researches for the advance of science. A government grant of £2,000 to the Royal Society is distributed annually to individual workers to enable them to pursue certain definite investigations, the exact character of which is laid before the Government Grant Committee and the Council of the Royal Society.

The grants of the British Association, and the government grant to the Royal Society have, by supplying the working man of science with instruments of research and other needful appliances, enabled him to carry on important investigations that have led to great scientific results that, but for such aid, would have been lost.

A few years ago Dr. Hughes Bennett carried on an important experimental inquiry into the action of mercury with a grant from this Association, and by a subscription entered into by certain of its members.

I would earnestly press upon the Association that they should re-establish the system of grants of money to individual members or committees of the Association for the purchase of such expensive instruments and other appliances as may be required in the pursuit of certain approved inquiries into the nature and treatment of disease.

The inquiries of Denis into the human blood, published in 1830, and followed by those of Andral and Gavarret and other observers, led to a knowledge of the positive effects of two of the then prevailing methods of healing disease—blood-letting and the use of iron. Blood-letting has mainly, in consequence, been practically abolished, and the value of iron as the means of increasing the proportion of red corpuscles in the blood has been established. Recent investigations, of which I have already spoken, as to the intimate nature of disease, and the action of quinine, digitalis, and other medicines, have added materially to our knowledge.

There are many important questions relating to disease and its treatment that are open to, indeed demand, inquiry, and I would here refer to a few of them. The amount of urea excreted during chorea, tetanus, fevers, and other diseases, and the relation that may subsist between the excretion of urea and the temperature of the body, are as yet but imperfectly ascertained. The mode of action of iron in increasing the red corpuscles is unknown. Can the crystalloid, iron, call to itself the colloid protein elements in such proportion as to form red corpuscles, when we know that the colloid is the energetic, the crystalloid the passive form of matter, and thus the crystalloid can diffuse itself through and depart from the colloid without altering its structure? The phos-

phates are largely given, and with great confidence in their good effects. Why? What is their mode of action? The phosphates came away rapidly from the broken-up tissues in certain diseases. I would repeat the question I have put with regard to iron—Can the passive crystalloid phosphate draw to itself the elements of the energetic colloid to replace the broken-up structures? Does the iron taken into the stomach diffuse itself passively through the tissues? In what way do antimony, arsenic, mercury, silver, and lead accumulate in the system? Do they diffuse themselves through the whole of the colloids? The action of the ergot of rye, of chloral, of quinine, of the bromide and iodide of potassium, of the potash salts, of the narcotics, and of many other drugs is as yet imperfectly ascertained. The influence of the cold bath, the wet sheet, the douche, wet sponging, and the local application of cold or heat on the temperature of the body calls for inquiry. The effects of certain kinds of food much employed in the sick-room are not yet known. What is the effect on the frame of Liebig's essence of meat, which contains no protein element—not even albumen—which contains little besides the fragrance of meat, and nitrogenous compounds. The same question, a little modified, applies to beef-tea and chicken-broth. Is it right to give those liquids, charged as they are with nitrogenous compounds, to patients affected with Bright's disease, whose blood is already poisonously saturated with broken-up nitrogenous compounds?

These important practical questions call for careful, patient, and unbiassed investigation. That investigation cannot be carried out without the aid of extensive self-recording instruments, accurate chemical apparatus, and other appliances.

Our Association has hitherto been unable to devote any portion of its income to the awarding of grants to aid in the investigation of disease and its treatment, but it is to be hoped that the time is rapidly approaching when it will have such means at its command, and that it will soon distribute grants of money to individual workers, or to committees to enable them to investigate disease.

There are many young physicians with time at their command and an earnest desire and skilled power to pursue important investigations of the class to which I have briefly alluded. They are attached to the various hospitals and medical schools that are doing so much good in the great centres of population in the three kingdoms. The recent establishment of classes of practical physiology has familiarised them with the true method of inquiry. If our Association places at their command the instruments and means of research, their vigorous powers of investigation will bring to light many of those important questions as to the nature and treatment of disease that are as yet comparatively obscure, and thus the science of medicine will be enlarged and elevated by labours inspired by this Association.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association,
in London, August, 1873.

By JOHN HILTON, Esq. F.R.S.

It must be a real gratification to any surgeon that he should be appointed by what I may fairly call the suffrages of a large section of his profession, and those the most active in the cultivation of professional knowledge, to occupy the position which I have now the honour to hold; therefore my first duty is to respectfully acknowledge and to express my personal appreciation of this distinction; and, further, to thank the members of the Society, who, through the Committee, have conferred this dignity upon me.

So much has been written and spoken on the progress of Surgery, that I dare not occupy your time beyond a very brief allusion to my individual experience of its advancement, lest I should trench upon the ground which the learned professor, who will address you at greater length, will necessarily occupy.

There has been much controversy in reference to the significant terms Art and Science, as applied to our professional progress; much earnest and thoughtful disputation has been employed in order to place medicine exclusively under the one or the other; and some writers have expressed their relation to each other, as a necessary sequence from art to science. These differences of opinion have arisen chiefly from a desire to fix the term science upon the details of what cannot be defined in exact terms. But I would ask you to go back with me just three hundred years, in order to observe how Bacon treated this same

point. He puts the question, as it existed in his days, at rest, by the obvious and simple differential arrangement between *method* and *knowledge*, in which definition the real features of the above problem will be found. Using the concrete language of his day, and at the same time revealing his great reflective power and his wonderful prescience, on the subject of the progress of knowledge he wrote these words: "Our early knowledge was *ciphers*, *alphabets*, it may be *words*; but by degrees it has grown into *wheel ciphers*, *key ciphers*, *doubles*, etc." This order or gradation of progress strictly applies to surgery, as far as my own recollection and interpretation serve me.

In my present position, the mind naturally reverts to what surgery was in the early period of its cultivation by myself and by my then colleagues, and what it is now, under a higher form of culture. At the outset of my career, *anatomy* was the *alphabet* upon which surgery took its stand. An accurate anatomy was the start-point from which it was to attain to the hopeful position of a science, or rather "method". Physiology was at that period a series of words, or, as Bacon would have styled them, intermixtures of "nulls and non-significants"; but I have been allowed to watch its growth into what he designated *wheel ciphers*, *key ciphers*, and culminate in a process which he called "involution or infolding"; just as we, in our progressive horticulture, have converted the stamina and calyx of the plant into corolla, and thus promoted the infolding to form the perfect rose.

So in Surgery, under my individual observation. When I commenced the study of my profession, the method of *tradition* was the all in all; the premises for reasoning were scanty and ill understood; but the alphabet, anatomy, was more diligently cultivated than at any former period. Physiology also within my own recollection began to be earnestly studied by our German professional brethren and ourselves; so that, with a more accurate anatomy and a higher physiological knowledge, a more firm basis was created for our clinical observation, resting upon John Hunter's researches, to secure a safe departure into rational surgery.

Thus were we led on by a more accurate anatomy, a more closely applied physiology, and a more definite clinical observation, of how tissues behave under the manifold forms of disease with which the surgeon has to deal; and thus the judgment of the surgeon outstripped the syllogism of tradition, and acquired the more definite form of an inductive attempt to explain, in good faith to himself, the marvellous phenomena which he was daily witnessing.

Therefore, I think it may be legitimately contended, first, that, although Surgery may not be strictly a science capable of mathematical proof, yet that it has not lagged behind the other branches of knowledge which have advanced so rapidly within our generation; and second, that a more accurate anatomy, a more recondite physiology, and a more painstaking observation of morbid phenomena, have kept it up to the level of those other branches of mental cultivation, which cannot yet be expressed in aphorisms, or demonstrated by exact proofs.

Again, great aid to its advancement has been derived from discussion in our numerous societies, which have constituted a peculiar feature of our progress in the present generation, both scientifically and socially. Hence I desire especially to dwell for a moment on the advantages of this great Association, representing, as it does, a professional community free from professional polemics; connecting professional strength; sustaining good professional feeling; dispelling jealous egotism; promoting the growth of mutually kind consideration one towards the other; and a genuine liberal appreciation of each other's legitimate work; thus creating a rich fund of knowledge, common to all.

The non-medical public, of course, chiefly recognise our divergencies (sometimes prominently presented to them), just as they do in the instances of theologians or of distinguished lawyers; and, arguing from our differences, infer, *more suo*, that as all cannot be right all may be wrong. But as they come to learn, through societies such as this, the real spirit in which we can work together for the elaboration of science, as it bears on our vocation; the kindly spirit in which we can discuss our difficulties, and the friendly way in which we labour, not for our own ends (at least not in this society) but for the public good; whether it be in the cause of sanitary improvements or by delving into the deeper recesses of our art, where we are met by that stone wall, biological knowledge; they will learn by degrees to judge us, not as they now do by the mere results of success or failure, but by the rational standard of a fair estimate of the sincere efforts which we have made, whatever may be the results.

Surely the free discussion which we employ, in order to arrive at the transcendental phenomena associated with life and disease, in order to fairly interpret the deviation of the latter from the paths of health, under the form of what we call disease, is one of the highest intellectual labours in which the mind of man can be engaged; and in proportion

to our own steadfastness in its pursuit, the public will gradually learn to estimate our honest toil.

By discussion the rule of custom or authority is swayed and broken, and the primary conditions of intellectual ongoing are set free. Discussion, indeed, furnishes the great incentive to vigorous and elevated thought, and is a motive power of incalculable impulse to the advance of learning in any form; but most particularly so in that form, in the cultivation of which we spend our days, and I may fairly say our nights.

Discussion necessarily implies *in limine* that its subject is a matter of either questionable fact or opinion, not settled in the minds of the enquirers, although either may have been accepted beforehand, on the ground of pre-existing authority; but something new may have occurred to render it susceptible of further elucidation by discussion, and possibly to emancipate it from the category of hereditary *dictum* or *dicta*.

The results of truth seeking trustworthy discussion have been well described as "pure dry light, free from the humour of habit and purged from consecrated usage," and I feel assured that our meetings tend to the same lucid form and ultimate result thus expressed.

Reflecting on the educational condition of the upcoming generation, in reference to our actual and future professional status, my long experience as a teacher at Guy's Hospital, and my extended official position, as an examiner at our College of Surgeons, enable me to speak on this matter with some reasonable amount of authority, and to affirm that the evidence of marked advancement is incontrovertible, and that it is impossible to doubt or overlook the conclusion that the prospect is most cheering for our profession. Various causes have contributed to this improvement; perhaps it is primarily referable to a better brain training in early life, and to a fuller aptitude for the recognition and retention of knowledge, this mental fruition being helped and encouraged by a more natural and true common sense scholastic tuition.

Relying and resting on the outcome of these fundamental advantages, I believe that much of the rapidity of professional acquirements may be justly attributable to and derived from the comparatively recent method now so widely insisted on, of teaching through the medium of the eye, and which is intended to be expressed by the term "practical study."

It must be within the personal experience of each of us, that no impressions are so quickly made, so tenaciously fixed, or so permanently stamped upon the memory as through the eye. This method of study complemented, as it has been of late years, by powerful optical agents, has contributed a great help, which has been eagerly sought and used by the emulous and industrious in the pursuit of knowledge, and at the same time it has become virtually an attractive allurements to the unemployed and the idle.

Powerful minds are now devoted energetically to the exploration of exact knowledge devoid of doubt.

Formerly the conclusions derived from statistics were much extolled, and relied upon, but they never could reach beyond the verge of probability, and that would not content the professional mind of the present day, which will be satisfied with nothing short of a usable certainty.

During the last thirty years, there has been a marked tendency, in the mind of the painstaking reflective physician or surgeon, in his search after truth, to rely only upon provable facts, myriads of which have been garnered and stored in isolated works, and especially in the archives of our various societies; few persons venturing to form hypotheses or theories upon them, until they have been acknowledged, under discussion, by their brethren and accepted, as reliable and proven data, upon which they might confidently reason.

Who is to gather together this massive and varied material and cement it into a harmonious whole?

Who will take, from this time, the foremost needful step in the van of scientific organisers in order to examine, arrange, and digest these stored materials in such a manner as to construct the foundation of a trustworthy reliable authority in the form of a future oracular work of strict and scientific reference?

The necessity for such an interpreter is felt by all of us in these days of bold inquiry, when science is pushing her researches into the mysteries of nature, bringing the animate and the inanimate creations closer to one another, and promising to flood with glowing light the hitherto black line of demarcation and separation of the known from the unknown.

In conclusion, I may be allowed to express my conviction that the Newton of medicine has not yet arrived; but in the meantime I am satisfied that such meetings as these disclose what all the best men of our profession have in view—*viz.*, the promotion of kindly intercourse, and thereby the free interchange of knowledge, the motive force to further and further inquiry, to the quenching of the pretentious and deceptions habits still, I regret, oftentimes exhibited by some of our profession to the public; and, finally, to avow our energetic commendation of the safe foothold, step by step process, by which we trust to reach our ultimate goal—Truth.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PHYSIOLOGY.

*At the Annual Meeting of the British Medical Association,
in London, August 6th, 1873.*

By GEORGE MURRAY HUMPHRY, M.D., F.R.S.,

Professor of Anatomy at the University of Cambridge; President
of the Section.

THE British Medical Association is still in process of development, and has not, we are glad to think, yet attained to maturity. A few years ago the important advance of instituting sections was made. On the present occasion, when the Association derives the great impulse resulting from a meeting in the metropolis, there are six sections representing six of the important branches of medicine; and it is a matter of no small congratulation that the section of Physiology has been revived. This section was held, and was attended with much success, under the able presidency of Professor Rolleston at Oxford; but since that meeting it has not, I believe, been attempted. It is, I feel, a great honour to be invited to preside in this section at the important meeting now held; and, setting aside all personal feelings and consciousness of inefficiency to discharge the duties of the office to my own and your satisfaction, I did not hesitate to accept the honour, because I perceived that in the selection a compliment was paid to my University, no less than to myself. I was therefore bound to do my best; and I must rely for the rest upon your indulgence and the able assistance of the gentlemen who are associated with me as Vice-Presidents and Secretaries.

I have said that the revival of the Physiological Section is a subject of no small congratulation. Indeed, I feel it to be a matter of the very highest importance; for, without depreciating the other sections, it may be said of this more truly than of any other, that it is, or ought to be, the main connecting link between the Association and science, I may say, indeed, between the Association and the Science of Medicine. Physiology must not simply be at the root, but must itself form the root of medical science. Unless it flourishes and is well tended, the science of medicine cannot thrive and be maintained on a level with other sciences. It cannot but have a tendency to degenerate into empiricism. Far be it from one whose life has, in the main, been spent in pursuing the practical work of the profession, to say anything which should seem to detract from the value of that work, or from the advances which are made in it. These are undoubted. They are sufficiently estimated; and they bring their own reward in their train; so that the influence of a great Association like the present is scarcely required to maintain and give an impulse to practical medicine. We live in an eminently, almost too practical, age; and some of our faults and mistakes are due to the general and growing submission to this influence. In medicine that is peculiarly the case. The practical has, more and more, a tendency to preponderate over the philosophical, which is evinced by a comparison of the writings of physicians and surgeons, of the former more particularly, at the present time with those of the past.

The increasing stringency of the examinations, and the greater range and precision of the several subjects comprised in the examinations, tend to produce this effect. The text-books are more heavily loaded with facts, and the students' minds are more densely crammed with the same, almost to a suffocating extent. A result of this compression may be, and no doubt is, seen in the greater amount of knowledge acquired; and knowledge is a good thing. But to produce its best results, knowledge should minister, and be subordinated, to thought. Not simply to store the mind, but to train the mind to use its store should be the object of education. The subjects of medical education are peculiarly adapted for this purpose; but I do not think that sufficient heed is taken of them in this respect, and it is to Physiology, more than the other subjects, that we must look to restore the balance between thought and knowledge. It teaches us to look beyond the fact into the causes, purposes, relations, and workings of the fact—into "the being's use and end." It gives life to dead anatomy—it leaves us not content with the dreary knowledge that a process exists, and is of given shape and size; but it urges us into the consideration of why it is so, and how it comes to be so. It transforms the miser of facts into the philosophical utiliser of them. I cannot but observe, and observe with regret, that the

more accurate cultivation of anatomy, now-a-days, has led not a little to its divorce from physiology. That kind of pure anatomy which, to my mind, savours much of pure dullness, is too exclusively the object of pursuit in teaching and in examination; and the great interest, enlivenment, and mental benefit which anatomy would derive from the association of other things and of ideas with it, are too much lost sight of. I must remark, however, that this fault does not appertain to the teaching of anatomy or of medicine only, but to teaching in general. I fear that much of the effect of teaching now-a-days is to make the student dislike learning; and I trace that effect not a little to the fact-cramming manner in which it is often done.

I am induced to allude to this subject particularly, because I apprehend that, between the pure anatomist, on the one hand, and the pure physiologist, on the other, the intermediate ground of what may be called "grosser physiology"—the mechanical, teleological, and morphological physiology—that is to say, the physiology of the larger and more solid parts of the frame, of the osseous and muscular systems more particularly, is in danger of being neglected. If this is so it will, I think, be much to be regretted; because a great part, at least, of the educational value of anatomical study will be sacrificed.

It is, however, with the "finer physiology," the physiology which discusses delicate structure and processes, the relations of parts to one another and their developments, that we are here most concerned, and with it, more particularly, as a branch, I may say the fundamental branch, of medical science.

It has been said, and the dictum has, I think, had much influence, that physiology forms a section or subsection of the British Association, that the ground is, therefore, occupied by that Association, and ought not to be invaded by the British Medical Association. But it need scarcely be observed that physiology is a very wide field, upon which the workers are daily increasing, which is becoming daily wider, and the new treasures of which are daily being disclosed. Moreover, its relations to medicine are such that a Medical Association ought not to presume to parade the noble word "science" upon its banner, which does not send its labourers into this field, which does not encourage them there, and, at the very least, receive gracefully the fruit of their toil. A knowledge of the healthy working of the machine must be the only key which can unlock the mysteries of those deviations from it which constitute morbid processes, and must alone be able to furnish any reasonable theory as to the mode by which they may be prevented and arrested, and by which the damage they have done may be repaired. Physiology, indeed, must be the foundation stone of Pathology, of Sanitary Medicine, and of rational Therapeutics; and in each of these instances the building has yet, in great measure, to be raised. Indeed, the groundwork is scarcely visible, and we have only dim glimmerings of the form which the structures are to assume; but we feel assured that they must rise, and that, as they do grow upon this only sure foundation, an enormous amount of good is likely to accrue to the human race, and the science of medicine will be rescued from the opprobrium of empiricism. It is in this way mainly, if not solely, that civilisation must hope to stem the tide of malady, or rather the increasing number and variety of maladies, which she unfailingly brings in her train, as a consequence of the increasing variety of occupations, the increasing artificiality of life with the consequent increasing sensitiveness to external impressions, and, above all, by the increasing density of population.

The allusion to this point reminds me that some maladies, as the black death of the fourteenth century, the sweating sickness of the sixteenth century, and the plague of the seventeenth century, have disappeared under increasing cleanliness, better diet, and improved sanitary regulations. But others, as syphilis, cholera, and diphtheria, with a multitude of minor and more chronic ailments, have come in. The fact is, that the catastrophes of disease which now and then sweep, like hurricanes and storms, over a land, serve, to some extent, to clear and purify the population; and the sanitary measures must not be limited to the prevention of these disasters and the evils which directly accrue from them. They must be extended also to those general improvements of the condition of the people which sound physiology will suggest.

The importance of Physiology, in a sanitary point of view, is beginning to be recognised and discussed by the public. It is felt, as a matter of common sense, that a knowledge of the living processes must assist in the discovery and the carrying out of the means which are most likely to maintain those processes in health and in vigour; and no greater service to mankind could this Association do than by giving an impulse to that feeling. In their apprehensions of epidemics men are beginning to bend before the shrine of science and to recognise the fact that it is in a patient, persevering, hopeful application of the faculties of investigation which have been given them, rather than in any direct interpositions, that they are to look to Providence for security. Where man can help himself, other assistance must not be sought; indeed, would be detri-

mental. Is not this as sure a law and as sure a stimulus to activity as any other which is stamped upon creation? Already the careful consideration of the life history of epidemic diseases, of their causes, origin, development, growth, and decay, and the very limited knowledge of their nature thus derived, have suggested certain definite preventive measures sufficient to give great encouragement to their further physiological investigation; and this, be it observed, can only be based upon more advanced knowledge of the conditions of healthy process.

True, it may be said that hitherto practical medicine has not derived much from physiology; that our knowledge of disease is still confined, almost entirely, to the information derived from observation of it and of its symptoms; and that treatment is based chiefly upon the results obtained by experience; that of the actual *modus operandi* of medicines we are very ignorant; that we give mercury, iodide of potassium, quinine, opium, etc., under certain circumstances, simply because we have found them to be beneficial in similar conditions; and that medicine, accordingly, is more of a tentative and experimental than of a rational and an inductive science. Doubtless there is much in this; and the same thing may be said of many other sciences. The reason in this case is obvious, forasmuch as Physiology has never yet reached a sufficiently advanced stage to render much help to medicine. The problems of disease and of therapeutics are singularly difficult of solution, perhaps more than any others in the physical world. They are so because they have relation to the aberrations of the most complex and most refined and highest of created objects. For instance, how many questions hard to be answered does an ague suggest, with its chill, its heat and its sweat, with its periodicity, its miasmatic origin, its accompanying depression, and its cure by quinine or arsenic, and by the relation of all these to one another. We watch the spasms in tetanus, which are dragging the life out of our patient, and fatally barring the road against supplies of nourishment if not of medicine; and we wonder upon what they depend, whether it is upon some change in the muscles, in the blood, or in the nervous system, and what change it is in either or all of these. We try a drug which we have read was followed by good result in some other case of the kind, and we are disappointed. All the drugs have had their turn, and in turn have failed. We cast about for help to enlighten our darkness; and we look longingly to Physiology. We cannot but feel a hope, if not a confidence, that though the problem may be a difficult one, and though we have hitherto looked in vain, yet that the solution of these and many like questions will come and will bring with it the alleviation of some of the destructive and racking and hitherto indomitable maladies to which our frames are subject. We yield to that hope the more willingly because we recognise that though hitherto almost barren in this direction, yet that physiology, as it is now studied, has more promise of fertility. So long as the attention was confined, almost exclusively, to the investigation of dead structure, we could not hope for much enlightenment on the subject of morbid process. That investigation was necessary; and it was necessary that it should be conducted with the labour and care which have been bestowed upon it. It is, however, not the end, but a means to assist in the elucidation of living process. The mine of dead physiology has probably been pretty nearly worked out in the last fifty years; and the shafts are now being sunk more determinedly and systematically than has hitherto been done in the district of living physiology, with all the assistance which an accurate knowledge of the ground can give. It is unquestionably to be repeated, thoughtfully planned, and carefully conducted experiments upon living animals that we must look for the solution of the great problems of pathology and therapeutics. The valuable discovery of the use of anesthetics has rendered these experiments far more successful, as well as feasible; and it may be anticipated that, through their administration to animals for this purpose, anesthetics will conduce even more largely, though less directly, to the mitigation of human suffering and the prolongation of human life, than in the mode in which we are accustomed to witness their employment on the human body. The workings of the animal machine can now be watched carefully and uninterruptedly, and the influence of various agents upon them can be deliberately investigated. At the same time, the improvement of apparatus enables the phenomena to be more accurately tested and recorded; and the employment of the bath enables a prolonged microscopical examination of the changes in a living part to be maintained.

The researches in this field which seem to hold out the best promise to medicine, are—*First*, those which are designed to elucidate the relation of the nervous to the vascular and the secretory system. *Secondly*, those which have relation to the transmission of healthy and morbid products from tissue to tissue, and from without the body to within it, and of their increase in the body. *Thirdly*, those which have for their end to determine the influence of various drugs, poisonous and other agents, upon the system.

With regard to the first of these, the growing knowledge we are acquiring, through the labours of Bridge, Schiff, Louget, Pflüger, Rutherford, and others, respecting the influence upon the heart and blood-vessels of the nervous system, as represented by two of its chief parts—the sympathetic, on the one hand, and the vagus and medulla oblongata, on the other—has opened up new fields of thought. They are enabling us to obtain rational views of the influences, already well known, which radiate from the stomach and alimentary canal upon the circulatory system. It seems incredible that this important stand-point, coupled as it is, and will be still more, with a knowledge of the circumstances which regulate blood-pressure and the production and distribution of heat, should not lead to better views of pathology and treatment. Happily, the sphygmograph and the clinical thermometer have introduced themselves here as additional bonds between the physician and the physiologist, coming in, as new inventions have happily the art of doing, or rather, as in the nature of things, they must do, precisely at the right time; and I trust that my friend Mr. Garrod, whose clinical knowledge, accuracy of observation, and fertility of invention peculiarly fit him for this work, will not cease to continue his interesting and instructive experiments. Practical medicine can scarcely desire a greater improvement than, it may be hoped, will accrue from a more rational system of applying cold internally and externally, and of regulating temperature, locally and generally, in the treatment of disease. We are peculiarly impressed with the importance of some trustworthy guiding knowledge on this point, when we remember the vacillations of practice which have taken place, and which do so still take place, with regard to it, when we reflect how terribly open we are to the imputation of blowing hot and cold with the same or consecutive breaths, and when we think upon the enormous amount of evil which has resulted from this. How many thousand lives have been sacrificed to misconception in this one point. Who can question, for instance, that the plagues of former days owed not a little of their virulence to the heated atmosphere in which the patients were sedulously kept? Then, as is too often the case still, profound ignorance cloaked itself with an effrontery of dogma which passed with the wearer, as well as with others, for evidence of an insight into the deep mysteries of science. Then, as too often now, the purely practical man, as he is called, was not uncommonly a slave to the grossest and most absurd theories, upon which he unconsciously relied as the ground of his malpraxis. If, then, theory is so potent for evil and for good, of what paramount importance is it to take all means that lie in our power to establish the foundations of theory upon as correct a basis as possible. Let the physiologist and the physician work on together, and let them work out, among other things, the subject of temperature in health and disease, so that the employment of cold, in the treatment of fever, for instance, may rest upon some assured principle, and not crop up for a time, do a certain amount of good or harm, and then fade away because it has no root in a clear conception of its effects and of the nature of the processes it is intended to regulate.

The second class of researches to which I have referred, those, namely, which have relation to the transmission of healthy and morbid products from tissue to tissue, and which have been made by Addison, Waller, Cohnheim, Stricker, Sanderson, Caton, and others, may be expected, perhaps, to throw light, not so much upon treatment as upon that which is still more important, viz., the prevention of disease. We have learned that the bodies of animals, probably of all animals, including our own, are freely permeable by parasitic forms, which insinuate themselves into and through the tissues, and leave no gap or trace of their course. We find that a similar, though more refined, corpuscular wandering, or transit of corpuscles, to and fro, takes place with regard to animal tissues; and the observation of the migration of corpuscles which have been stained by cinnabar and other coloured materials shows that their membranes offer little or no barriers to this sort of osmosis. A wide field for observation and speculation is here opened, upon which, however, we are only just entering, and we need that it should be much more thoroughly explored, and that much more information must be gained respecting the laws by which this process is regulated, before we can apply our knowledge respecting it, with much advantage, to the elucidation of the many great problems of pathology that may probably be solved by it. We can understand now, what was before thought to be impossible, that pus corpuscles, and others like them, can find their way into the blood current and produce the effects we so much dread under the name of pyæmia; but we need assurance that this really takes place; and, if so, under what circumstances it occurs, what conditions favour and what oppose it, and why purulent matter is sometimes diffused and at others pent up in abscesses.

We trust that more information on these and other like points will teach us how we may best avoid those evils which are among the most serious hindrances to the success of operative surgery. My own impression is, that they are connected with some particular habits and states of system

thereby engendered. If I am not mistaken, they are less frequent among the agriculturists than among oppidans, and are, in part, due to the more liberal supply of animal food in which the latter, the artisans more especially, have, of late years, been in the habit of indulging.

Associated with this subject is that of the introduction of noxious agencies from without, and the various questions bearing upon it, such as the decomposition of fluids, the introduction, dissemination, and propagation of germs, and, I may add, their spontaneous generation. The importance of a fuller investigation of those subjects to the adopting of effectual means to prevent the spread of disease is sufficiently obvious. Some points appear to be clear.

First, it is pretty clear that air is the great, if not the only, vehicle of these insidious agencies, whatever they are; and that the exclusion of air or the purification of air from them prevents the occurrence of their effects. To this exclusion of air in the one case, and its admission in the other, must be attributed the difference in the changes which follow a simple and a compound fracture, as also of a subcutaneous and a more free external incision. There can be little doubt that if air could be entirely excluded, the various serous and synovial cavities might be opened with comparative immunity, and operations could be performed, from the probable or certain danger of which we now wisely shrink. It is upon the purification of air from these agents, or germs as they are called, that the antiseptic treatment, so ably propounded by Professor Lister at a former meeting of this Association, rests its claim. Certainly, whether they are germs or not in the ordinary sense of the word, they are so inasmuch as they are the starters or initiators of a new series of changes in the fluids or solids of the body.

Secondly, it is clear that these influences operate with greatest rapidity and facility where vitality is lowered. In other words, the nutritive and other processes are most easily impressed and diverted in a new direction in persons and parts where they are least vigorously conducted. Where the tendency to a right direction is staggered or weakened, the tendency to a wrong direction is most easily given. A fainting or a depressed body is well known to be a ready victim to poisonous and malarious agencies.

Closer observation of animal and vegetable life tells, more and more, of the prevalence of parasitic growth and of those lowered conditions which induce its excess. If a garden is blighted we know that it is so because the vigour of the trees is lowered by imperfect ventilation, frost, or some depressing cause. We recognise in it a mode of killing off some of the imperfect and over-crowded plants; and to apply these physiological principles to the case of man, we see that the maintenance of the vigour of the population by judicious sanitary measures is the only means of preventing an epidemic, and, at the same time, of preventing those evils which epidemics have the effect of correcting. We learn that, if it were in our power to stop epidemics by any mode, as by the institution of rigid quarantine, without attending to this point, we might, by so doing, effect more harm than good; forasmuch as we should incur the liability of engendering other, more insidious and perhaps more destructive, maladies than those we attempt to ward off. Physiologically, the security of a country from invasion by epidemic and other maladies depends not upon the rigour of its quarantine laws, but upon the efficiency of its sanitary enactments; just as, in a military point of view, security from foreign invasion and intestine commotion depends less upon bristling fortresses and strong ramparts than upon those laws which promote the energy and independence, and give scope to the physical, mental, and moral development of the people.

This is one among the lessons which physiology here teaches; and well would it be for the nations of the earth if they would lay it to heart, and would set about improving their own condition, rather than rest content, as they are too prone to do, with expending their efforts on what seems to be the more obvious and the easier task of endeavouring to bar out the enemy. This may be urged the more, because physiology points to some, and may soon be able to indicate more, of the methods by which the end may be attained. Physiology will gradually more unfold those laws which regulate and continue in mutual subordination the multitudinous factors that make a human body, and will show under what conditions they are most likely to degenerate into morbid conditions or morbid forms, and to degenerate into, or be modified by, parasitic growths or something akin to them. I say degenerate into parasitic growths; for as a cancer, on the one hand, has many of the attributes of the parasite, so it has, on the other, many connecting links with healthy tissue. It occupies, as it were, a middle or transitional place, and seems to suggest that in a better knowledge of the refined processes which are the source of it and some other morbid products, and in the more intimate knowledge of their real nature to be thus attained, we may look for some assistance towards the pre-

vention, and possibly the cure, of these, the most terrible scourges of a civilised people.

We know that effused blood and other fluids of low vitality are peculiarly prone to decomposition and disintegration from the admission of air. If the presence of blood in wounds could be prevented, the other tissues would, as a rule, resist the decomposing influence of air; and the lower the vitality of the blood, the less is its resisting power. If experimental physiology will disclose some means of increasing the resistance of the blood to decomposition, or, still better, will give us some good means of damming up the vessels, or clotting the blood in them, so as to prevent its effusions into wounds after they are closed, primary union would be the rule, and the mortality after the lesions caused by operations and in other ways would be greatly reduced. I say into wounds after they are closed; for the blood which flows while the wound is open may be cleared away, or may be so tanned, as it were, by carbolic acid and other agents, as to render it proof against the decomposing influence of air. The frequent failure of the primary union of wounds is discreditable alike to physiology and to surgery.

Thirdly, we find that, though some of these noxious agents, such as the fine poisons of measles, scarlatina, etc., are capable of traversing the delicate pulmonary and other membranes and to produce their effect on the system, while others, which are probably of a somewhat coarser nature, are arrested by these sieves, and, to some extent, by the artificial sieves of cotton-wool or muslin, which have been suggested by Professor Tyndall in his well known lecture on dust; some, and this seems to be the case with diphtheria, erysipelas, ringworm, and more obviously with itch, fasten upon the surface and spread their baneful influence in the epithelium and subjacent membrane. Of these, some, as the last mentioned, are clearly parasitic; and others may be so. In deciding this point, it is necessary to discriminate whether the parasite is a cause or a consequence of the altered condition. For instance, in the case of hay-fever, it is not by any means certain whether the vibrios in the mucus of the Schneiderian membrane, described by Binz and Helmholtz, and which suggested the dropping of a solution of quinine into the nostrils as a remedy, are a cause of the malady, or whether they are only an aggravating consequence of the altered condition of the epithelium, which presents a favourable nidus for them. Just as it appears from the recent observations of Hoppe-Seyler, that fermentation may not be, as supposed by Pasteur, dependent upon organisms, though the progress of fermentation and the production of new organisms may proceed *pari passu*.

The third direction of physiological research, to which I have alluded as holding out good promise for medicine, that, namely, which has for its object to determine the influence of various drugs, poisons, and other agents, upon the system, is the one we may look to most directly for assistance to the practical physician. The ground has been broken and the seed sown by Drs. Fraser, Brunton, and Paton, by Von Bezold, Boehm, J. Blake of San Francisco, and others; and we hope to gather the fruit of a more precise knowledge of the effects of medicines, and also of their *modus operandi* upon the parts of the body upon which they severally act; whether it is by influencing the chemical, the osmotic, or the other qualities of the fluids and tissues. So that we may learn what it is that a medicine really does, and have some scientific basis for our employment of it in the treatment of disease. Here I may refer to the interesting observations of Drs. Crum Brown and Fraser on the relation between chemical constitution and physiological action; from which it appears that a slight change in the composition of a medicine may lead not only to a change of effect, but to a change in the tissue affected; and also to the observations of Dr. Murray on the relation of osmosis to digestion and dyspepsia, and to the physical and physiological action of medicines, as indicating the path in which such investigations may be pursued. Is it not strange, and a strong shock to our reliance upon the evidence of practical men on such matters, that they should so long have gone on in the belief, and in action founded on the belief, that mercury produced a direct and marked effect upon the liver; and that they should have done so in spite of the abundant evidence to the contrary daily before their eyes, in the treatment of syphilis and other affections? That it should have been reserved to the experiments recently conducted in Edinburgh, by Drs. Rutherford and Gamgee, to throw a doubt upon, if not to disprove this, is a proof, at any rate, that the experience of practitioners needs to be supplemented by the carefully conducted experiments of trained physiologists. Indeed, the doubt thrown upon the action of mercury on the liver; the announcement by M. Lorain, that digitalis augments the force of the heart's action, and diminishes and regulates its beats; and further, the observation that alcohol lowers the temperature in pyrexia, are sufficiently startling to make us hesitate respecting the accepted views of the effects of remedies. Added to the revulsions of opinion on apparently established points

which many of us have witnessed, they make us long for some additional sources of information to show us better light in this dark and difficult road. In the midst of these shakings of our old ideas, it is some comfort to learn, from the carefully conducted observations made by MM. Rabeteau and Constant, that the action of alkalis is really to reduce the rate of oxidation of tissues, the temperature, the pulsations of the heart, and the excretion of urea, and not, as was recently taught by Mialke and other therapists, to increase all these.

The physiologically antagonistic influences of atropia and physostigma, and the fact that a poisonous dose of the one may be given with impunity, if the other is administered along with it, seem to open a prospect that really curative, that is antidotal agents, may be discovered, not simply for drugs, but for the effects induced by drugs, and also for the changes which constitute disease; and the observation that morphia, chloroform, and some other substances, produce different and sometimes opposite effects, according to the doses in which they are given, renders it not improbable that poisonous agents may, in some instances, be antidotal to themselves, and that the word "homœopathy" may be rescued from its position as the expression of a fallacy, and may yet take its place in the etymology of scientific medicine.

In connection with this subject, I cannot do better than refer you to the valuable and truly philosophical lectures of Dr. Brunton *On the Experimental Investigation of the Action of Medicines*, the publication of which in the JOURNAL of the Association has done more than any one other thing to raise the scientific character of the JOURNAL. The appearance of such lectures in one of our weekly JOURNALS may be said almost to mark a new era in our profession; and I earnestly commend the perusal or re-perusal of them to every member of the Association, not only because they will supply him with a surprising amount of original information, but, still more, because they are calculated to inspire him with a truer feeling of what the science of medicine is or ought to be, and of the mode in which it should be studied.

Let us hope, too, that researches, conducted in the spirit of those by Parkes, Allbutt, Flint, and others, will induce more rational views respecting diet in health and disease, so that we may not henceforth find the "starving" system and the "keeping-up" system supplanting one another, as though at the caprice of fashion, to the great injury of all and to the discredit of our profession; and that we may gain more positive information as to the nutritive qualities of some of the staple articles of food, such as alcohol, albumen, and gelatine, as well as of the conditions in which each is most likely to be serviceable.

I must not, however, trespass longer upon your time; I have purposely avoided details, partly because they are scarcely suitable to the occasion, and still more, because we have the pleasure of anticipating an address in Physiology from one who is so much more competent to the task. My object in troubling you with these remarks is chiefly to express my own sense of the paramount importance of physiology, especially of physiology practically studied upon the living animal body, to the science of medicine, and of the great opportunity which is open to the Association, through the medium of this section, to clench more tightly the link that joins physiology to medicine. This I believe to be of especial importance at the present time, not simply because physiologists are entering upon regions of research which afford vast opportunity for the improvement of medical science, but because the great area and engrossing character of those regions may have too much the effect of rendering physiology a special and separate study, and of carrying its followers somewhat too much out of the range of medical thought. Upon this section, therefore, devolves the task of giving or maintaining a practical bearing to the researches of physiology, of showing that every discovery of physiology may, indeed must, admit of such a bearing; that however abstruse the investigation into animal life may be, it must ultimately have a relation to the pathology of man and the treatment of his diseases. It is for us, as practical men, to sympathise with the physiologist in his most refined investigations, on the one hand, and on the other, to induce the physiologist to sympathise with us, and to feel that the highest aim of his pursuits should be to extend the knowledge of the natural processes into that of the variations from them which constitute disease, and into that of the means by which those variations may be prevented or arrested. In short, to connect science and practice, to make them interpret and supplement and assist one another, which is the great desideratum in all departments of knowledge, is the especial function of the Physiological Section of the British Medical Association. That our meeting will not be altogether barren in this respect is sufficiently shown by the list of papers embracing so many, and such interesting subjects, which appears upon our programme.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 9TH, 1873.

THE LONDON MEETING.

A LARGE proportion of our readers are as well or perhaps better able to form a judgment and pronounce a verdict on the London meeting as ourselves. Some of its features are indisputable. It is the largest meeting of the members of this Association that has yet been held; nay, it is the largest meeting that, so far as we know, has ever been held of the members of our profession. It has included also a larger and more cosmopolitan representation of all that is eminent in the various branches of Medicine, Surgery, Obstetrics, Physiology, and Psychology than has ever been found at any congress, national or international. It has produced, too, a more profound, and, let us hope, a more favourable impression on the public mind of the collective energies, the united character, and the philanthropic objects of the medical profession than any event which has yet occurred in the history of medical associations. During this week, the whole objects of the Association have been very prominently and very earnestly brought under the public eye by men whose personal character and reputation guaranteed the sincerity and the value of their opinions. The leaders of medicine have daily, publicly, and constantly identified themselves in the public eye with the main objects which we seek. This does not, of course, commit them, and is not by any means intended in any way to commit them, to participation in the particular acts or declarations of opinion of majorities of the Association.

In respect to minor matters, it has been made perfectly apparent that the Association is one of great elasticity and breadth, one which affords a common ground for the expression of a great variety of opinions and for the evolution of a great diversity of modes of action. Moreover, in all great associations an unanimity of opinion is neither possible nor entirely desirable, but the course of action is decided by the preponderance of clearly expressed opinion, the well understood condition being that the majority shall not abuse their advantage. What is everywhere understood, then, as the meaning of this great gathering, as the interpretation of this affluence of foreign celebrities, of the cordial public action of men such as Fergusson and Paget, Jenner, Burrows, Curling, Humphry, Denham and Porter of Dublin, Hughes Bennett of Edinburgh, Struthers of Aberdeen, Gairdner and Macleod of Glasgow, Rumsey of Cheltenham, George Hastings, Sibson, Stewart, Quain, Savory, Wilks, Callender, Baker of Birmingham, Southam of Manchester, Waters of Chester, Falconer of Bath? The meaning surely is, that all are prepared to approve the objects of the Association, to unite in furthering those general objects, and to endorse the spirit and the general scope, if not always the minute directions, of the efforts which have been made by all concerned

in the conduct of the Association to carry out the objects of its founders.

The very success of the meeting has been in some sense the cause of observable defects in its conduct. "*Mole ruit sua*" was the criticism of a not unfriendly observer on the first day of the meeting; and indeed, at one moment, this fate seemed almost to threaten. Seven hundred gentlemen only had responded to the urgent and repeated request that everyone who desired to attend the meeting, would fill in and return a printed form of notice supplied through the JOURNAL. On the day prior to the meeting, between the hours of twelve and three, six hundred names had already been entered. Before one o'clock on the first day of the meeting, fifteen hundred members made their appearance, and by six o'clock in the evening, 2,200 names had been registered. It was excessively difficult, and in some instances practically impossible, to expand the arrangements with sufficient rapidity to meet so unprecedented and extraordinary an accession of members. For instance, the Lord Mayor was prepared to receive 1000 visitors, with a proportion of ladies; the total number of visitors who actually attended at the Mansion House was 3,400, of whom 3,000 were members of the Association, and their ladies. The Hall of Lincoln's Inn, which was selected as the most desirable place for the public dinner, will hold 350. There has commonly been a considerable difficulty in making up the members who attend the public dinner to 200, as this is considered as among the most costly, and not always the most attractive of the privileges of the meeting. The announcement, however, that the Premier intended to honour the Association by attending at all costs, and notwithstanding his known physical suffering, attracted upwards of 900 applications for seats. The capabilities of the excursion parties were of course limited. The tent erected at Cliefden will not hold more than 150 persons at dinner; but 500 were anxious to take part in this most attractive excursion. Under these circumstances, it became necessary to adopt some principle of selection; excursions were multiplied in number, sufficient to afford accommodation to all comers; and for the more favoured parties, for which an excess of applications had been received, the principle was laid down of confining the excursions entirely to foreign guests and provincial members, and, after providing for a limited number of those whose long services to the Association, great labours, and personal efforts on the occasion of the various annual visits of the Association required special recognition, a ballot was made for the rest. It is not probable that any arrangements which did not meet the impossible condition of including all applicants should be agreeable to all applicants. The plan, which was actually adopted, was carried out with great care at the cost of immense labour lasting through all night on each of the days of the meeting; and every possible effort was made to mitigate any discomfort and to compensate any disappointments which were inevitable. So much of explanation is due to those who had devoted many weeks of labour to the organisation of this most onerous and laborious meeting, and who have desired to do their utmost in the matter to serve the interests of the whole Association. The liberality of the metropolitan members had provided a fund of £800 to defray the expenses of the meeting; they will, of course, largely exceed this sum, but on this score we feel certain that there will be no difficulty. Private hospitalities have been universal and profuse; nevertheless, it is to be feared that, from the difficulty of marshalling lists so unexpectedly large in their

extent and so rapidly poured in, many have been overlooked whom it would have been a pride and pleasure to entertain.

Of the character of the addresses we need say nothing; for we present all the four orations to-day, and several of the addresses of presidents of sections. Our readers can compare them, and will form their own judgment. Those who attended the meetings have been loud in their expressions of interest and admiration.

The sections have been admirably attended, and the business of the sections has been conducted throughout the meeting with an order, regularity, and success which entitles the officers of sections to our warmest thanks. We shall endeavour to present collective reports in our following issues. We may say, however, that the sections of Obstetrics, of Medicine, and of Public Medicine were marked by papers of singular interest, and that the reception accorded to some distinguished foreign and British speakers was such as we know has produced on them a permanent impression of ineffaceable satisfaction.

It is impossible to accord thanks too earnest and sincere to the Excursion Committee, and especially to its Chairman, Mr. Curling, and its Secretaries, Dr. Edis and Dr. John Murray, for their untiring labours and uniform efforts to meet the enormous pressure upon their time and attention.

The Museum Committee, and chiefly, their editor and secretary, Mr. Waren Tay and Mr. Fowke, had a task of which those who have received copies of the catalogue can form some idea. It is a volume of 132 octavo pages, with 136 illustrations, and had to be prepared for the press within four days. Some 800 objects had to be arranged, many of them sent in at the last minute, as such things always are; series of demonstrations had to be provided for, and a labour which might well have been spread over three months was condensed within as many days. The catalogue was largely distributed; it is, of course, a very costly as it is a singularly valuable volume. A number of interesting special demonstrations were made at different hours in the museum and in other parts of the building, of which we shall publish further notices.

The meeting is not yet ended; and, writing during its course, we can but say that, spite of those shortcomings to which we have frankly alluded, and which are, we honestly believe, due to the unprecedented magnitude of the gathering and the suddenness with which this great increase of its size was developed, and spite of any difficulties or shortcomings, it may be considered as one of the most interesting and remarkable events yet recorded in the history of this Association, or indeed of the British medical profession. We trust that we shall next week be able to say that the universal verdict has pronounced it to be on the whole a splendid if not an unalloyed success; and in any case its effects must make themselves felt for a long time to come in the increased power and influence which the Association has gathered through its instrumentality.

THE PROVIDENT MOVEMENT AT MANCHESTER.

THE question of providing for the medical treatment of the artisan class upon the principle of mutual assurance continues to occupy the attention of both the public and the profession in Manchester and Salford, and there can be very little doubt that we shall ere long be furnished with a scheme for carrying out this object on a large scale. A letter from Dr. Reed in the *Manchester Guardian* of July 25th gives us some insight into what took place at the meeting of medical men

which was lately held with closed doors. It appears that, far from being unanimous in condemning the provident system, those who supported Dr. Royle form a minority of the medical profession of Manchester and Salford. There seems to have been a brisk discussion; and though, on the whole, the speakers were favourable to the provident principle, they pointed out with great justice some of the defects in the existing provident dispensaries, and indicated the points which ought to be borne in mind in framing a comprehensive system of provident sick societies. There can be no doubt that there is room for improvement in the management of provident institutions. They are, in truth, in their infancy, and we have yet to learn by experience the best modes of harmonising the requirements of the industrial classes with the legitimate interests of the medical profession. This was pointed out in a recent number of our JOURNAL; and we indicated how far Dr. Royle and those who act with him seem to us to have a reasonable ground of complaint. But, if the Manchester Committee, which is now engaged in reviewing the whole subject, give due weight to these considerations, we can hardly doubt that they will propose a scheme which will be satisfactory alike to the public and to the medical profession.

There is one point which Dr. Royle has urged in which we entirely agree with him; and that is, that the medical charities should make a real inquiry into the circumstances of their patients, so as to prevent the admission of those who are able to pay. Whether provident sick societies are established or not on a large scale, a systematic inquiry as to the social condition of the applicants is necessary on the part of all free hospitals and dispensaries. Without this, it is impossible that they can tell whether they are doing good or harm, or that there can be any remedy to the abuses of which so much complaint is now made. This point is urged in the current number of *Macmillan's Magazine*, in a very able paper on the Use and Abuse of Hospitals by Mr. Fairlie Clarke; and it is shown how such a system of inquiry would work, and what advantages it would carry with it for the sick poor, the charitable public, and the medical profession. If due inquiry were made in all cases, those persons who are able to pay the fees of a general practitioner would no longer be allowed to prey upon the liberality of the charitable, and would be equally excluded from the roll of the provident dispensary; and a large class, who now obtain gratuitous relief, would be obliged to seek advice in the ordinary way, and to pay their medical attendant his justly earned fees.

THE library of the Royal Medical and Chirurgical Society will be closed for one month, from August 11th to September 10th, both days inclusive.

WE regret to see that the intention is announced of discontinuing the *Madras Monthly Medical Journal*. This excellent monthly has apparently succumbed to the competition of more frequently published papers, such as our able contemporary the *Indian Medical Gazette*.

VENTILATION OF THE INNS OF COURT.

THE frequent complaints of judges, jury, reporters, and public, of the quality of the respirable air in the law courts during the summer months, are not surprising; but it is much to be feared that, until much larger and better constructed courts are available for the purposes of justice, and especially for trying cases which attract a concourse of auditors, it is beyond the resources of science to remedy the evil. We have had more than one opportunity of investigating the modes of ventilation practised in the Westminster court; and it would be difficult to suggest anything more ingenious and complete, or to devise a more intelligent and careful surveillance. The problem, of course, is to change the contained air sufficiently to prevent it from becoming loaded with the products of respiration. It is possible to ventilate adequately the smallest space into which a man can be crammed, by producing sufficiently rapid currents of air; and means are at hand, in some of the courts, for blowing the judge and jury out of their seats, and carrying the wigs and papers of the barristers floating over St. James's Park. But the tolera-

tion of currents of air, or draughts as they are called, is very limited, both with individuals and with bodies of men. Hence it is found necessary, whenever it is desired adequately to ventilate any building, permanently occupied, to allow sufficient floor-space, and apertures of ingress and egress of such size as will give about 1200 feet of cubic air for each individual, and will afford facilities for producing a movement of air just sufficient to produce a total change of air about twice an hour. Our readers will remember that this whole question was minutely discussed in a memorandum presented to the Poor-law Board, a few years since, by Mr. Ernest Hart, pending the question of the reconstruction of Poor-law infirmaries, which was then being agitated; and it was then further analysed by authorities such as General Morin, Dr. Angus Smith, F.R.S., Professor Parkes, F.R.S., and others; and, setting aside details, this was the conclusion at which they arrived. In the courts of law, however, witnesses, jurymen, and public are packed like herrings in a barrel; and to produce anything like the change of atmosphere necessary to afford a pure, cool and respirable air, a whirlwind must be blown through the court. The conditions to be satisfied at present are, in short, impossible. The difficulty is in some cases aggravated by the extreme susceptibility of some venerable members of the Bench to anything like perceptible movement in the air. We have seen repeated written orders from the Lord Chief Justice Cockburn to close air-holes, close windows, and shut ventilators; and the rule of the judges is absolute in such matters. The bar and the public must endure the excess of discomfort as well as they can. But even where such susceptibilities do not exist, the present courts are so ill adapted to receive the crowds who are often packed tightly into them—not always the most dry, savoury, and well-washed crowds—that it is impossible to ventilate them adequately without driving through them, while the courts are sitting, the four winds of heaven, and this is not to be thought of.

SUPERANNUATION TO DR. BURROWS.

AT a meeting of the guardians of the Sligo Union, held last week, it was unanimously resolved that Dr. Burrows, medical officer of the Riverstown Dispensary, should receive a retiring allowance of £87 : 18 : 8 per annum, being two-thirds of his salary, including registration and vaccination fees. Dr. Burrows has served for nearly half a century and well deserves the sum awarded him.

MR. DALRYMPLE, M.P.

WE regret to see it stated by the political press that Mr. Dalrymple, M.P. for Bath, has declined to contest his seat for Bath in the next Parliament. Mr. Dalrymple has earned the good opinion of the House, and has quickly won for himself a solid political position. He was always most ready to assist in bringing forward medical subjects requiring discussion in the House, and has laid his profession under considerable obligations. We trust, therefore, that the statement may not be verified by events, or that, at all events, he will find some other constituency less difficult to please. The services which Mr. Dalrymple has rendered in procuring a thorough parliamentary investigation of the question of providing means for restraining dipsomaniacs are well known; and the decision of the Select Committee of which he procured the appointment, and for which, at great personal sacrifice, he obtained valuable information, will remain an important contribution to future legislation. The Bill which he framed has been hardly treated by the Government, which sacrificed it to its own exigencies, while avowing an intention to support some of its main provisions. We trust, however, that it will reappear early on the scene in the next session, and will yet become law.

MISSING OFFICERS.

INDISPOSITION deprives the annual meeting this year of three at least of its most valued officers: Dr. Lyon Playfair, M.P., the President of the Public Health Section; Dr. Braxton Hicks, F.R.S., the President of the Obstetric Section; and Mr. John Erichsen, the Orator in Surgery. Dr. Playfair, we are happy to learn, needs only rest and change of air to enable him to recover from the effects of over-fatigue in the

course of the session. Mr. Erichsen and Dr. Braxton Hicks have suffered severe illness from the effects of wounds which occurred in operating; but they are now, we are happy to state, both on the road to complete recovery, although forbidden for the moment to undertake their official duties. To them, as to us, the unfortunate accidents have been the source of great regret.

SERIOUS OUTBREAK OF TYPHOID FEVER IN THE NEIGHBOURHOOD OF CAVENDISH SQUARE.

WE regret to state that a severe epidemic of typhoid fever, affecting the families of many medical men, has broken out in the neighbourhood of Cavendish Square. Its cause is still in doubt. We have received a letter on the subject, which we publish below; but it ought to be stated that information, of which we are in possession, throws considerable doubts on the statement that the epidemic is conterminous with any particular milk-walk. The implicated company, indeed, believes itself to be in possession of information indicating quite another source of the epidemic. The following is the letter to which we have referred.

Department of Medical Officer of Health,

Court House, St. Marylebone, W., 6th August, 1873.

SIR,—It has come to my knowledge that many cases of typhoid fever have recently occurred in this and neighbouring parishes amongst families who are supplied with milk from the same source. I shall feel under great obligation to any of your medical readers who may at the present time be treating the disease, or have recently done so in this or the neighbouring parishes, to inform me, with the least possible delay, of the source from which in these instances the supply of milk to the family has been obtained.

The great importance to the health of the community, of the matter which my official position calls upon me to investigate, is my apology for asking your valuable assistance.

I am, Sir, your obedient servant,

J. WHITMORE, M.D.,

Medical Officer of Health for the parish of St. Marylebone.

PROFESSIONAL RISKS.

WE deeply regret to have to record the death of Dr. Pirrie, J.P., Consulting Physician of the Belfast General Hospital, and Master of the Belfast Lying-in Hospital. This eminent physician must be counted amongst those who have fallen victims to the dangers of professional life. His death was due to a wound by a spiculum of bone, which happened to him in performing the operation of craniotomy. Two eminent professional men in London—Mr. Erichsen and Dr. Braxton Hicks—are at this time suffering from severe illness, passing on now, however, happily to cure, arising from wounds incurred in operating. Dr. Pirrie was a man of considerable accomplishment and great local influence, and his premature death is largely felt and deeply lamented. He died at the age of 45.

EDINBURGH UNIVERSITY CLUB.

THE "capping day" dinner of this club was held at St. James' Hall Restaurant on August 1st, 1873, at 7 P.M.; Sir John Rose Cormack (of Paris) in the chair. Forty-six members of the club and guests sat down to dinner. Among the members present were: Sir William Fergusson, Bart., Drs. Sieveking, Cobbold, George Harley, Barlow, Cogswell, Webster, Woodhouse (of Reading), Barnes (of Epsom), Jardine Murray (of Brighton), Whiteley (of Cannes), Halley (Hon. Treasurer), and Mr. Richard Davy (Hon. Secretary). The Chairman, after giving the loyal toasts, in very eloquent terms proposed the Edinburgh University and the hundred gentlemen who had that day received their degrees. In his remarks, he referred to the importance of rated. Dr. Sieveking proposed the health of the Chairman, and such institutions as the Club, in bringing together men otherwise separated to the services rendered by him to the French and English in Paris during the two sieges, and to the recognition which they had received in the honour of knighthood conferred on him by the Queen. Sir John, in replying, gave some graphic sketches of incidents which had occurred in and around Paris during the German siege. Dr. White-

ley proposed, as a corollary to the preceding toast, the health of Lady Cormack, who had ably supported the Chairman in the trying position in which he was placed during the sieges of Paris. Telegrams were interchanged between the Chairman and Professor Turner, of Edinburgh, congratulating the newly "capped" graduates. Dr. Cobbold, Dr. Lavies, and Dr. Halley contributed to the success of this agreeable *r  union* by their excellent singing.

NORTH OF SCOTLAND MEDICAL ASSOCIATION.

THE annual meeting of this Association was held in the Medical Society's Hall, Aberdeen, on the 1st instant; Dr. Turner (of Keith), President, in the chair. There was a large attendance. The President delivered an admirable and very able address on concurrent changes in medical practice during his professional career, and more particularly to the progress of therapeutics. The address will be published at the request of the Association. Mr. Mackie (Insch) brought up the amended report of the committee on medical ethics, and, on the motion of Dr. Alexander Ogston (Aberdeen), it was resolved, before finally agreeing to the code, that it be printed and circulated among the members of the Association. Dr. Alexander Ogston (Aberdeen), in the absence of Dr. Keith (Aboyne), moved the appointment of a committee "to revise the existing scales of fees, and, if necessary, introduce a new one to replace them, so as to bring our remuneration in unison with the altered value of money, and to serve as a standard for the guidance of local societies." This was agreed to, the committee to consist of the presidents and secretaries of the local societies. Dr. Beveridge (Aberdeen) read a paper on the diagnosis of certain obscure forms of disease of the brain. Dr. Beveridge submitted an abstract of the accounts for the year. Dr. Harvey (Aberdeen) was nominated President. The members afterwards dined in the Imperial Hotel, and a pleasant afternoon was spent under the presidency of Dr. Turner.

THE DECLINE OF THE MAORIS.

A SERIES of reports have been issued from officers in native districts of New Zealand, furnishing a general report of the physical condition of the natives in the places where they are stationed; and we gather from these reports a good deal of interesting information. The residing magistrate of Wainate, Bay of Islands, reports that, although the natives are much addicted to intemperance, their physical condition at the present time is better than it has been for some time previously, as they suffered much formerly from low gastric fever, which caused several deaths, principally amongst children. Influenza has been general, but not severe. One prevailing cause of sickness amongst the natives is their constant exposure to wet and cold on the gum-diggings, the miserable shelter they provide, and the low diet to which they subject themselves. The official correspondent from Alexandria states that he does not notice any marked alteration in the physical condition of the natives of that district. Last winter, there was a good deal of sickness, pulmonary diseases being very wide-spread. The natives constantly complain of what is termed "Rewharewha", which is applied to all complaints of the throat and chest. The mortality has not of late years been excessive. Arrangements have been entered into in Alexandria for the erection of a building to be used as a hospital, where any sick people who are brought there can be attended to, and the services of a medical man have been secured. It is stated, however, that the hospital will not be very beneficial; for, as a rule, it is only when a patient is hopelessly given up by their own "tohunga", that the natives place him in proper medical hands. From Opotiki, which is situated in what is picturesquely termed the Bay of Plenty, we learn that the health of the natives has been good during the past year. They have been visited by no epidemic, and the deaths have been few. Children appear to be plentiful and healthy; and it is mentioned that, in this district at least, there are no signs of the Maori race becoming extinct. Drunkenness is very prevalent amongst them. The resident magistrate of the district of Whanganni reports with regard to the physical condition of the natives, that they cannot be pro-

nounced as healthy, inasmuch as cutaneous and other diseases prevail amongst them, owing in a great measure to their want of cleanliness. The mortality of the Maoris, indeed, is very great, which is due in most part to their own neglect in needlessly exposing themselves to the inclemency of the weather, whereby the seeds of disease, in some shape or other, are generated. Many also die in infancy, in consequence of a want of care on the part of their parents and insufficient nourishment. Numbers of the married women are also unfruitful, which induces many of the husbands to lead irregular lives, and adopt the system of concubinage in vogue amongst their ancestors. Their excuse is the strong desire they have to perpetuate the race. There can be no doubt, indeed, that the natives are rapidly decreasing in numbers; they are themselves aware of their own decline, and are very despondent in consequence. The resident magistrate of the district of Marton reports unfavourably of the physical condition of the Maoris. There has of late been a great deal of sickness amongst them in that district, and the population is rapidly diminishing. During the past two years, there has been about fifteen per cent. of deaths, while there has only been seven per cent. of births, in a population of about seven hundred. This fact certainly speaks for itself. The report of the health of the natives in the province of Nelson is somewhat more satisfactory. The numerical status of the people is about stationary, the births keeping pace with the deaths. The children form little more than one-fourth of the whole population, and but a very small proportion of the native women rear children. The want of fecundity in the females has been attributed to the illicit intercourse which takes place between the sexes from a very early age, although the deficiency of vigour in the reproductive powers of the race has been attributed by some to the circumstance of their subsisting mainly on a vegetable diet. The author of the report from which we now quote states that he believes the true cause of their decay to be their continual breeding in-and-in; and that, in fact, they are becoming, from natural causes, effete and worn out. A medical return of diseases during the year shows that no less than three hundred and thirty-six cases were treated for diseases of the chest; while of rheumatism there were ninety-six cases, and of diseases of the abdomen eighty. A circular has been issued to the natives, informing them of the existence of small-pox in the colony, and drawing their attention to the importance of being vaccinated. The report on the Maoris of the district of East Canterbury states that the rate of mortality is less than it has been, owing, not to the increased vigour of the race, but to the absence of epidemics. It is curious to note, however, that the children form little more than one-fourth of the population. The form of scrofula so common in the northern provinces, which attacks the glands of the neck, is unknown in this district; and the question is asked, Can it be owing to their large consumption of (titi) mutton birds, and to their never eating Indian corn? Asthma and rheumatism are common amongst adults, while low fever and pulmonary diseases cause most of the deaths.

EXAMINERS AT THE COLLEGE.

"THERE are", says the *Guy's Hospital Gazette*, "some examiners whose voices seem to produce a most distressing condition of nervous depression, accompanied with profuse diaphoresis in the unfortunate candidate who comes before them. And this may occur without any assignable cause, unless we believe in the existence of a species of instinctive antipathy which appears to exist between certain individuals. And perhaps in the case of a student and an examiner, this condition of things is greatly brought about by the tendency there is in students to look upon examiners as their natural enemies. A student generally enters the examination-room in a state of nervous anxiety; and it often turns on the very first word which escapes an examiner's lips, whether that state of mind is to be kept up or not. If the examiner's tone and manner appear to be kindly, the student begins to feel himself at home, and then, and only then, do his answers represent a true state of his knowledge. There are, of course, some examiners who are more popular than others; and some whose names, often without any just

ground, have a shade of terror thrown around them. Amongst the former class, we may place Mr. Lane, who, after five years' office, has now retired from his examinership, and loud were the wailings amongst intending candidates when this fact was announced. We can but endorse what the BRITISH MEDICAL JOURNAL says, that, 'Candidates for diplomas have found Mr. Lane a type of a perfect and kindly gentleman, who, while upholding the standard of examination, has emboldened and encouraged every candidate, by his natural kindness of manner and life-long experience of students, to do his best and show what knowledge he had.....He will long be gratefully remembered as a model examiner at the College.'

MEDICAL TREATMENT OF SAILORS.

MR. HARRY LEACH, Medical Officer of the Port of London, writes to us :—

Your annotation of last week with this heading, and the quotation from *Fraser's Magazine* that you inserted in the JOURNAL of the 19th ult., might very fitly furnish the text for a long dissertation on the prevention of disease and the preservation of life among our sailors at sea. It is, however, but fair to inform your readers that the Board of Trade in 1867 revised the scale of medicines carried in merchant ships; and, at the special request of Dr. Dickson and myself, eliminated all active mercurial preparations and all drugs likely to be dangerous in the hands of non-professional men. We revised the scale, in fact, on the principle that if little good could, little harm should, be done; but in spite of our exertions, and of the adoption of a "ship guide" containing very simple directions for the treatment of accidents and diseases, cases often crop up in the Seamen's Hospital and elsewhere, showing that shipmasters will, in defiance of official and other recommendations, persistently take to sea, prescribe, and dispense mercury and other actively harmful drugs. Scurvy and pyalism, I am happy to say, now seldom go together, because the former is nearly extinct in our merchant navy; but the active proclivities of captains in amateur doctoring still exist, and if any of your readers can suggest a remedy, I shall be most happy to import it into the next edition of the *Ship Captain's Medical Guide* for the benefit of our sailors.

SCOTLAND.

EDINBURGH UNIVERSITY.

THE ceremony of medical graduation in connection with the University of Edinburgh took place in the Assembly Hall on Friday morning, the 1st instant, when a large number of students were "capped" by the Lord Justice General, who, as Chancellor of the University, presided on the occasion. An address to the graduates was delivered by Professor Turner.

IRELAND.

DUBLIN DRAINAGE.

As Mr. Bazalgette's plan of intercepting sewers has been abandoned, it has been considered advisable that some simpler and more economical project should be considered; and, besides the method of flood-gates, that recommended by Dr. L'Estrange, of Dublin, has attracted a considerable amount of attention. This plan, which was brought before the public about three years since, consists of placing a large tube in the centre of the bed of the Liffey, with which all the sewers that empty themselves into the river would be made to communicate by a series of short connecting pipes, whose contents would pass into the main receptacle. This construction would resemble the backbone of a fish, every small bone being a connecting sewer pipe, whilst the large tube would be thoroughly flushed every tide by the retreating water, removing everything objectionable. The main pipe must, of course, be carried out for a considerable distance into the sea to prevent the sewage passing back again with the next tide. The plan is a simple one, and apparently solves all the difficulties connected with the affair, whilst the cost, although considerable, would be far less than that proposed by Mr. Bazalgette.

FORTY-FIRST ANNUAL MEETING OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

FIRST GENERAL MEETING, TUESDAY, AUGUST 5TH.

AT 10 A.M., the President, Mr. Alfred Baker, and the President-elect, Sir William Fergusson, attended a choral service at St. Paul's Cathedral. The feature of this service was Mendelssohn's "Hear my prayer", which took the place of the anthem.

The First General Meeting was held at 3 P.M. The large hall of King's College was overcrowded at the time announced for holding the meeting; and, as the President and President-elect, with the Committee of Council, passed to the platform, the large assemblage cheered most enthusiastically.

The *Minutes of the Birmingham Meeting* were read by Mr. FRANCIS FOWKE, the General Secretary, and confirmed.

The *Retiring President's Address*.—Mr. BAKER then made his valedictory address. He said :—

Before I resign this chair to the distinguished surgeon who will shortly adorn it, permit me to congratulate the British Medical Association on the unparalleled prosperity and success of the past year. At no period in its history has its numerical increase been so rapid, since more than six hundred names have been added to its membership. This fact is encouraging to its officers and managers, since it shows that its objects are catholic, and enlist the sympathies of our medical brethren. To this progress all its Branches have contributed; and in portions of the kingdom in which no Branch exists, there has been a disposition on the part of the profession to attach themselves to the Parent Society. In Scotland, the flourishing Branch at Aberdeen has attracted numerous members; and there is reason to anticipate a considerable accession of strength in other quarters.

The Branches have sprung up in diverse ways. Some have initiated themselves by pure local energy; others have required counsel and aid from the central Executive; and there is in their management and in their relative activity a curious absence of uniformity. This may be inevitable, but it may also arise from causes that are remediable. In illustration of my statement, I must mention that our indefatigable editor, Mr. Hart, has this year prepared a large map, so coloured as to show the area and boundaries of each Branch, the places at which the meetings are held, the number of such meetings, the proportion of members to that of the medical population, and the rate of increase for some years. To those amongst you who are interested in studying the development of the Association, the map will be eminently suggestive. It will doubtless attract attention from the Council, and will introduce another argument in favour of a complete revision of our laws. At present, these are by no means perfect; and, although alterations and amendments are continually proposed, inasmuch as these apply to special defects, they leave the group of original laws incomplete, if they do not render them inharmonious. Whenever this revision takes place—and it cannot long be delayed—sound judgment and forethought will be required to utilise the power which has been so rapidly developed, and to direct it into those channels in which it will operate for the advancement of professional interests and the public good.

In the various discussions on the Medical Act which governs the relations between the profession and the public, and the modes of examination for diplomas, the principle that representation should accompany taxation has been always accepted. Successive annual meetings have affirmed direct representation to be a *sine qua non*, and have re-appointed the Committee instructed to deal with this question. The firmness of the Association on this point has been justified by a declaration from the Minister who sacrificed one Bill in preference to the concession of it, that there is no longer any opposition to direct representation. The state of public business this session has deprived Mr. Headlam of the power to forward his Bill; and, as time will thus be given to the medical corporations to reconsider the sources of their opposition, let us hope that, on the next reading of the Bill, their antagonism will have been withdrawn.

The possessors of degrees obtained without examination, and dishonestly used, have received great discouragement from recent decisions given in our law-courts. Such righteous judgments alike protect the public from unqualified pretenders, and support the moral dignity of our profession.

In no public measure is this Association more deeply interested than in the administration of the Public Health Act. The Royal Sanitary Commission which inaugurated it included the names of distinguished members of our body, and the Committee on State Medicine contributed its advice. The representations made failed to influence the Minister in charge of the Bill; and the consequence is, that serious imperfections exist. Had Mr. Stansfeld consulted the eminent men who are employed in the Medical Department of the Privy Council, he would perhaps have been convinced that, to ensure the efficient working of the Act, well devised areas of administration, efficient inspection, adequate powers, and thorough co-operation between the Local Boards, were absolutely necessary. He would also have learned that men who have devoted themselves to the study of law and of military science are scarcely likely to have drunk deeply at the font of hygiene, or to possess qualifications for superintending matters that are purely medical. In this instance, Mr. Stansfeld has not displayed the proverbial wisdom of the serpent; and, even should he discard the influences which have hitherto guided him, and consult the highest sanitary authorities, the rectification of these defects must occupy a long period. Had Sir Charles Adderley's Public Health Bill and the Government Registration Act been proceeded with, amendments would have been prepared by our own Parliamentary Bills Committee that might have remedied existing errors. As neither of the measures reached Committee of the House of Commons, we have simply to mourn over good intentions unrealised.

Our military brethren have laboured under a sense of injury from the new Army Warrant owing to the abrogation by it of important privileges specially granted in former warrants, under which a large number of medical officers had previously entered the military service. This Association, feeling sympathy with the sufferers, has aided them by detailed statements, and propositions in writing made through the Chairman of the Parliamentary Committee, Mr. Ernest Hart. The advocacy thus given has not been ineffectual, since Mr. Cardwell "has given careful thought to the representations, and has drawn up modifications of the warrant thereupon, which require the sanction of the Treasury."

The language quoted implies concession; and we may hope that a just sense of the interests of the nation and of the service itself, will prevent a parsimonious decision on the part of the Treasury. Niggardiness in this matter—which involves rank as well as money—will tend to render the service unpopular, to disappoint efficient officers, and to lower the standard of future applicants for admission.

It is gratifying to record that the efforts of our Association on this point have been highly appreciated by the army medical service, and that expressions of warm thanks have been received from the officers of military stations at home and abroad.

The Association is indebted to many Members of Parliament for support: especially are thanks due to Dr. Lyon Playfair, the Right Hon. T. E. Headlam, Mr. Dalrymple, and Mr. Charley, for the readiness with which they have assisted in bringing the views of the Association clearly before our house of representatives.

At the earnest desire of your Finance Committee the business affairs of the Association have been subjected to a thorough, and searching, and independent investigation; a course strongly urged by my friends, Mr. Husband of York, and the late Mr. Clayton of Birmingham. The accountants' report reveals a financial condition that is highly satisfactory, and removes all doubt as to the soundness of the Association in a commercial sense. You will in future be supplied annually with an intelligible balance-sheet, in which the income is contrasted with the expenses of the year.

The improvement that has taken place of late years in our weekly JOURNAL compels comment. I have no wish to analyse its literary merits, but simply to state that it will not suffer by comparison with any other medical periodical; that it abounds in recent intelligence, British and foreign; in useful information; in original contributions; and in reports of hospitals and societies. For this improvement we are indebted to our talented editor, Mr. Ernest Hart, who is entitled, in my opinion, to the warm approbation of our Associates, not only for his ability as a journalist, but for the boldness and readiness with which he has advocated the claims of the profession and the interests of the Association, and for his invaluable services as Chairman of the Parliamentary Bills Committee.

Permit me to refer to one subject which—though not directly connected with the objects of the present meeting—is yet an offshoot of that human sympathy and generosity which reaches its full tide on occasions like this. The cries of misfortune and poverty appeal too strongly to us all to need any recapitulation by me of the claims of the British Medical Benevolent Fund. Originating with some of the earliest members of this Association, it has steadily pursued its course

of beneficence, by bestowing donations on the needy to relieve temporary wants, and by supplying the aged and unfortunate members of our profession with small annuities. Its usefulness is limited by its means; but every contributor may feel that his donation benefits some deserving person, since the Society has no paid officer except the collector.

Before concluding, I must express my cordial thanks to the President and Members of Council, and to all the officers, local and general, for the courtesy and readiness with which they have aided my duties, and have thus rendered my office almost a sinecure.

And now, Gentlemen, let me congratulate you on your second assemblage in the metropolis, the centre of medical literature and education in this country. The learned and eloquent addresses delivered here eleven years ago under the presidency of Dr. Burrows, the hearty goodwill and the genial hospitality of our London brethren, must be fresh in the memory of many. Upon this occasion, when our meetings will be presided over by so eminent a surgeon as Sir William Fergusson, a success commensurate with our increased number of members may be confidently predicted.

Sir WILLIAM FERGUSSON took the chair as President, and delivered an address, which is published at page 137.

Vote of Thanks to the Retiring President.—Dr. CHADWICK (Leeds) said he had a pleasing duty to perform towards the retiring President; but, before he did so, he desired to congratulate Sir William Fergusson upon taking the chair, and upon the splendid ovation with which he had been received. After this great welcome to the new President, it would be most fitting that the Association should pass a vote recording its thanks to the gentleman who had just left the presidential chair, and who had so ably presided for the past year. [Cheers.] He moved "That the best thanks of the Association are due, and are hereby given, to Mr. Alfred Baker for the able, courteous, and hospitable way in which he has filled the office of President during the year ending August, 1873, and that he be, and he hereby is, appointed a Vice-President for life." [Cheers.] Dr. Chadwick said he would not for a moment delay the meeting from the great object of the day—Sir William Fergusson's address; but he did feel that the Association owed a deep debt of gratitude to the gentleman who had just vacated the chair, and he was sure the members would heartily adopt the resolution he had read. Those who were at Birmingham would remember with pleasure the success which attended that gathering—[cheers]—and they knew that a great deal of that success was due to the excellent way in which the late President occupied the chair; and he could not doubt that something of that great augmentation of numbers which had been explained to the meeting was due to that great success at Birmingham. [Cheers.] He would take occasion to remark, that if it was, as appeared, that the success of one annual meeting promised the success of the next—as the Birmingham had promised the success of the London meeting—then what might not be expected from this? He had no doubt that Mr. Baker would look back, in years to come, upon this meeting with the highest satisfaction, and reflect with pride that the turning-point in the history of the Association, from which it will go on to greater successes, and promote those objects for the advancement of medical science and the good of the profession for which it was originally intended. [Cheers.]

Mr. HUSBAND (York) seconded the vote proposed to one who had so successfully filled the office of President. As the present President represented the surgical celebrity of the metropolis, so the provincial practitioners considered that Mr. Alfred Baker was a fitting representative of the body to which they belonged. [Cheers.] And not only did the provincial practitioners consider him a fitting representative of their body, but they were proud to have a man like him amongst them, who, when placed in a high public position, could fill that position with so much benefit and honour to the Society of which he was the temporary head. [Cheers.] It could not be forgot that the meeting at Birmingham filled every member with a deep debt of gratitude, both to Mr. Baker and to those men who were so renowned throughout the Midlands; and the speaker did look upon that Birmingham meeting as the crowning one before this London one. [Cheers.] And he claimed also the thanks of the Association for Mr. Baker, for that gentleman's attention, not only at public meetings, but for his energetic efforts to secure their comfort. Mr. Baker was no idle President either at the annual meeting last August, or, during the year, in the conduct of the general business, and, in electing him as Vice-President, the Association would be electing one who, for his life, had given them the best powers which a man could give to his fellow-men, and one whose assistance would be a benefit year after year. The speaker trusted the meeting would carry the vote by acclamation.

The vote was carried by acclamation.

Mr. BAKER said he had but few words to say, for he, like them, was anxious to hear the address of their new President. All he had to say

was to thank them heartily for the honour they had bestowed upon him. [*Cheers.*]

Report of Council.—Mr. FOWKE, General Secretary, read the following Report.

Your Council have much satisfaction in meeting you again in this vast metropolis. When in 1862 the Association met for the first time in London, it scarcely numbered 2,000 members; it now numbers above 5,400. The financial condition of the Association, as you will have seen from the accountant's report, is equally satisfactory; and, whilst congratulating you on past success and present prosperity, your Council feel assured that the present meeting, so admirably arranged, and so cordially supported by the leading members of the profession in London, will give renewed strength, and consequently a larger sphere of usefulness to the Association.

During the past year, there have been 66 deaths and 96 resignations, whilst 700 new members have been elected. The Association now numbers 5,400 members.

At the annual meeting of last year, your Council appointed a Journal and Finance Subcommittee to manage the finances of the Association, and this Committee considered it desirable that a thorough examination into the financial position of the Association, which has so long been a matter of anxiety, should be made. An eminent London accountant was accordingly instructed to make such examination, and draw up a balance-sheet, which will be now placed before you; and your Council would especially direct your attention to the improving income of the Association, by which so much of the debts incurred in past years has been wiped off, and it appears by the balance-sheet the amount of assets over liabilities is £1,817:12:3. The business of the JOURNAL office is now satisfactorily conducted, and fully justifies the removal of the Secretary's office to London. The JOURNAL continues to be conducted with marked vigour and ability, and has rendered important services to the Association during the year.

The incorporation of the Association has for some years been contemplated, but was not carried out, in consequence of the great expense to be incurred. Since the question was first mooted, however, important legal modifications have rendered it unnecessary to incur the expense of a charter. The Companies' Act has been so modified as to enable scientific associations to obtain all the benefits of a charter at a comparatively slight cost; and your legal adviser, Mr. J. Upton, has taken the preliminary steps for the purpose of carrying out the wish of the Association.

The Medical Reform Committee, through the right honourable Mr. Headlam and Sir H. Selwin-Ibbetson, Bart., introduced a Medical Act Amendment Bill, framed in accordance with the principles laid down by the Association at Newcastle, in 1870, and endorsed at the annual meetings subsequently held at Plymouth and Birmingham. The Bill provided for the introduction into the General Medical Council of Representatives, elected by the direct votes of the registered medical practitioners, and for the establishment in each division of the kingdom of a conjoint Board of Examiners, for the licensing of all candidates for the future practice of the profession. The Committee had reason to believe that the Government would not have opposed the second reading of the Bill, but the press of business before the House rendered it impossible to carry it into law during the present session, and Mr. Headlam consequently withdrew it. The proceedings of the Committee will be laid before the Association in a special report.

The Parliamentary Bills Committee, which consists of ten members elected at the annual meeting, and a representative elected by each Branch, has carefully watched all parliamentary and Government proceedings affecting medical interests, and has held many important meetings during the year. The Registration of Births and Deaths Bill, and the Public Health Bill, were the two most important parliamentary measures considered by the Committee. In respect to both of those measures your Committee had interviews with the ministers who had charge of these Bills, and who promised to modify several objectionable clauses, but neither bill has been carried through Parliament this session. The interests of army medical officers have been seriously compromised by the recent warrant. Full information was obtained on the points at issue from reliable sources, and a detailed statement of them was laid before Mr. Cardwell, by the chairman of the Committee, and a deputation, introduced by the President-elect, Sir William Fergusson. This subject is under consideration at the War Office, and a just recognition of the claims of the army medical officers may be hoped for. The army medical officers at numerous stations at home and abroad, have conveyed their thanks for the active intervention on their behalf by the Association.

The Joint Committee on State Medicine, which has contented itself with observing the progress of events during the past year, will present a brief report on the working of the Public Health Act.

The Subcommittee on the Registration of Disease have presented a memorial to the Local Government Board, and a petition to Parliament in accordance with the instructions of the last annual meeting. Copies of the memorial and petition have appeared in your JOURNAL.

The President of the Council has, at the request of the Committee of Council, given formal notice of the alterations of laws.

Rule 7. To omit the word "and" in the second line, and insert a "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872."

Rule 8. To omit the word "fortnight," and insert instead the word "five weeks;" also in the same rule, to insert the word "twenty" instead of "ten."

Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-elect, President of Council, Treasurer, the Vice-Presidents, and Secretary from each Branch. 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.

Mode of Election.—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary, at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons.

Mr. R. H. B. Nicholson of Hull, has given notice that he will move that Law 23 be omitted, and that the following new law be substituted for it.

Law 23.—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to 31st day of December each year, and such accounts shall include a statement of assets and liabilities, and a report upon the financial condition of the Association which will be published in the JOURNAL within the first four months of the year."

Your Council consider the proposed alteration of laws to be very desirable, inasmuch as the responsibilities and income of the Association have so largely increased (the latter amounting now to over £3,000 per annum), that the Committee of Council feel that professional men whose time is to them so valuable, ought not to be asked to undertake so large a work, and that the commercial affairs of the Association do not require the audit of an accountant, well versed in the management of commercial undertakings. The warmest thanks of the Association are, however, due to the honorary auditors for their past services, and especially to Dr. Fox, of Clifton, and Mr. Church, of Bath, who have acted as auditors for several years; also to Dr. Washbourne of Gloucester, who audited the accounts for last year.

The Committee of Council having had their attention called to the desirability of an alteration in the mode of electing the members of the body, referred the matter to a sub-committee, who reported, in the first instance, that the large and rapid growth of the Association has rendered the existing code of laws, in many respects, inapplicable to the extended requirements, and in consequence it was almost impossible to deal with the question in a thoroughly satisfactory manner. They subsequently, however, presented a report, containing certain modifications in the constitution and mode of election of the Council, and of the Committee of Council, some of which have been adopted by your Council, and will be submitted for your approval in resolutions to be proposed by the President of the Council.

In consideration of the insufficiency of the laws suggested by the sub-committee, and in view of the proposed incorporation of the Association, your Committee are of opinion that the time has arrived for a revision and codification of the laws for the conduct and management of the Association, and they accordingly recommend that steps should be forthwith adopted to carry out this object. A resolution to that effect of which notice has been given by Dr. Steele, will be submitted to you.

Your Council have to report that three essays for the Hastings Prize Medal have been received, and the medal has been awarded to Mr. Lawson Tait of Birmingham.

The thanks of your Council are due to the Honorary Secretaries of the Branches for the effective working of their respective Branches during the past year.

In compliance with Law 18, your Council recommend that M. Ricord and Dr. Demarquay, who contributed so much to the interest of the

last annual meeting at Birmingham by their presence and addresses, be elected honorary members of the Association.

Your Council regret the loss sustained by the deaths of several of their most eminent members. Dr. Heygate of Derby, who was President of the Association in 1847; Mr. Henry Douglas Carden of Worcester, one of the original members of the Association; Dr. Ormerod of Brighton, who delivered the Address in Medicine in 1864 at Cambridge; and Mr. Richard Partridge, F.R.S., the distinguished Professor of King's College, have been removed from among us; but the memory of their services to the profession and the Association will long remain.

Summary of Receipts and Payments during the Year ended 31st December, 1872.

(As prepared by Kain, Bullen, Eldridge, and Co.)

Dr.]		RECEIPTS, &c.	£	s.	d.
Balance in hands of Treasurer on 1st January, 1872	1186	1	7
Subscriptions	4685	17	5
Advertisements	2676	10	1
Journal	293	14	6
Interest allowed by Bank	16	3	3
			£8,858	4	10
Cr.]		PAYMENTS, &c.	£	s.	d.
Editor	212	0	0
Sub-Editors	93	15	0
General Secretaries—Williams, £125; Fowke, £350	475	0	0
Sundry Salaries	234	18	3
Printer	487	4	6
Commission	91	5	9
Contributions	952	7	0
Stationery	280	0	6
Sundries	102	0	6
Law Charges	11	8	10
Engraving	31	6	6
Petty Cash	541	6	9
Rent	12	0	0
Furniture	68	18	8
Charges by Roberts, Lubbock, and Co.	1	1	3
In hands of Treasurer on 31st December, 1872, viz.:					
General Secretary	£625	3	8
Roberts, Lubbock, and Co.	9	9	10
			168	17	10
			803	11	4
			£8,858	4	10

Balance Account, 31st December, 1872.

(As prepared by Kain, Bullen, Eldridge, and Co.)

Dr.]		ASSETS.	On 31st December, 1871.	1872.	£	s.	d.
Roberts and Co.	1286	1	7	..	0
Advertisements	2419	5	7	..	10
Subscriptions	140	2	0	..	10
Fowke, F.	20	6	6	..	10
Furniture	8
						£3,637	2
Cr.]		LIABILITIES.	On 31st December, 1871.	1872.	£	s.	d.
Printing	2598	9	6	..	3
Contributions	377	10	2	..	8
Editor	62	10	0	..	0
Stationery	51	17	9	..	0
Petty Cash	79	13	9	..	4
Law Charges	13	10
Rent	13	0
Engraving	18	1	6	..	0
Black (being excess of assets over liabilities)	624	5	6	..	3
						£3,637	2

KAIN, BULLEN, ELDRIDGE, & Co.,

Law and Mercantile Accountants, 69, Chancery Lane, London.
(and at Liverpool).

29th May, 1873.

Dr. GRAILY HEWETT proposed the adoption of the report and the rejection of the accounts.

Mr. J. W. BAKER (Derby) seconded the motion.

Mr. J. MARSHALL (Dover) said he considered that the financial conduct of the JOURNAL required some comment; but, before he went on to make this comment, he desired to point out that by the twenty-third of the financial statement should be published within the first three months of the year; and, as this had not been done, perhaps the Council would say why this had not been done, and why the law had been

set aside. He had not seen in the JOURNAL any reason why this delay had occurred. Then, as to the conduct of the JOURNAL, he found the large sum of £952 : 7, as paid for "contributions," and he had taken some pains in trying to find out to whom this had been paid, with the conclusion that under the head money was paid for articles to the JOURNAL. He had asked the editor for an explanation and the names of those who were paid. [Oh, oh!] Well, the answer he received from the editor was to the effect that the statement for which he had asked was furnished to the Finance and JOURNAL Committees, and that the editor was not at liberty to give individual names [Hear, hear; quite right.] Well, if the policy of the Association was to be a policy of concealment, then it better be said so; but he held that everything should be known to all members, and that they should accept them if they pleased. [Oh!] He hoped some information would be given on this subject. Another subject upon which he desired to speak was that of the "petty cash." [A laugh.] This amounted to £541 : 7. Well this was a large amount, and in any accounts of a public company a large sum lumped like this would not be allowed to pass without question. He had endeavoured to ascertain from Mr. Fowke what was combined in this amount, and that gentleman had answered that it included the payment of postage, the payments of foreign papers to the JOURNAL, the wages of office boys, and office stationery; but he found that there was also a separate item of £280 for stationery, not included in that amount for petty cash. The speaker said he spoke only as a member, and not as connected with any medical journal of any kind; but he considered that the affairs of the JOURNAL should be open to all members. He reminded them of a remark made by Dr. Steele last year, that the Association was like the water put into a leaky cistern—the more was put in the faster it ran out; for the more members the Association obtained the less was the money in hand. He would ask if it was well for the Association to go on wasting—on, rather, he would say, sinking—money in the JOURNAL, when more good might be done in forming a large benevolent fund. [Loud and unanimous cries of No, no.] He would like to ask if the members thought the money was well and usefully spent in the JOURNAL. [Cries of Yes, yes.] He was in the hands of the meeting, and he hoped his remarks would raise a discussion.

Dr. SHRIMPTON said that, though some one else would answer the last speaker's remarks, yet he might, as a member, point out that the Association was just emerging from those difficulties which had surrounded it, and he considered it would not be wise to launch itself into such a speculation as a benevolent fund. Let charity commence at home; and when the Association was rich enough to help itself, it would be time enough to consider about helping others. [Cheers.]

Dr. CHADWICK suggested taking the report paragraph by paragraph.

Sir JOHN CORDY BURROWS maintained that the business-like way of proceeding would be to enter the report upon the minutes, and then the meeting could discuss it. It would be a matter of courtesy to the Council to adopt this course, and he urged the Chairman to put the motion for the reception of the report.

The reception of the report was then put and carried.

Amid some little confusion, a member asked what chance there was of members dining together on Thursday.—Mr. MARSHALL asked again for information on the questions he had asked.

The PRESIDENT said that the question of the dinner was attracting the attention of those who had the arrangement of the matter, and everything which could be done would be done for the comfort and convenience of the members. There was no room large enough to dine altogether. (A voice, "Have a tent"), another ("Take the Crystal Palace"). If those who made these suggestions were married men, they must know that difficulties would sometimes arise about a dinner (a laugh).

Alterations in the Laws.—Mr. SOUTHAM, in accordance with the wish of the Council, proposed the alterations in the rules of which notice had been given in the JOURNAL. It was desired to make the Council and the Committee of Council more extensive than they were. In order to enlarge the Council, the Committee of Council recommended that the readers of addresses and the presidents of sections at the Annual Meetings, should be life members of the Council; for it had been thought that gentlemen who had distinguished themselves by giving their time to the Association work, and had taken much trouble, as all did who filled these positions, were fairly entitled to receive some recognition at the hands of the Association (hear). Of course, it was not desired to make these admissions too numerous, and the question had been considered as to how many would be admitted under this rule, and as it had been found that there would only be six or seven each a year, there was no fear that the life members would ever outnumber the representative members. Then as to the Committee of Council, it

was considered that ten was too small a number of elected members, making with the President and Vice-Presidents forty-seven in all, considering the great increase of the Association; and the Committee of Council considered it would not be out-stepping what was necessary if ten additional members were added, making twenty elected members in all. The Committee of Council had considered the way in which these ten should be elected, and they had come to the conclusion that the best plan would be for the Committee of Council to nominate twenty members, and that the list should be sent to every member at least three weeks before the election, and that any two members of the Council should be at liberty to nominate a member to amend the list. It was desired to get new blood on the Council, and it was further proposed that five of these twenty elected members should retire annually.

Mr. A. BAKER, in seconding the proposals thus made, said that they had been well considered, and, if they were not perfect, their virtues were far above their defects.

Dr. E. CRISP said he had lately been re-elected a member, and he had heard before he left, and now, the greatest objection to life members being added to the Council. He had heard it objected that the gentlemen who formed the governing body of the Association, were all in favour of corporations. The readers of addresses, and the Presidents of Sections, were no doubt very good men, but they regarded the interests of the corporations before the interests of the Association. Then he thought it was not right that the Committee of Council should have the election of the new committee in their hands.

The PRESIDENT said it was not proposed to give the Committee the power of election; but only of nomination.

Dr. CRISP said nomination and election were all the same. (*No, no.*)

Mr. SOUTHAM explained that the members generally would also have the right of nomination.

Dr. W. WILLIAMS said it was stated by Mr. Southam that the desire was to introduce new blood into the Council, but the proposal to make life members would be retrograde, and would really keep stagnant blood in.

Dr. S. GIBBON said he would give a point to the remarks of Dr. Crisp by moving that the words as to readers of the addresses being made life members of the Council be struck out. He thought some answer should be given to the questions of Mr. Marshall, with regard to the petty cash.

Mr. FOWKE said he had written to Mr. Marshall, telling him that the books were open to his inspection at any time, but that he was too much engaged to do more. (*Hear, hear, and cheers.*)

Mr. MARSHALL read from a letter, which he said he had received from Mr. Fowke, a statement to the effect that "petty cash" was made up of the items mentioned.

Mr. FOWKE rejoined by requesting Mr. Marshall to read the whole of the letter, as the part read was not a fair explanation, for he had told Mr. Marshall, in that letter, that the books were open for his inspection or the inspection of any member. [*Cheers.*]

Mr. HUSBAND assured Mr. Marshall and all the members of the Association that none of the Committee of Council would flinch from having the most searching examination of the affairs they conducted. [*Cheers.*] But he would put it to them, as men of business, whether any commercial enterprise could be carried on, such as the conduct of a journal, if all the details of expenditure were published for gossips to discuss. If Mr. Marshall desired to see how the expenses were incurred, he could, by taking the trouble, find how those expenses were checked by the Committee, and could easily understand the means which were taken to prevent improper appropriation of the funds. There was every check upon the expenditure, there was no waste of funds, and all the money spent was spent with the aim of making the Association greater, and the JOURNAL worthy of it. [*Cheers.*]

Sir J. CORDY BURROWS thought that this explanation was really unnecessary, and moreover that it was out of order.

Mr. HUSBAND said an explanation had been asked, and he really thought he should have the opportunity given him of making it. The Committee of Council had a Finance Committee, which managed everything, and no money was paid except through them, and all the accounts were properly audited. [*Cheers.*] It was not correct to say that the Committee of Council were attached to the Corporations, for they had been rather in antagonism to them than otherwise, and he would not have remained a member of the Committee of Council if there had been anything like a clique. The members of the Committee of Council had no purpose to serve except to serve the Association. The Committee of Council, to whom had been delegated the power of management, were men who would not be at the beck and call of any clique, and the readers of addresses were the best men in the country,

and whom it would be an honour to have in the Council. [*Cheers.*]

As to the mode of election, it was felt that, if the matter were left open for anyone to elect without any guide as to the men who had done good service, the members would be left in the dark as to the best men, and there was the chance that men would be elected who had given the Association and profession no aid at all. [*Cheers.*] He therefore, for one, thought that it would be better for a list to be prepared on some system than for the election to be conducted on mere haphazard; but the Committee of Council were not wedded to their plan, and were quite open to consider another, if proposed. [*Cheers.*]

As to the list of contributors, the Committee knew the names of all and the sum paid; but every editor the JOURNAL had had would agree, as would every one who knew the business affairs of a large concern, that, if the JOURNAL was to compete with other journals, its business must be conducted in the same way as other journals. [*Cheers.*]

No contributor was paid except through the Committee, by cheques signed by the treasurer, and all these were properly vouched and audited. [*Cheers.*]

As to the large item of petty cash, they all knew the postage of the JOURNAL was a large item—[*hear*—] that must be apparent; but he need only say that the accounts were audited by the auditor appointed by the general body of members. [*Hear.*]

They all knew, too, the treasurer was a most honourable man. [*Cheers.*]

As to the accounts not being thoroughly made up in detail, the fact was they were made up to December 31st last, and after the difficulty the Committee of Council had had, he thought there was really some credit due to them for having got out a statement showing the financial position, and showing the Association to be in a position it was never in before—of having a balance. [*Cheers.*]

The Association had been in a position hitherto most hazardous; for, if it had been compelled to pay up its debts, the members would have had to make a "whip" of some pounds each, and there were not many of them who would have liked to do that. [*A laugh.*]

As to the motion before them with regard to electing the life-members of the Council, and the enlargement of the Committee of Council, he begged to remind them that the latter was the executive governing body, and that it was necessary to have of that the best business men in the Association.

After some remarks from Dr. WEBSTER, who laboured under the view that it was proposed to elect the readers of addresses, and President of Sections to the Committee of Council, and supported the amendment, the vote was taken. There were for the amendment 40 and 59 against it. The amendment was declared lost.

Mr. NICHOLSON then proposed his amendment of the twenty-third law (published in the JOURNAL).

Dr. FALCONER recorded the motion, which was carried *nem. con.*

Dr. STEELE then proposed the resolution of which he had given notice respecting the drawing up of a revised code of laws.

Dr. ROYLE of Manchester seconded this, and it was also carried.

The General Secretary.—Dr. AVELING proposed the re-election of Mr. F. Fowke as General Secretary.

Mr. HECKSTALL SMITH seconded this, and it was also carried *nem. con.*

The meeting then adjourned.

Committee of Council.—The following twenty gentlemen were elected members of the Committee of Council:—H. C. Bastian, M.D. (F.R.S. (London)); Sir J. Cordy Burrows (Brighton); W. Cadge, Esq. (Norwich); A. Carpenter, M.D. (Croydon); P. R. Cresswell, Esq. (Dowlais); B. W. Foster, M.D. (Birmingham); E. L. Fox, M.I. (Clifton); R. Harrison, Esq. (Liverpool); Berkeley Hill, Esq. (London); J. R. Humphreys, Esq. (Shrewsbury); W. E. Image, Esq. (Bury St Edmunds); Richard Quain, M.D., F.R.S. (London); W. Robert M.D. (Manchester); H. W. Rumsey, M.D. (Cheltenham); T. Heckstall Smith, Esq. (St. Mary Cray); T. Underhill, M.D. (We Bromwich); W. F. Wade, M.D. (Birmingham); A. F. Waters, M.I. (Liverpool); C. G. Wheelhouse (Leeds); M. A. E. Wilkinson, M.I. (Manchester).

On Wednesday at the second general meeting, it was agreed that the next meeting should be in Norwich, with Dr. Copeman as President elect.

A meeting of Militia Medical Officers was held, and it was resolved to revive the old Association of these gentlemen.

On Thursday the Committees on Registration of Disease, Statistics, Medicine, and Medical Reform, made their reports, and the Hasting Medal was presented to Mr. Lawson Tait, of Birmingham. The Health Officers, and Poor-law Medical Officers held meetings on this day.

[Further details of the proceedings will appear next week.]

REPORTS OF SOCIETIES.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, APRIL 12TH, 1873.

LONGBE ATTHILL, M.D., Vice-President, in the Chair.

Fibrous Tumour of the Uterus.—THE CHAIRMAN exhibited a tumour, which he had removed two days before from the uterus of a married but childless woman, aged upwards of 40. In addition to its true pedicle, a false one was formed by its extremity becoming intimately attached to the anterior lip of the cervix uteri. When removed, the polypus weighed half-a-pound; while *in situ* it was five inches long, but, when removed and unfolded, it measured seven and a half inches.

The Excessive Vomiting of Pregnancy.—Dr. ALFRED H. MCCLINTOCK read a paper on this subject, including all those exceptional cases where vomiting is so frequent, so persistent, and so intractable a symptom, that nutrition is arrested, wasting and debility are rapidly induced, and finally, pyrexia is excited; all this resulting either in the death of the patient, or occasionally in the cessation of vomiting with or without spontaneous abortion. Primiparae were probably most disposed to this grave complication, which might set in at any period between the end of the first and beginning of the ninth month; generally, indeed, a few weeks after conception. The etiology was by no means satisfactorily established. Retroflexion or antelexion of the gravid uterus seemed to be only a very rare and concurrent cause of the vomiting of pregnancy. It was necessary to distinguish between the sickness of pregnancy, and sickness in pregnancy, such as was sometimes induced by phthisis, gastritis, constipation, or, some other such cause. Artificial abortion was justifiable in extreme cases. The author had tabulated thirty-six cases where abortion had been practised. In twenty-seven instances the sickness was arrested, and the patients perfectly recovered; whilst in nine, although the vomiting almost invariably ceased after the expulsion of the ovum, the patients did not ultimately recover. In these unfavourable cases, other circumstances apart from the operation generally concurred to cause death, such as diarrhoea, biliary calculus, puerperal fever, debility, or *post partum* hæmorrhage. In some cases also, the operation had been too long postponed, and was practised only as a forlorn hope. Extreme caution should be used in determining on those cases in which artificial abortion was likely to be followed by cessation of vomiting. Dr. McClintock detailed the clinical history of a case in which he had recently induced abortion, with the happiest results.—THE CHAIRMAN said that Dr. McClintock had very properly pointed out the distinction between "normal" and "abnormal" sickness—the sickness of, and the sickness in, pregnancy. The flexion theory could scarcely be held by any well-informed medical man. The treatment of inducing abortion should be adopted in extreme cases, where sinking threatened.—Dr. CHURCHILL could not accept the flexion theory, for nausea was met with much more frequently than a retroverted uterus in pregnancy. He believed that various conditions of the os uteri, of the cervical canal, and of the os internum, might produce this sickness. Of extreme vomiting in pregnancy he had seen altogether seven cases, of which five terminated fatally. All had occurred at an early period of pregnancy, and the suffering was generally due to exhaustion. He had saved one life by inducing abortion. One of the best guides as to the expediency of performing the operation was the state of the pulse; when it rose much there should be no delay, for if the patient were left to run down too long she could not rally.—Dr. J. A. BYRNE had seen but one fatal case of excessive vomiting, in a young married woman, delicate, and four and a half months pregnant. As to the cause of this serious complication, he thought there was much obscurity: for himself, he was inclined to hold that it depended on stretching of the muscular fibres, by their rapid growth in pregnancy. Caution should be exercised in determining on the induction of abortion, for the practice might be followed where it was not necessary, and excessive vomiting often ceased spontaneously and suddenly.—Dr. DARBY considered that this alarming symptom of pregnancy depended on a peculiar idiosyncrasy unconnected with any organic affection. In one serious case, however, he had observed an attack of jaundice. The nausea was so severe that he contemplated the induction of artificial abortion. He waited notwithstanding, and the patient recovered. He did not place any confidence in the flexion theory.—Dr. MCCLINTOCK replied.

SATURDAY, MAY 10TH, 1873.

LONGBE ATTHILL, M.D., Vice-President, in the Chair.

Epithelioma of the Uterus.—Dr. KIDD showed an example of epithelioma which grew from the right corner and posterior lip of the

uterus; the anterior lip was also slightly involved. The patient was being run down by hæmorrhage, and in the intervals, by a copious foetid serous discharge. In this case, a perfect cure was scarcely to be hoped for, but the operation was useful.—Dr. JOHNSTON mentioned a case of epithelioma similar to that described by Dr. Kidd, in which he had removed the growth (from the anterior wall of the cervix) with a scissors. There was no hæmorrhage.—Dr. RINGLAND believed that the treatment by operation should be employed, with a view not only to obtaining a cure, but also to giving ease and comfort to the patient.—Dr. CHURCHILL agreed that the operation should be practised as a palliative measure, but he was not so hopeful of effecting a cure as Dr. Kidd was. He mentioned an instance where, after two and a half years, the growth again budded. Life could certainly be prolonged, and freedom from suffering secured to a patient for the time being. When the growth was removed, it might be kept back from returning, by the application of nitric acid.—THE CHAIRMAN also agreed as to the advisability of operating. He had, however, never seen a complete and final recovery after the operation, nor could he say much for the utility of escharotics.

Ovarian Tumour.—Dr. KIDD presented a specimen of ovarian tumour, which he had removed from an unmarried woman, aged 28. It was of about two years' growth, and was painful from the first. The cyst was nearly unilocular, and after removal, weighed 1lb. 6ozs., the contained fluid, measuring 160ozs. It was quite free from adhesions. An attack of local peritonitis, setting in some weeks after the operation, somewhat retarded an otherwise good recovery. Menstruation had been normal since the operation, while it had been profuse before. Some menstrual fluid escaped through the cicatrix in the second menstruation, an occurrence noticed by Mr. Spencer Wells.

Occlusion of the Vulva, Cured by Operation.—Dr. MORGAN exhibited a cast, showing the state of the external genitals in a girl, aged 22. The organs were all fully developed, but externally the parts were occluded by a cicatricial web. The girl suffered from epileptiform seizures at each menstrual period. The urine and menses escaped through an opening, which barely admitted a No. 4 catheter. The patient stated that, seven years before, she had fever, when the parts sloughed, and the web had closed the opening. The cicatricial tissue was split up, and partly excised, and the orifice was kept dilated with a tent. The epileptiform attacks had not returned since the operation.

Amenorrhœa from Congenital Malformation.—Dr. CHURCHILL read a paper on this subject. To make an accurate diagnosis was often difficult, and yet the question of relief depended upon this point. The means of forming a diagnosis were either physiological, or physical. The first dealt with the presence of the menstrual *molimen* and of sexual gratification, etc. By means of the second, we judged of the presence or absence of the different organs of generation. A most useful method of examination was that termed the *bimanual manipulation*. Dr. Churchill related twelve cases in illustration of his subject, in some of which, the ovaries were either not present, or were in an infantile state, undeveloped, and not acting; while in others, the fault consisted in the absence of the uterus, or, in congenital closure of the os uteri (one case). As regards treatment, of course in most cases, nothing could be done; but, to remedy an undeveloped state of the uterus, Sir J. Y. Simpson had recommended the use of a galvanic pessary. A practical question was, whether we think that a patient ought to marry, in whom these defects were discovered. However reluctant we should be to condemn her to a single life, it should not be forgotten that another person is concerned in the matter, and therefore the decision against marriage is called for, or, if she be fully bent upon marrying, the other party ought to be fully informed as to the existing defect.—Dr. RINGLAND described a remarkable case of unilateral development in a young lady, aged 20, who had never menstruated naturally, but in whom vicarious discharges at each monthly period had occurred for more than four years, through the bladder, rectum, nose, or eyes. The left side of her body was perfectly developed sexually; while the right was not so. The left breast was normal, the right resembled that of a girl of 12; there was hair on the left side of the pubes, none on the right; the left labium was fully formed, the right was almost wanting. The clitoris, vagina, and uterus, were absent. The left ovary could be felt, but the right could not be detected. Sexual desire existed in this case, but a strong opinion as to the inadvisability of marriage was given.—Dr. KIDD and the CHAIRMAN alluded to the great use of the galvanic pessary in cases where the uterus or ovaries were not absent, but merely in a rudimentary or infantile condition.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, APRIL 26TH, 1873.

SIR DOMINIC J. CORRIGAN, Bart., M.D., Vice-President, in the Chair.
Multilocular Ovarian Cystoid.—Dr. A. W. FOOT laid before the

Society an ovarian tumour, removed from the body of an unmarried female, aged 45. The disease involved the right ovary, and had been observed by the patient for about a year. A preliminary tapping was performed, before deciding on the removal of the tumour, and a basin-full of brown glutinous matter was removed slowly through a large cannula. She died of acute peritonitis, thirty-four hours after the tapping, apparently from extravasation of some of the contents of the cyst. The abdomen of the corpse was much larger than before operation. The gas contained in the peritoneal cavity was set fire to as it escaped from a puncture, and burned with a pale blue, very hot, detonating flame. The intestines were contracted and empty; the peritonitis was acute and general. The tumour had no adhesions. Its harder portion consisted of very numerous small cysts, containing matters of various colours, and more or less glutinous.

Transverse Laceration of the Aorta.—Dr. A. W. FOOT exhibited a heart, weighing 28½ oz., taken from the body of a bricklayer aged 30, who had died suddenly from hæmorrhage into the pericardium. There was a transverse laceration of the inner and middle coats of the intrapericardial portion of the aorta, extending through three-fourths of its circumference; the external cellular coat was stretched and frayed, and about two pounds of blood had escaped into the pericardium, through several linear and pin-hole apertures. The aorta was unusually thin, and seemed too small for the size of the heart; it was not dilated, nor was any atheroma visible in the vessel. The valves of the heart were competent, though the aortic valves were thickened, and there were some small vegetations on the auricular aspect of the anterior mitral valve. The kidneys were very hard, and presented indications of amyloid disease. Their colour on section was purple, shading into deep crimson; this made the glistening amyloid granules more obvious. The feet, legs, and scrotum, were œdematous; there was also some effusion of serum in the subcutaneous cellular tissue of the abdomen; and there were subconjunctival ecchymoses. The man had been of intemperate habits.

Fracture of the Skull. Fracture through Lower Epiphysis of Radius.—Dr. R. W. SMITH presented two crania, both of which had suffered extensive injuries. The first was the skull of a boy, who had fallen from a considerable height. A fracture passed from the right parietal bone, across the orbit to the other side, while the base of the skull was also fissured. As a further injury, a compound fracture of the radius detaching the lower epiphysis existed. The injury closely resembled Colles's fracture. Dr. Smith showed a cast illustrating this rare injury of detachment of the lower radial epiphysis.

Presentation of the Society's Gold Medal.—THE CHAIRMAN announced that the Gold Medal had been awarded to "Icarus" for his Treatise on the Diagnosis and Pathology of Abdominal Tumours in the Male. The author proved to be Mr. Theodore Hack, to whom the Medal was then presented, amid loud applause.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

VACCINATION. IPSWICH UNION.

Up to the 31st December, 1872, the number of registered births occurring in this union, since 1867, was 6,891. Vaccination has been registered in respect of 5,983, and 706 have died before vaccination; 168 have removed, or cannot otherwise be found; 21 have either had small-pox, or been certified as insusceptible; and in respect of 12, vaccination has been suspended by medical certificate on account of present unfitness. This leaves only one case to be accounted for, and this one is the child of a strong opponent of vaccination, who has been twice summoned before the justices in respect of the case. On the first occasion he was fined twenty shillings and the costs, both of which were paid by the local agent of the Anti-Vaccination Society. On the 30th ult., he was again summoned, under the 31st section of the Act of 1867, and an order for vaccination in fourteen days was made by the justices.

SANITARY INSPECTION OF SHIPPING.

Mr. W. J. SCOTT, Chairman of the Port of London Sanitary Committee, brought up a report recommending the appointment of a medical officer for the port of London at a salary of £400 a year, and an inspector at a salary of £120 a year. Mr. Fricker asked if it was true, as stated in the *Times*, on the authority of Dr. Rogers, medical officer for the Limehouse district, that a sailor, suffering from small-pox, be-

longing to the Norwegian vessel *Scandria*, which vessel had passed Gravesend, had gone with the captain, while so suffering, to the City and back, walking through the streets both ways. Mr. Scott, the chairman of the Committee, replied that he knew of no such case. Mr. Fricker said he had a written statement of the medical officer there to the effect that during the whole time of his appointment there had not been a single instance of a contagious disease at Gravesend, and that no person had been landed there suffering from any such a disease. Dr. Saunderson contended that the business of preventing the introduction and spread of disease in the port of London could only be successfully carried out by a system of rigid inspection. He mentioned, incidentally, that in the same hotel at which Mrs. Brewster died of cholera in Vienna, a young gentleman whom he knew, and who was spending his honeymoon in that city, was attacked with the disease after his arrival there. Mr. Pedler, a leading member of the Port of London Sanitary Committee, organised by the Corporation, took occasion to say that during the last two years no case of cholera, fever, or small-pox had come under the notice of the Committee; that 295 vessels in the Thames had been inspected during the last two months, and that not one of them had required disinfection. A most effective system of examination, he added, had been established at Gravesend under the Custom House authorities, with whom the rule was to board every ship arriving from abroad, and up to Wednesday last there had not been a single suspicious case. Moreover, the present death-rate was only 19 in 1,000. The subject-matter of the report of the Committee underwent some further discussion, and in the result the report was adopted, but on the condition that the officers appointed should devote their whole time to the duty.

OBITUARY.

WILLIAM WARD, M.D.

DIED at Huntingdon, on Tuesday, July 22nd, William Ward, M.D. He was born September 16th, 1799, at the Manse in Old Deer, near Aberdeen, of which parish his father, the Rev. William Ward, M.A., of Queen's College, Cambridge, was at that time resident minister. Originally intended for the navy, he went out to India and China, but, after one voyage, turned his attention to the medical profession, and studied at the Norfolk and Norwich Hospital, which the illustrious names of Martineau, Rigby, and Dalrymple had raised to the height of its celebrity. After completing his education at the Borough Hospitals Mr. Ward passed the Hall and College, and began practice at St. Neots. In 1827, on the death of Mr. Leslie, he removed to Huntingdon, where for nearly half a century he had a large practice, from which he finally retired about three years since. He was made Fellow of the Royal College of Surgeons of England, by examination, in 1844; and M.D. of the University and King's College, Aberdeen, in 1850. Dr. Ward took great interest and was largely concerned in the establishment of the Huntingdon County Hospital, of which he was for several years one of the medical officers, and to which, on his retirement from practice, he was appointed honorary consulting physician; his old patients and friends at the same time presented him with a testimonial of their regard and esteem. Dr. Ward was six times elected mayor of the borough of Huntingdon, of which at the time of his death he was the senior alderman. He was also many years in the commission of the peace for the county. In politics he was a conservative. The cause of his death was a large carcinomatous tumour of the abdomen, connected probably with the lumbar glands.

Dr. Ward was twice married. His first wife was his cousin Lydia, only daughter of Robert Ward, Esq., of Salhouse Hall, Norfolk. She died October 12th, 1834, leaving one daughter, who became the wife of Wootton Isaacson, Esq., the partner of his father-in-law. Dr. Ward married, secondly, Sarah, daughter of the late Francis Hopkinson, Esq., of Peterborough, and by her (who survives him) leaves two sons.

C. CURRIE RITCHIE, M.D. EDIN.

It is only six months since Dr. Ritchie was appointed Assistant-Physician to the Manchester Royal Infirmary, when as bright and prosperous a career appeared before him as ever gladdened the heart of an able and ambitious young man, who had worked hard and earned by sheer merit the post which he had won. He had but just entered into his new duties, however, when he was attacked by peritonitis, from which he very slowly recovered, but was able three weeks since to re-enter upon his hospital work. Unhappily the improvement was not lasting, for, on Saturday, he relapsed, and sank on Tuesday, July 29th.

Dr. Ritchie was a distinguished student of Edinburgh, graduating

and C.M., with honours, in 1867. He subsequently severally filled the posts of resident surgeon in the Royal Infirmary, Edinburgh, physician-assistant to the Manchester Royal Infirmary, physician to the Hulme Dispensary, and lastly, assistant-physician to the Manchester Infirmary.

Dr. Ritchie was a widely read and highly accomplished physician, excellent specimen of the best kind of the scientific practitioner. He contributed several articles of high merit to the *Practitioner*, and many medical journals, and very materially assisted W. W. Roberts in the revised edition of his work on *Renal Diseases*.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 31st, 1873.

Carter, Albert, Belvedere, Kent.
Carter, Francis Richard, Potter Newton, Leeds.
Carbin, Edward Kinnersley, Guernsey.
Davies, James Harries, Llandysul, South Wales.
Griffiths, David, Aberayron, South Wales.
Jones, Thomas Evan, Buarthylfail, Anglesea.
Welch, William John Joseph, Stourbridge.
Hawton, James William Hambly, Devonport.

The following gentlemen also on the same day passed their primary professional examination.

Bate, George, St. Thomas's Hospital.
Duke, Edgar, Guy's Hospital.
Fox, Richard Kingston, London Hospital.
Jepson, Edward, St. Bartholomew's Hospital.
Spark, John, St. Bartholomew's Hospital.
Spooner, Frederick Henry, St. Bartholomew's Hospital.
Thomson, Samuel John, St. Mary's Hospital.
Watts, Frederick, St. Bartholomew's Hospital.

HOSPITAL CONSTRUCTION.

The final report of accounts for the building of St. Thomas's Hospital has been presented, and some extracts from it are published in the *Standard*. The following, which relates to the outlay on the buildings, will be read with interest.

The total expenditure, irrespective of the cost of the site and of the extensive concrete foundations required by the exceptional character of the ground (half of the site having been reclaimed from the river), may thus be classified:—Mr. Perry's account for the buildings, £346,377; for sundry wood fittings, £6,500; for warming, ventilating, and water services and ward stoves, £11,345; for hydraulic lifts, etc., £229; for gas mains, pipes, and fittings, £3,765; for cooking apparatus in the principal and other kitchens, £875; lavatory and bath fittings, £1,667; stoves and chimney-pieces, £1,721; electric communication and bells, £918; engineer's works in the dispensary and other laboratories, and fittings in chemical laboratory, £1,788; fire appliances, £313; laying out the grounds and planting, £2,820; sundries, £97—total, £383,948. Of this amount, the architect states that about £10,000 may be taken as the cost of the museum and school buildings, including fittings; £10,000 as the expense of erecting the home for the probationer nurses to be trained under the arrangement with the Council of the Nightingale Fund; and Mr. Currey estimates the cost of the extensive range of buildings required for the out-patients and casualty departments at £33,000, leaving £311,000 as the cost of the hospital, including the administration block, officers' residences, the chapel, the enclosure walls and railings, the river colonnades, hydraulic lifts, and all necessary fittings; and as the hospital is designed for nearly 600 beds, the cost per bed is a little more than £530, with a cubic capacity of 1,800 feet for each patient. The cost per cubic foot of the whole range of buildings has been about 9d., and it may be safely asserted that the cost of the hospital would have been largely increased had its erection been postponed to a later period. (It may be desirable to state the cost of the simple extension of a hospital built on the pavilion principle, with but two rows of beds in each ward, where only ward and nursing accommodation is required. The architect gives as the cost of one

pavilion, containing 111 beds with sisters' room, nurses' dormitories, ward kitchen and offices, excluding, as before, the cost of special concrete foundations, as extracted from tender of Mr. Perry, £29,468: add for extras, being proportion of the actual result, £1,472—total, £30,940, or nearly £280 per bed; and adding for fittings, lifts, gas, warming and ventilating arrangements, and electric communication, £4,400—total, £35,340, or about £318 per bed.) It may be interesting to compare these figures with the cost of other hospitals. The Herbert Hospital, with a cubic capacity per patient of 1,200 feet, cost £320 per bed, exceptional circumstances, as at St. Thomas's, having increased its cost. The Lariboisière Hospital at Paris, with 606 beds (having but very limited out-patient arrangements, and needing much less extended corridor communication), is said to have cost £440 per bed, with a cubic capacity of nearly 1,900 feet per patient. The Hôtel Dieu at Paris, now in course of erection, is reported to have cost, with the alterations which have been found necessary, £600,000; and if the number of beds be reduced, as proposed, to 400, the cost per bed will be £1,500, with a cubic capacity to each of about 2,300 feet; but if the original number of 800 be adhered to, the cost will be £750 per bed. Taking, therefore, the average cost of the three great Hospitals referred to, the average cost per bed appears to be a little more than £500, and the average cubic capacity 1,800 feet, which figures nearly correspond with the results at St. Thomas's. It is believed, however, that the accommodation provided at St. Thomas's in ward-offices, etc., irrespective of the actual ward space, is far larger than at any of the other hospitals referred to, and it must be remembered that this is included in the cost per bed. The professional charges of the architect (including payments of £2,252 to the clerk of the works) have been £13,032. The cost of furniture has been £10,084.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALCESTER UNION, Warwickshire—Medical Officer for the Bidford District: £55 per annum.
AUCHTERGAVERN, Perthshire—Parochial Medical Officer: £32 per annum. Applications to Thomas Wyllie, Chairman.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon: £100 per annum, furnished apartments, etc. Applications, August 28th, to the President, care of J. G. Douglas, M.B.
BRIDGWATER UNION—Medical Officer for District No. 5: £36 per annum.
BROMYARD, HEREFORD, LEDBURY, LEOMINSTER, AND WEOLLEY RURAL SANITARY DISTRICTS—Medical Officer of Health: £500 per annum for three years, without private practice. Applications, 19th inst., to T. Llanwarne, Esq., Hereford.
CARLISLE URBAN SANITARY DISTRICT—Medical Officer of Health: £150 per annum for three years. Applications, 12th.
DERBY AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Assistant-Surgeon: £130 per annum. Applications, 15th inst., to J. Bullivant, Secretary, 58, Abbey Street, Derby.
EDENDERRY UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballyboggan Dispensary District: £120 per annum and fees. Applications, 12th inst., to James Robinson, Hon. Sec.
ESSEX AND COLCHESTER HOSPITAL—House-Surgeon and Apothecary: £80 per annum, board, and lodging. Applications, 21st inst., to John Lay, Esq., Secretary.
EVELINA HOSPITAL FOR SICK CHILDREN—Registrar.
EVESHAM UNION, Worcestershire—Medical Officer for District No. 5: £12 per annum.
FEVER HOSPITAL AND HOUSE OF RECOVERY, Cork Street, Dublin—Two Resident Medical Pupils. Applications, 13th inst., to T. F. Eustace, Registrar.
GUILTCROSS RURAL SANITARY UNION—Medical Officer of Health: £50 for one year. Applications, 16th.
JOINT COUNTIES LUNATIC ASYLUM, Carmarthen—Assistant Medical Officer: £100 per annum to commence, furnished apartments, etc. Applications, 27th instant, to the Medical Superintendent.
KILKEEL UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilkeel Dispensary District, No. 2: £80 per annum, and fees. Applications to James Walmsley, Esq., Ballykeel House, Kilkeel.
LIVERPOOL EYE AND EAR INFIRMARY—House-Surgeon: £80 per annum, residence, etc. Applications, 20th inst., to Henry H. Hornby, Hon. Sec.
LIVERPOOL NORTHERN HOSPITAL—Surgeon.
LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Demonstrator of Anatomy: £100 per annum.
MANCHESTER ROYAL INFIRMARY—Assistant-Physician.
MANCHESTER TOWNSHIP—Assistant Resident Medical Officer to the Workhouse at Crumpsall.
NEWTON ABBOT RURAL, and DAWLISH AND WOLBOROUGH URBAN, SANITARY DISTRICTS, combined—Medical Officer of Health: £400 per annum for two years, without private practice. Applications, 16th inst., to John Alsop, Esq.

RIPON DISPENSARY AND HOUSE OF RECOVERY—Resident House-Surgeon: £100 per annum, furnished apartments, etc.
ROYAL SOUTH HANTS INFIRMARY, Southampton—House-Surgeon: £70 per annum, board, lodging, and washing. Applications, 16th inst.
ST. MARY'S HOSPITAL, Manchester—Resident Medical Officer.
UPPON-ON-SEVERN RURAL SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications, 13th.
WANTAGE UNION—Medical Officer, Isley District: £55 per annum. Applications, 17th inst.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—Physician's Assistant: £100 per annum, board, washing, and furnished apartments.
WREXHAM INFIRMARY AND DISPENSARY—House-Surgeon: £80 per annum, residence and maintenance.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication

BIRTHS.

GAIRDNER.—At Ardrossan, Ayrshire, on July 31st, the wife of Professor Gairdner, M.D., Glasgow University, of a son.
SIMPSON.—On August 3rd, at 52, Queen Street, Edinburgh, the wife of *Professor Simpson, of a son.
WATSON.—On August 3rd, at Tottenham, the wife of *W. Tyndale Watson, of a son.

MARRIAGES.

GRAY-DARCY.—On August 2nd, at Ballymacward Church, co. Galway, by the Rev. J. H. Smythe, late Rector of Ballyclog, assisted by the Rev. F. Carr, Rector of the Parish, George Gray, M.D., of Castlewellan, co. Down, to Jane Adelaide, daughter of the late Thomas Richardson, J.P., of Tyaquin, co. Galway, and widow of Charles Vesey Darcy, J.P., of Bryansford, co. Down, and Lieutenant H.M. Indian Army.
SURGIN-SALE.—On August 6th, at Clifton, near Rugby, by the Rev. Thomas Sale, D.D., Vicar of Sheffield and Canon of York, uncle of the bride, assisted by the Rev. S. Newall, Vicar of Clifton, Herbert Branwhite Spurgin, Esq., Surgeon 48th Northamptonshire and Rutland Militia, of Northampton, to Jane Anna, younger daughter of the late Edward Sale, Esq.

DEATH.

JOHNSTONE, George, M.D., at Brighouse, aged 33, on July 23rd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

FEES IN CASES OF URGENCY.

SIR,—Some letters from Poor-law medical officers have of late appeared in the BRITISH MEDICAL JOURNAL complaining of the action of Boards of Guardians regard to extra fees claimed for attending to cases of urgency without a writ order. I used to think that the custom of refusing such fees was a characteristic of a board to which I once had the honour to belong; but it would appear that your correspondents that the same *low trick* (I use the term advisedly) is practised elsewhere.

For the benefit of Boards of Guardians who may not be aware how some pounds *per annum* may be saved from falling into the medical officers' hands, give the following *modus operandi*. The poor must be given to understand in all sudden cases they must go at once to the medical officer, without an order. If the latter attend to the case, and then claim the regulation fee, he is politely asked for the order, and having none, is told by the board to go about his business. If, on the other hand, he decline to go to a case before the order is obtained, he is held to do so at his own risk; and should such a case terminate fatally, it comes the coroner upon the medical officer like a hatchet. The Board follows suit, in a state of virtuous indignation, and the local press takes good care not to lose the chance of airing its rhetoric at the medical officer's expense.

Now let us contemplate the beauty of the plan. The medical officer has to choose between being made a social Aunt Sally or doing the required work; nothing; and, in general, he chooses the least of two evils, and the Board gets work done and saves the price of it, thanks to the dread of an enlightened public opinion. Surely, it is high time that such a state of matters be done away with. Why the laws regarding medical officers should have been framed as they are puzzles me; why we continue to submit to them puzzles me more. If our physicians were suddenly filled by artisans, those laws would be swept off the statute-book within six months. Moral suasion has been tried to ameliorate our condition *ad nauseam*—with what result? To attempt to get anything from the Bumble by means of resolutions of societies, timid remonstrances, milk-and-water proposals, is like taking a lancet to charge a wild pig. There is only one way in which our condition can be remedied; and that is, by firmly urging, one and all, and as firmly *demanding* that we shall be fairly paid and honourably dealt by. The good sense of the country would back us up, and we should rise immensely in public estimation. As it is, I do not wonder at the contempt lavished upon us, as a body, by the public. "What poor-spirited curs they must be to stand such treatment," say they; and they are right. If we would have independence, we must fight for it, not merely protest.

I am, etc., C. MOSS CAMDELL, M.D.

Staunton, Gloucester, July 15th, 1873.

The following handbill is forwarded to us, with a statement that the gentleman is a member of the British Medical Association. *Proh pudor!*

"Concert Hall, Lord Nelson Street, Liverpool"
 "Sunday, August 3rd, 1873.

"Dr. Lambart, M.A. Oxon., M.D. Trin. Col. Dub., Member of the Royal College of Surgeons, England, Gold and Silver Medallist and Prizeman in Anatomy, Physiology, Materia Medica, Midwifery, Medicine, and Surgery, will lecture on Cholera and Diarrhoea, how it becomes infectious, why we need not fear it, how to escape it, how to treat it, etc., things that everyone should know now, as cholera is at present in Europe and America, and may visit England soon. Lecture to commence at 6.30 punctually.—N. J. Webster, Printer, 20, Gerard Street, Liverpool."

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WE are indebted to correspondents for the following periodicals, containing reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 12th; The Manchester Guardian, July 16th; The Aberdeen Daily Press, July 12th; The Bath Express, July 12th; The Birmingham Daily Post, July 16th; The Herts and Essex Observer; The Roscommon Journal; The Hampshire Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Sussex Daily News; The City Press; The Birmingham Daily Mail; The Kent Mercury; The Daily Review; The Western Mail; The Wrexham Guardian; The Lincolnshire Chronicle; The Inquirer; The Lincoln Gazette; The Redruth Times, July 12th; The Liverpool Albion; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Richard Davy, London; Mr. A. Graham, Weybridge; Dr. Tyndale Watson, Tottenham; Dr. W. Dale, Plymouth; Mr. Blanchard, Charing Cross Hospital; Mr. Joseph Brown, Brighouse; Mr. L. Thomas, Dudley; Dr. McVeagh, Coventry; Our Dublin Correspondent; Mr. Wheatley, London; Mr. R. H. Anderson, London; Dr. Protheroe Smith, London; etc.

AN ADDRESS

ON

PUBLIC HEALTH AND THE PUBLIC HEALTH ACT.

Delivered at the opening of a Conference of Medical Officers of Health, held at King's College, London, August 7th, 1873.

By ERNEST HART, ESQ.

Chairman of the Meeting and of the Parliamentary Bills Committee of the Association.

A FEW words of explanation as to the object of this conference and the reasons for calling it together will probably conveniently preface the business. The British Medical Association has, through its State Medicine Committee and through its Parliamentary Bills Committee, constituted two organisations of which the special object is to watch the policy of the Government, and as far as possible to assist the Government in carrying out a wise and liberal policy in respect to the regulations of sanitary measures and the advancement of public health. It is unnecessary to recall to this audience the fact that the Royal Sanitary Commission, upon whose report the Public Health Act of 1872 was based, was called into existence by the urgent, deliberate, and elaborate representations of the State Medicine Committee of this and the Social Science Associations. That measure is, doubtless, called upon to exercise a great influence over the welfare of this country. Nothing can be more important to the material welfare of the country than the provisions of that measure, and the spirit in which it is interpreted and carried out. That it is the beginning of a great change, the initiation of the recognition by the State of its duties in assisting, guiding, and informing local effort for the prevention of disease and the improvement of the health tables of all parts of the country, is indeed evident from the attendance at this conference. For the first time in the history of this country, and indeed for the first time in the history of any country, we have here assembled to-day a conference of not less than one hundred and sixty medical men, all bearing a distinct commission from the authorities of their own localities having relations to the central Government, and having duties which immediately connect them with the sanitary condition of the districts in which they live and which bind them to the record of all the causes which affect health, of the outbreaks of disease which threaten life, and of all those conditions which come under the general designation of health. Thus far, then, we may congratulate ourselves that a great legislative advance has been made; and we may congratulate ourselves especially that our own profession has taken so large, so earnest, and so continuous a part in pressing upon the people and upon the Government, the necessity for establishing a preventive organisation, one which is destined to avert disease and which establishes us in the most grateful position we can occupy, that of saviours of health, and anticipators rather than curers of established evil.

It is natural that all those who thus have a community of public duties, and who are launched simultaneously in a new career, should endeavour to confer, with the view of ascertaining how far their commission is satisfactory, what are the means by which they can best carry it out, what are their present and future functions, and their apparent and possibly removable difficulties.

The Parliamentary Bills Committee, seated in the metropolis, and called upon to watch the progress of Parliamentary measures, is particularly anxious to maintain itself in communication with the medical officers appointed under the Public Health Act, and as far as possible to be enlightened by their experience in dealing with those modifications and amendments of the Public Health Act which have already been announced, and which are obviously impending. The Public Health Bill of Sir Charles Adderley reached only the preliminary stages of the Parliamentary discussion. It will, however, certainly be revived; and it is our desire to gather now, and in the future, such information as to your wishes, your experience, and your duties, as shall enable us to give expression to the best professional knowledge on the subject, and at least to inform, if not to guide, the future Parliamentary and Governmental action in respect to it.

Perhaps you will permit me to tell you, in as few words as possible, how the present administrative position of health administration presents itself to my mind, in order that I may learn how far you are in sympathy with that view, and that you may, by present and future communications, assist us either in modifying or in confirming it.

When the Public Health Act of 1872 was in process of construction,—and prior even to that stage, while it was still only in the condition of design,—the wisest counsels that could be collected from the most experienced persons indicated a simple and uniform organisation as one which was necessitated by the elementary facts of the case. It was clear to us that preventive health administration in any locality must be based, in the first place, upon provision for a minute, ready, and intelligent appreciation of the individual facts; secondly, upon a means for collecting them in sufficient numbers and conveying them at once to the persons whose duty it is to act upon them; and thirdly, upon the provision of authorities and officers capable of co-ordinating the facts, devising a proper course of action, and acting over such areas and with such authority and sources of income as are necessary for considerable sanitary operations.

Let me recapitulate these elements by translating them into a scheme. It was evident that a scheme of health administration involved the necessity, first, of medical officers whose local position gave them an individual knowledge of all the unhealthy localities, and gave them constant means of immediately learning the place, the time, and the circumstances of every case of zymotic or epidemic disease as it occurred. Such a person could only be found in the Poor-law medical officer of the district. He therefore, was the first and most essential element in any organisation; but it was obvious that he could not be the only element,—first, because his area of action was too small; secondly, because the funds, the authority, the intelligence, and the geological character of the area peculiar to union authorities, were not adequate for the purposes of constituting areas of sanitary administration. So that it was at once evident that for effective sanitary administration, arrangements must be made for grouping the union areas and the union medical officers and bringing them together under the authority of a consolidated Board, and with the assistance of a Consultative Medical Health officer, who should possess as complete a knowledge as possible of sanitary means and modes of proceeding.

Here, then, was this second necessary element in the administration of a public health law. But since this is a matter, not only of local but of imperial concern; and since it was from the first designed and necessary that the central government should, by its wisdom direct, by its funds assist, and by its authority govern the whole, it was necessary in this, as in all other departments of public work, to bring these two elements of local administration into relation with the central Board. The familiar machinery of the Local Government Board for this purpose is the employment of inspectors, who, over large circuits of country, consult with the local authorities and their officers, assist, devise, mediate, and ultimately report to the department of the Local Government Board, which decides. Here, then, was a machinery ready at hand, suggested, not by any new theory, but growing out of the plain and inevitable facts, so evident that it seemed hard then, and it seems still harder now, to understand how the purport of the facts could have been misconceived or misinterpreted, or how any other scheme could have been adopted. The history of the Act is, however, known to most of you. The first outline of the Bill made no provision for any systematic administration of the kind. After repeated efforts, Mr. Stansfeld was persuaded to put upon the face of his Bill something which indicated an intention to favour this arrangement. The Bill, however, was so vague in the matter of districts and areas, so blank in its creation of an administrative scheme, that we could not but feel that it was in that respect unsatisfactory, and left open a doubtful vista. No pains, however, were spared to lay before Mr. Stansfeld all the facts; and it is right to say that his utterances, on more than one occasion, appeared very distinctly to indicate an acceptance of this view. Doubtful as was the Bill, therefore, on the score of its vagueness, dangerous as was the absence of any provision for establishing adequate areas or an adequate system of officers, it was not thought right to obstruct, by serious opposition, the passage of a measure of which the general object was good, and which was at least capable of being so administered as to make it very largely beneficial to the country.

I am bound to confess to you—and it is this point especially on which I desire to consult you—that the mode in which the Act has

been carried out has inspired us with the most serious apprehensions, and has, so far as our information extends, led to consequences in which evil is so largely mingled with good, that it behoves us to ascertain exactly what is the working of the Act, and whether some remedy can be applied to those evils. It was natural to suppose that, in managing what had become a health-department of the Local Government Board, its own health-officers would have been consulted. It is publicly known that that has not been the case; and I speak of it here, because it is essential that it should be understood that, in what we have to say in objection to what has been done, we do not desire to involve in any censure the medical advisers of the Government, for the reason that they are in truth wholly innocent of the errors that have been committed, and that this extraordinary state of things exists—that an attempt has been made to establish at Gwydyr House a health-department dealing with great principles of public medicine, with great questions of sanitary science, from which all those persons who had any previous knowledge, any previous experience of the subject, have been carefully excluded. From what motive, I neither know nor am I concerned to know; but the fact remains, that an attempt has been made to establish on *dilettante* principles, and by spontaneous and heaven-born intelligence, a measure which, above others, required the most careful deliberation, the largest experience, the most minute knowledge. It required this, because a great experiment was being tried, a nation was being brought to the performance of a task of which the importance cannot be overrated, but which had previously been neglected; a new series of authorities were being created; a new series of precedents were being formed; a new series of officers were being instituted. There was a mass of experience available at the office of the Local Government Board, which could have told the President or the Secretaries of the Board what areas could be considered possible, what duties could fairly be entrusted to medical officers, what was the importance of gaining prompt and complete local knowledge, and what were the means by which the best instruments for obtaining such local knowledge could be selected, and the machinery by which they could be placed in communication with such central officers as could promptly co-ordinate and act upon that knowledge. The whole of that experience has been ignored. As the medical officer of the Local Government Board was not consulted in the construction of that faulty Act, so neither was he consulted in arranging the machinery for carrying it out. True to the instincts of a Board which has for years thought itself competent to manage affairs of which it knew nothing; true to the instincts of a Board which disgraced the Metropolis, disgraced the country, disgraced humanity, by its mismanagement of its medical department, by its cruel and ignorant neglect of the medical infirmaries of the workhouses under its care, by its oppression, contempt, and carelessness towards its medical subordinates, the Local Government Board has on this occasion sought to take into its own hand, uninformed, careless of information, and contemptuous of the skill which it was compelled, for form's sake, to have at its side, but which it has dared to despise, that Board has on this occasion sought to aggrandise itself, enlarge its power, to magnify its chosen instruments at the expense of the very Bill which itself had framed, at the expense of the very objects which it bound itself before the country to promote. What have we seen? We have seen, in spite of remonstrance, in spite of warnings, those very inspectors selected whose ignorance of all that relates to public medicine is avowed and has been proved, and to send them out broadcast over the country to experiment according to their own unassisted intelligence. Of course, I do not imply that they are not men of great intelligence, and possibly, in various departments, of great acquirements; but it has sent them, knowing that they had neither knowledge, nor experience, nor reading, nor instruction in sanitary administration to guide them; and it has entrusted to them the task of organising a health administration throughout the country. To pursue them each through their own work would be to unroll a story of almost continuous blundering, relieved by occasional snatches of success, by occasional hints derived from chance sources, by intelligent efforts to retrieve past blunders, and to undo what they had just been doing.

I have neither the time, nor is the material at my disposal; for their reports have not been collected, they have not been summarised, they have not been published. But following them, as I have, by means open to everyone, their own reported speeches, and their own published schemes, I see that they have placed the medical profession, and that they have placed the country, in this unpleasant position. Your duties are various; your positions are

unlike; your relation to local authorities and to the central authority, having in them nothing fixed or uniform; in many cases they are so difficult, and in some so impossible that failure must ensue. We have seen at the outset Mr. Doyle, one of the ablest of the inspectors of the Local Government Board, proceed to organise one great division of this kingdom. He has shewn so much ability in his work, that he has since, in part, retrieved his earlier blunders, and has, with great intelligence, retraced some of his false steps; in other words, he has learned to shave upon the public beard, and has managed to bleed his patient without considerably injuring his own reputation. Mr. Doyle started by devising a scheme in which one element only of sanitary administration was present. He procured the appointment of every district medical officer as a local health officer, and he said nothing about any other intention. At the same time, by a singular incongruity, he recommended the appointment of local inspectors of nuisances over much larger areas, reversing the approved principle that the medical officer of health should be the head, the directing intelligence,—presiding over the area, over whom the inspector of nuisances should be the hands. He obtained from these local medical officers of health so appointed and from the inspectors of nuisances' parallel reports, which are published as of equal authority in a very interesting, and, in every way, a very astonishing public report. Those who have read that report must be struck by finding that the inspector of nuisances often figures as a much more important person than the medical officer of health, and that his recommendations are often set forth with the *aplomb* and detail of an accomplished health officer, never doubting of his own ignorance, suggesting the expedients which uninstructed incapacity devises. The result of this was, that, in the first place, a number of these appointments have proved themselves to be for areas so utterly small and insignificant, that they annulled themselves, and in other cases, since Mr. Doyle himself, the inspectors of nuisances, and the medical officers of health, were but incompletely informed of the great experience which had accumulated during the last twenty years in dealing, in Mr. Simon's department, with these subjects, many of the recommendations were not only useless, but absolutely pernicious. It is unnecessary to say that it was upon these that the local authorities seized, with the greatest avidity; it is upon these that they began to act, and that some of them remain now permanent monuments of the results of setting a man of great ability to do with all his might a work of which he was ignorant. He did succeed in persuading the local authorities to follow his advice. He did succeed in inducing local medical officers to endorse his plans, and he did succeed in perpetrating some of those enduring blunders of which Mr. Dyke has with ingenuous truthfulness spoken in an address recently delivered to the South Wales Branch, and which cannot be removed for years to come; and even then, probably not without further interference of legislation.

Since the appearance of this report Mr. Doyle has wisely, and, I have no doubt, in accordance with the advice of our friend, Mr. Dyke, urged upon the Local Boards that amount of co-operation and the additional appointment of a consultative officer of a large area, which ought to have been the first and cardinal point in his scheme and in the scheme of all the other inspectors from the moment when they started, and which would have been, had any adequately skilled advice been taken on the subject. Mr. Doyle, however, has been happier than some of his fellows. While he was at work in Wales recommending the appointment of medical officers in small districts pure and simple, others of his colleagues were at work in other parts of the country. Mr. Henley started upon another cue: he took the other element of our scheme: he started at once with the grand theory of county organisation pure and simple; and just as Mr. Doyle, clothed with the authority of the Local Government Board, would hear of nothing but Poor-law medical officers as sole officers of health, so Mr. Henley would have nothing to do with Poor-law medical officers as health-officers in any capacity. His plan was to appoint a medical officer over a great district, to exclude Poor-law medical officers altogether from the health scheme, and to concentrate all the sanitary work over one thousand square miles of country upon the shoulders of one medical officer; and others of his colleagues adopted a similar course. Mr. Henley told the boards, whom he summoned that he might enlighten them, in the name of the Local Government Board, that they were utterly to reject Poor-law medical officers from their scheme. Mr. Henley, indeed, was in favour of appointing relieving officers as inspectors of nuisances; but Mr. Hawley in another place would have nothing to do either with Poor-law medical officers or with relieving officers; and it may serve to show the grounds upon

which great principles of sanitary administration were decided, that he alleged as his reason that to employ Poor-law medical officers would involve a difficulty in accounts. Mr. Farnall, speaking also in the name of the Local Government Board, suggested a third plan to the authorities whom he enlightened; and that was a coalition of districts, a consultative medical officer, and a coalition of inspectors under a consultative inspector of nuisances; and so it is that we see now not a sanitary organisation but a sanitary anarchy throughout the kingdom, medical officers appointed in some cases in districts so small that it is impossible that sanitary works of any importance can be carried out, and with salaries so small that no medical man can be expected to devote any serious amount of time to his work,—nor can the sanitary authority afford to spend any adequate sum upon the work to be done; whilst other medical officers are appointed over areas so large that, if they were to attempt to carry out the work of ascertaining the primary facts of the outbreaks of disease, of the condition of local nuisance, and of the daily incidents of disease, their whole life would be spent, as half of their time is now, on horseback; worse even than this, in those districts in which medical officers of great ability, of adequate experience, have been employed at fair salaries by a meeting of sanitary authorities collected *ad hoc*, the difficulties of the work are, on other grounds, if not insuperable, at least so excessively great as must impede their work and such as need never have occurred. Thus we have, first, the irregular, scattered, and interpolated confusion of their districts, which has been so well shown in the admirable maps constructed by Dr. Rumsey, issued recently in the JOURNAL. We have, then, this most serious consideration, that, although the medical officer of health has been appointed by a collective committee of authorities, no arrangements have been made for their persistence in any collective relation to him; and they do not exist in the collected form in which they appointed him. There is no persistent conjoint committee. The medical officer has been appointed by fourteen independent authorities, meeting once to appoint him, then disappearing into space, and dissolving into their original disunion; so that that gentleman has to deal, not with one committee, but with fourteen separate authorities, who have each co-ordinate and simultaneous claims upon him, each of whom may require his presence at fourteen different places at the same time, who have no means of communicating their views to each other, and with whom, if he wishes to communicate, he must communicate, not collectively but individually. It is palpable that in such an arrangement there is no element of persistence, no element of unity, no element of solidity or coherence.

These are the difficulties which occur to us on the face of the existing arrangements, under which you hold your offices. But we see another, to which attention ought to be called. This anarchy has been created by lay inspectors, and those gentlemen remain as the mediators, the advisers, and the judges in the districts which they have created. We have seen Mr. Doyle referring with satisfaction to impossible sanitary proceedings. In his last and corrected scheme, we find him so utterly uninformed of the elements of sanitary administration, as to declare that "uniformity is essential."

Now, if any positive knowledge has been more certainly established by experience than any other, it is that uniformity of principle in dealing with local nuisances is impossible,—that every place requires to be treated as every patient requires to be treated, in consonance with local necessities, local conditions; and that the sanitary requirements of each place must be studied separately, and dealt with according to the principles derived from large previous experience. If Mr. Doyle had been aware of this, he would never have sanctioned, even by implication, the establishment of culverts without water-supply. Culverts and drains are excellent things where there is a good water-supply, and may thus easily have commended themselves to his mind when in search of a uniform principle—as an uniform method: but as a matter of fact, introduced in places where he has been indirectly instrumental in introducing them, and where there is no good water-supply, they become huge nuisances and sources of pestilence.

Again, we have seen Mr. Corbett, one of the lay inspectors, undertaking to advise a local board at Macclesfield on the subject of the suppression of an outbreak of scarlet fever—calling in to his aid the assistance of a neighbouring inspector of nuisances—with this result, that the local authorities had enough glimmerings of the insufficiency of the advice given them to reject it contemptuously, and in a manner more offensive to the Local Government Board than is usual, even in the annals of that much suffer-

ing Board: so, that in despair, it became necessary to call in the assistance of one of the youngest of the medical inspectors of the Board, who, quickly enough, was enabled to satisfy the Board of what it was right for them to do, to induce them to change their attitude, and within forty-eight hours to take the step which led to the speedy suppression of the outbreak.

At present, then, the whole of the medical officers now appointed are subject to the inspection, to the interference, to the judgment, and to the guidance of men, who in truth know nothing of the work which they are set to inspect, or at least know no more than the guardians whom they are to advise, and not so much as the medical officers whom in cases of necessity they are to control. They know nothing of the difficulties which beset a medical officer in the discharge of his duties; they cannot judge of the propriety or impropriety of the steps which he may feel it necessary to urge upon his Board to take in periods of emergency; nor are they qualified by any knowledge of their own to test his recommendations, nor by any arguments of their own to assist him, or to assist him in informing his Board, or to assist the Board in arriving at decisions where they are either unwilling to act, or doubtful how to act. *Prima facie*, it is an absurdity to employ uninformed persons to superintend, or to control, or to advise about the work of highly informed persons: but it is possible that some of us might at first sight be willing enough to accept this impossibility on the principle that after all King Log is a very good king, and that inspectors who are obviously ignorant must of necessity be silent and inactive. This would be a plausible suggestion; and no doubt it is one which has occurred to some of us, and has rather reconciled us to the possibility of having as inspectors, persons whose knowledge we know to be inferior to our own; but it is more incorrect than it is plausible. The whole history of the Poor Law Board is there to shew it; the whole history of the medical administration of workhouses, of the administration of sick relief to the out-door poor, testifies against such an hypothesis. Not to revert, however, to the history of the past, not to revert to scandals less deeply impressed perhaps on the memory of others, than in my own mind who saw them with my own eyes, we need only to look to what is now going on at this moment in a case before our eyes, where lay inspectors have thought themselves, and have been thought, competent to assume towards medical officers in district schools the very functions which it is now proposed to give them towards medical officers of health.

Let us look at the state of the metropolitan district schools. How is it that ophthalmia is now prevalent, and has been prevalent for several years in every district Poor-law school around London, with probably two exceptions? The cases are precisely parallel to those of the medical health-officers in respect to their administrative relations to lay inspectors, and so I would beg your attention to it. The medical officers of the district schools are subject to the local authorities of the schools, just as local medical officers of health are subject to the local sanitary authorities; and both are supposed to be guided by the advice of their medical officers. They are, of course, in fact so guided just to the extent that it pleases them. In both cases the Government possesses a consultative medical officer; in the one case Mr. John Simon, in the other case Dr. Edward Smith.

To make the case stronger in illustration of my present argument, it should be mentioned that Dr. Edward Smith had been consulted to the extent of being asked to lay down a code of rules for dietary and space. The matter then passed into the hands of the lay inspectors; and I believe that the inspector of these district schools is well credited to be one of the most intelligent officers in the employ of the Local Government Board, and was selected for his known and pre-eminent abilities as an inspector. How is it, then, with local medical officers, and with a consultative physician, that such a scandal as this has persisted for several years—and I speak advisedly in using that rather unpleasant expression, for the scandal is so great that, if the documents relating to it were published, or if anyone possessing the whole facts of the case could publish them, no department could withstand the indignant outcry which it would raise; and I venture to appeal—I fear, hopelessly—to the President of the Local Government Board to publish the reports of local medical officers on cases of ophthalmia in the local district schools for the last six years, and the special reports of Dr. Mouat. Ophthalmia has been epidemic and persistent in the district Poor-law schools from causes wholly removable, but which have not been removed. These causes were of a nature so easily to be remedied, and so well known, that in

the one school in which well-devised precautions were taken, a complete immunity has been enjoyed throughout the period of the recent formidable epidemic; but, in the other district schools, the lay inspectors, incapable of comprehending the nature of the emergency, uninspired by knowledge to support, stimulate, and assist the local medical officers, incapable of imparting to the guardians that authoritative information which would have compelled them to remedy the evil, and regardless of the advice of the collateral medical inspector in London, Dr. Bridges, in at least one instance allowed an epidemic to grow up, flourish and persist under their eyes until it attained dimensions so scandalous, that the President of the Board, awakened by the public clamour, felt compelled to call in the advice of a medical man holding no official position, but eminently qualified for the office, who has, by three months' labour, succeeded in redeeming some of the errors of the past.

Let this lesson be taken to heart. It was not a want of natural intelligence; it was not a want of industry; it was not a want of humanity which allowed Mr. Farnall to see the cruelties and the faults of the workhouse infirmary system in London grow up unnoticed under his eyes: it was not any defect in personal qualities which made Mr. Hawley indirectly guilty and responsible for the incidents in the drama unveiled at the inquiry into the Farnham Medical Infirmary: it was want of technical knowledge. With that lesson before their eyes it is strange indeed that the Local Government Board, seeing their inspectors driven from a position in which want of technical information had disgraced them and the government in the eyes of the nation, should now have thrust them into positions in which they bring a want of special information to a task which demands it in a much higher degree. To me it is not surprising that they should only have succeeded in producing a scheme which is chiefly remarkable for its entire absence of coherence, of order, or of possible persistence. It is not possible in my view that medical officers over large districts should carry on their duties satisfactorily—over one thousand square miles of country—without the assistance of local medical officers of health, without the power of reference to a consolidated local authority, and without the intervention of, and the power of appeal to, an intelligent and technically instructed government officer intervening between them, the Local Board, and the Local Government Board.

Seeing the difficulties under which medical officers of health are placed under the present scheme, and seeing the want under which they must labour of reference to a collective medical experience and administrative capacity, it seemed peculiarly desirable that the opportunity which has now occurred should be used of affording those who are this week present in London the means of conferring upon their duties and position. It seemed at the same time most desirable to establish a means of communication between them so as to enable us, acting for the British Medical Association, to gather their views and to act in concert with them in those further measures which it will be our duty to take in connection with any legislative measures which may be introduced in the next session of Parliament.

THE ADULTERATION ACT.—At Westminster, Messrs. Warren Brothers, wholesale and retail grocers, of Stockbridge Terrace, Pimlico, were summoned for selling coffee to which chicory had been added. Dr. Corfield said he found the coffee very much adulterated with chicory—he should say at least 30 per cent. The defence was that chicory rendered the beverage more palatable, and that as coffee in bean cost 1s. 5d. per lb. wholesale, it could not be sold in a pure state without loss. Mr. Dixon, the vestry officer said he had frequently purchased pure coffee at 1s. 4d. per lb. The defendants further contended that the paper in which the coffee was wrapped bore the words, "This is sold as a mixture of chicory and coffee." These words, however, were not visible on the outside of the packet sold to the inspector. Mr. Woolrych fined the defendants £3, including costs. In another case of a similar nature the words, "This is sold as a mixture of chicory and coffee" were inside the paper, and could not be seen. Mr. Woolrych fined the defendant £3, including costs. In another summons the defendant was fined 50s. He maintained that pure coffee could not be sold at 1s. 4d. per pound, and that the master was not responsible for the acts of the shopman. Mr. Woolrych overruled the objection.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association, in London, August, 1873.

By GEORGE WOODYATT HASTINGS, Esq.,

Barrister-at-Law, Vice-President of the Section.

UNDER any circumstances I should have taken the chair on this occasion with feelings of great diffidence, because I know well that in presiding, as I am about to do, over an assemblage of scientific medical men on one of the subjects relating to their profession, which is at least as scientific as any other, my qualifications must fall very far short of what is required in your President; but I feel that diffidence on this occasion all the more strongly, because I have been called upon at the last moment and quite unexpectedly to myself, to take the place of one who, as I know by personal knowledge, was perhaps more highly qualified than any man in the kingdom, looking to his scientific attainments, looking also to his parliamentary experience, viewing the subject whether legislatively or theoretically, to occupy this position. I deeply lament, as you all do, that Dr. Lyon Playfair is prevented from attending. I lament still more the cause that has led to his absence. I can only ask you, under these unforeseen and unfortunate circumstances, to extend to me a generous consideration while I am engaged in the discharge of my duties in this chair. I can only ask you especially to forgive the necessary shortcomings of an opening address, which I have had no time to commit to writing, and in which I only purpose to make a few extemporaneous observations upon certain points of the great subject committed to our care in this Section, which have commanded my attention during the last few months, and on which I think I shall be able to speak to you, whether they be important or otherwise, with some personal knowledge and experience.

Now the science of Public Medicine, which this Section meets to consider, and which is one of the most important which the Association was formed and exists to promote, is, in fact, considered practically, the art of preserving life and of preventing disease. I desire to bring to your notice one or two special cases in which I have myself seen a great success in thus preserving life and preventing disease, and to argue from those special cases, as far as I am able to do, as to what appears to be the best means by which the same advantages can be extended to the whole community.

During last autumn and winter, I was able to pay a visit to the Continent of America; and I need not say that I there met with many valuable experiences in several branches of political and social science, and I became acquainted with a few facts with regard to Public Health, which interested me greatly. I do not wish to flatter our American kinsmen, by telling you that in my belief they are advanced as far in sanitary science as we are in this country. I think it is very much the reverse. I believe that, at the present moment, England is far ahead of the United States in the practical administration of sanitary science; but at the same time, I can bear most cordial witness to the great efforts that are now being made in America to bring up sanitary administration to a higher standard, and to the scientific investigations which are being carried on with respect to sanitary questions, and to the great zeal manifested by those engaged in the cause.

In New York I became acquainted with more than one circumstance which I desire to bring to your notice. There is one which may or may not be intimately connected with the objects of this Section, but it is an institution which I think might be usefully imitated in this metropolis; and, assembled as the Association is in this great city of London, whence intellect and information spread naturally to all quarters of the kingdom, I think it may be well if any suggestions be made which will tend to improve either sanitary or hospital administration. I was very much struck by what is called the ambulance system established in connection with the New York hospitals. I went to what is called the Reception Hospital, near the bank of the river, and there saw the system at work. They keep in that and other hospitals six ambulances, each furnished with a horse, and with all surgical appliances in case of an accident, and in fact, supplied exactly as the ambulance would be if it were about to take the field with an army under

active operations. A telegraph office in the Reception Hospital communicates with the police stations in every ward of the city, and wherever an accident happens, a message is transmitted. While I was in the room, a telegram arrived, and was written out in my presence, stating, that a labourer had fallen from a scaffold and broken his leg. Within three minutes of its arrival, I saw the ambulance start, furnished with all the appliances I have mentioned, in charge of a surgeon, who drove as fast as possible to the scene. Probably within a quarter of an hour after a telegram is received, a qualified surgeon with all the restoratives necessary, is by the side of the man who had sustained an accident. He is placed carefully in the ambulance, in the best possible position with reference to his fractured limb, all necessary restoratives are at once applied, and he is taken to the hospital best fitted to his case, or which is nearest, or, if he wish it, to his own home. I found that, during the then preceding year, 1,401 patients had been succoured by means of the ambulances from the hospitals, of whom 1,066 had been helped in consequence of telegrams received from police stations. I was also told there were upwards of seventy cases, which in the opinion of the surgeons would have been fatal if they had not been speedily succoured, but in which, owing to the help rendered them, the sufferers lived to be removed to the hospital, and afterwards recovered under the care of the hospital surgeon. I venture to suggest, whether in this great city, looking to the resources of our hospitals, it might not be possible to organise such an ambulance system, so as to secure the assistance of a qualified surgeon as promptly as possible to any accident within the bounds of the metropolis.

Another institution I saw in New York was the hospital for infants in Randall's Island, a very remarkable institution. Up to 1868, the numerous children deserted by their mothers in the streets of New York, or otherwise thrown on the charge of the public, were taken to what are called the almshouses, which answer to our workhouses, and were under the charge of pauper nurses. Under that system, nearly all the children died. I cannot give the exact rate of mortality, but it was frightful, and amounted nearly to the extinction of the children thus taken under the care of the State. In 1868, the Commissioners of the city of New York, who have charge of these matters, and to whom I shall have occasion subsequently to allude, established the Infants' Hospital in Randall's Island, with a paid and highly qualified physician, Dr. Dunster, a matron, and a staff of paid nurses. The mortality has since diminished very greatly; but the point to which I wish to draw particular attention is the remarkable difference between the mortality of the foundlings and of the other class, who are called "mothers' infants" because they are taken into the hospital with their mothers.

The rate of mortality among the foundlings taken in without mothers was, in 1868, 76.77 per cent., in 1869 it was 70.32 per cent., and in 1870 it was 58.99 per cent.; whereas the mortality of children suckled by their mothers in the ordinary and natural way was, in 1868, 20.57 per cent., in 1869 20.44 per cent., and in 1870 15.06 per cent. I asked Dr. Dunster, whose great kindness and courtesy to me I desire publicly to acknowledge, and I only wish I could do so to him personally here, what, in his opinion, was the reason of the vast difference between the two rates of mortality. He told me that unquestionably the difference was owing to the fact that, in one case, the children had the natural nourishment which every child ought to have from its mother, while the other class, however carefully treated, were brought up upon artificial food. He told me also that the diminution between 1868 and 1870 in the mortality of the foundlings was owing to the means he has taken for supplying every child, as far as possible, with its natural food. He showed me a number of women who had come into the hospital with one child each of their own; and the bargain he makes with them is that, if they are taken into the hospital and well provided for, each of them shall take one of the foundling children to suckle. With good food, ample nourishment, and care of their health, they are perfectly competent to do so; and the foundling, thus adopted by a mother, lives and thrives, when the foundling not so circumstanced frequently dies.

The general conclusion we must draw from that special fact, as it seems to me, is that the first thing we have to look to with respect to infant life in our community is, that children and parents are so circumstanced that it is, at any rate, probable the former will receive a proper and sufficient quantity of the natural nourishment from their mothers. In connection with this subject, I desire to say a few words on a Bill which was before the House of Commons during the past session, and which has provoked much discussion, relating to the employment of women in factories. It has been fiercely contested, and, owing to the opposition thrown in its way, it was finally withdrawn. The argument, so far as I am able to follow it, taken by the opponents of the Bill is mainly this; that, however justifiable it may be to interfere with the hours of labour of children, who have not, perhaps, arrived at

the period of life when they can judge for themselves, it is contrary to the principles of political economy and to the liberty of the subject to interfere with the labour of adult women; that every woman, whether married or not, when arrived at a certain period of life, ought to be allowed to work as hard and as long as she chooses, without legislative interference. It seems to me that the facts to which I have been drawing your attention tell very forcibly on such a question as this. I do not admit the laws of political economy to be precisely and exactly such as they are occasionally expounded, even by their most eminent professors. Political economy, I may venture to say, is a science to which I have myself devoted some time and attention; and those who have ever done me the honour of listening to any addresses I have given on the subject know that I am certainly not one of those inclined to be heretical on the matter, or to depart from the economical views which, I believe, embody the great laws regulating the social happiness of mankind. The mistake, however, sometimes made on economical questions is, that those who deal with them do not look over a sufficiently wide area of facts, and therefore draw conclusions which are too narrow. They reason from insufficient premises, and consequently arrive at incorrect conclusions.

That, as it seems to me, is precisely what is done in relation to this Factory Bill and similar questions. It is a perfectly sound and healthy doctrine of political economy, that each individual of adult age and of ordinary reason is the best judge of his or her own interest, and, if no other interests than those of the individuals be involved, it is only right to leave them to go wrong if they choose, and to go right if they can be persuaded to do so; but, when the interests of the individuals involve other interests than their own, the question is totally different. The ancient maxim of jurisprudence, that you have a right to use your own possessions, but must not use them to your neighbours' prejudice, comes in here and modifies the more narrow views of the political economist.

The first material object of a community must be to preserve the health, and, consequently, the vigour, and efficiency, of its population; and as we all know that sickly children cannot, as a rule, grow up into healthy adults, it follows that one of the first objects of every community must be to take care of helpless children who cannot defend themselves, who cannot speak for themselves, and who cannot look after their own interests. They should have their interests attended to by the community, and if it be true that a child is not likely to be healthy and vigorous, and, perhaps, that the chances against its life, as I think I have shown, are very great if it lacks the mother's milk which nature intended for its food, it follows that any system of employment of married women, operating at any rate upon a wide scale, which either compels or induces them to neglect the care of their children, to stay away from their babies for many hours, to leave them to the care of nurses, whether competent or incompetent, careful or careless, a system which deprives children, consequently, of their natural food, must be a policy which will ultimately sap the strength of the population of the country. I, therefore, say that upon this question of factory labour the economy of the whole nation overrides, according to the strictest doctrine of the science, the economy of the individual, and that it is not our policy to allow large classes of married women so to employ themselves in continuous work, as to injure the constitution and endanger the lives of those to whom they have given birth. The argument which is drawn from men to married women upon this point, though I admit it to be in some respects sound, is largely fallacious, and for this reason, that their destiny in life is dissimilar. Man, as far as at any rate as the great bulk of mankind are concerned, is eminently a working animal, one intended to earn wages to maintain himself and those dependent upon him; whereas a married woman is eminently, essentially, and primarily a child-bearing animal, and it is upon that point of view that public policy must look upon her and insist that that view should occupy the foremost place in any legislation affecting her destinies. I do not admit, therefore, that any legislative interference is unjustifiable respecting the hours of factory labour as far as married women are concerned, so as to bring them within those hours which, on the average, and taking the bulk of women employed in those factories, shall not be prejudicial either to their own health, or prejudicial to the health and constitutions of their helpless children.

I am now desirous of calling your attention to another matter, from which also I think I shall be able to deduce some conclusions which may possibly interest you—a matter which has come under my own observation, and I may say supervision, during the last few months. In the city of Worcester, at the close of last year, there broke out an epidemic of small-pox. In its extent and nature it was; so alarming, that not only did the tradesmen of the city find that their usual customers from the county deserted them and went to Cheltenham and other towns where they thought they could do their shopping with safety, but it was

gravely considered whether the Winter Assize should not be postponed, on account of the danger which, it was believed, would attend the assemblage of prosecutors and witnesses and other persons in attendance on the court. The epidemic continued almost unchecked for some time; but at length, owing to the active exertions of the municipal authorities and medical profession in the city, and by using a detached house on the outskirts as a small-pox hospital, it was got under, though not till many lives had been lost, till a great deal of suffering had been sustained, and till the city—as I pointed out at a public meeting with regard to sanitary matters—had suffered in actual pecuniary damage far more than would have sufficed to maintain a highly paid medical officer of health for several years.

It happened that, while the epidemic was thus raging, two cases of small-pox were accidentally introduced into our county prison. Two prisoners came in who had unquestionably taken small-pox before they were committed. It broke out upon them while they were in their cells. Now, the population of the prison was upwards of two hundred, and it was a population so circumstanced, as it seems to me, that it was in many respects very likely the epidemic would spread—that is, it was a population of persons living under rather depressing circumstances with respect to their health, many on very reduced diet, and, therefore, we may presume with their vital energy at a lower point than the average. There was also a large number of warders, turnkeys, and others who necessarily had to go about the prison, and would have been subject to the contagion. What happened? Owing to the exertions of the surgeon of the prison, Mr. Hyde, to the stringent orders that were issued by the visiting justices, to the precautions that were taken, by isolation, by vaccination, by disinfectants, in fact, to every prompt step that could be taken to meet the emergency, not one prisoner in addition to the two who came in at separate times with the disease upon them, or in a state of incubation, took the disorder; so that, while the city was ravaged by an epidemic which for a time it seemed impossible to check, there was a population living on its borders, subject apparently to precisely the same influence, among whom the epidemic did not spread, though there were two cases of small-pox among them.

Now it seems to me that this is a tolerably convincing proof that it is possible to arrest the spread of contagious and infectious disease if prompt and proper steps be taken. There was, about a year ago, in the same prison, a still more remarkable fact. We had, by accident, a case of relapsing fever introduced into the prison; that did not spread. Owing to the precautions taken, the one patient was cured without a single other prisoner taking the disorder. While I give every due merit to the intelligence and zeal of our surgeon, I think something is also due to those who administered the prison, and who were ready, under the emergency to do all they were told was necessary for the preservation of the health of those who had been committed to their care.

Now it seems to me the logic of these facts applies to the whole community. If you can do this for a small community like a prison, you can, with adequate means, do it for a large community, and ultimately for the whole nation. It is merely a question of organisation, of wise expenditure, of energy and of science. I have seen it done to a considerable extent for a population who were not living under the same urgent restrictions as those which, of course, beset prisoner in gaol. I happen to be chairman, like Sir Charles Hastings before me, of the Model Dwellings Association of Worcester. When epidemics—scarlet fever and others—were raging in the city, we have escaped without a single case, and why? Because we exercise a kind of benevolent despotism over the inhabitants of those dwellings. We will not allow them to be filthy or to have nuisances on the premises, or flagrantly to neglect their health. We enforce cleanliness and decency, and take care that the buildings are adequately drained, supplied with good water, and kept in a sanitary condition. By these simple means we are able to boast to our shareholders, year after year, that not a death has taken place among the population of our model dwellings from anything like an epidemic disorder.

Now, when you have such facts, we are entitled to argue that if you can only extend—I do not say that at this moment you can—the same prevision and care to a large population as you have already done to a small community, you will be able to produce precisely the same order. But in order to do so, the first question to consider is the administrative body to whom you will entrust the work. You may have as many medical officers of health as you can appoint; but, valuable as they are, they will be powerless unless they have those beside them who will carry out their advice. You may enact what sanitary Acts you choose, and yet you will never be able to preserve the health of the population as long as you have administrative bodies either so ignorant, or careless, or incompetent, or interested, that they will not take proper action. I have been more and more struck, year after year, as I have

had to consider these questions—whether administratively as a magistrate of my own county, or whether in connection with this Association or the Social Science Association—with the fallacy that attaches to the mere abstract idea of what is called the elective principle upon these matters. I entirely believe in representative government, as I presume you all do, and we are proud that England has given what is perhaps the greatest among many examples of the blessings of free institutions; but it is a fallacy to suppose that you can drive the principle to an extreme, and that you can obtain good government merely because you have an elective governing body. What is necessary beyond that, is that the men so elected are competent and capable and upright. Unless you secure that, this representative government of which we boast only lands us in more serious evils than any despotism, however rude, could do.

The first principle to which we have to look in this matter, is that the area over which the elected body is to bear sway shall be of sufficient size to exclude the system of small cliques and of interested classes which always arises in small areas. You are well acquainted with the history and nature of this subject. Do you know, or do you not, small administrative bodies who are elected nominally for the purpose of preserving the health of the people, but really for the purpose of saving the pockets of those who own small, unhealthy, evil tenements within the area in which the election takes place—men who are chosen to show how the thing can not be done—chosen for the purpose, they would say, of keeping down the rates which no doubt is with them a great object, but still more with the object of avoiding alterations in their own property, which they would have to pay for themselves? They desire to remain in as unsanitary a condition as they can, because an unsanitary condition is to their private pockets more economical than due reparation and improvement.

I was much struck by finding in New York that the sanitary administration of the city has been taken away from the hands of the Town Council—taken away, by the people rising up with indignant repudiation of the bad government that was being carried on and of the wrongs done to them by the elected body—and placed in the hands of a body of paid commissioners nominated by the Governor of the State, and incapable of being removed by any popular vote. I found that this change was the commencement of sanitary improvement in New York. If you will read the remarkable health-report of the Commissioners, issued, I think, in 1868, you will find what the condition of the city was in sanitary matters when they were appointed, and you will be able to judge by their subsequent reports, as I could judge from personal observation, what improvement has been effected since. You will find that, from the moment this paid, upright, and disinterested body was appointed, they began to sweep away the nuisances which the elected body had thought it their first duty and interest to maintain. I find that the example is being largely followed in other States; and I believe that within ten years in every important city of the Republic the sanitary administration will be taken out of elective hands, and put into the hands of nominated and paid commissioners.

Now I do not advocate such a step for this country. I do not think we have in England fallen into quite the condition of the municipality of New York, and I hope there is sufficient public spirit, and energy, and intelligence yet left to enable Englishmen to resolve that they will for themselves remove abuses, and, through the action of their own representatives, take care that the health of the public is improved and maintained. In order, however, to do so, it is necessary that the areas of administration should be sufficiently large to enable the ratepayers to elect men who will be above the interests of cliques and classes, and who will duly represent the whole community. We want areas like those which elected the London School Board, which, instead of sending, as under other circumstances might have happened, a number of small vestrymen to carry out the educational wants of the metropolis, elected a body of men to whom the community can look up, and in whose hands they feel sure the Act will be efficiently, uprightly, and wisely worked. If, in the country at large, you will only insist that Parliament and the Local Government Board shall take care that the areas are so large as to exclude the petty interests which prevail in smaller districts, you will have governing bodies elected in sanitary matters composed of men incapable of corruption, above all personal and party interests, bent only on availing themselves of the scientific knowledge at their disposal, and of improving to the utmost the sanitary condition of the people.

There was a remarkable contradiction between the enactments embodied in the Public Health Act, as carried through Parliament by Mr. Stansfeld, and the administrative steps that were taken by the Department of which he is the head, a few weeks or months after the Act was passed. I had the honour of being spokesman of a deputation to Mr. Stansfeld, sent by this Association and the Social Science Associa-

tion conjointly, before the Public Health Bill was introduced into the House of Commons. It was then, we may presume, in such a state of fluidity that it might have been moulded into any form its author chose. Our task was to express the opinion of the two great bodies whom we represented, and which had again and again, in committees and at public meetings, exhaustively discussed the whole question. We showed Mr. Stansfeld, very much as I have endeavoured to show you, that, if the Bill were only a measure for consolidating, to some extent, existing enactments, and if it left the administration of sanitary matters in the hands of a number of petty and conflicting authorities, all such legislation would be futile. We endeavoured to establish, and, although I may have no right to say so, we tolerably demonstrated that any measure which, in accordance with the mistaken recommendation of the Royal Sanitary Commission, made boards of guardians the sanitary authority in rural districts would assuredly come to nought. Mr. Stansfeld, as he had a perfect right to do, totally disregarded our representations. He thought, I suppose, that we were not men who understood the subject, and that our voice did not carry sufficient weight with the Local Government Board or the Legislature. A measure was passed which confided to boards of guardians the sanitary administration of rural districts.

What, then, was my astonishment when, having made up my mind, as an *ex officio* guardian, to do what I could to make the sanitary administration of our Board tolerably successful, I received a notice from Mr. Longe, Inspector of the Local Government Board for a wide district, that he had asked the Lord-Lieutenant of Worcestershire to convene a meeting of delegates of the different sanitary authorities throughout the county, to submit a plan by which they should unite in the appointment of a medical officer of health in common. This was the very thing we had asked Mr. Stansfeld to do. We had told him it was the initial step in making sanitary administration in the provinces a success, and he had declined to agree with us. The very thing which might easily have been effected by six lines in the Act of Parliament, was now to be attempted by bringing together, in a heterogeneous meeting of delegates, all the different sanitary authorities of the county, and asking them to do voluntarily what the Act had told them, in plain language, they were not to do!

Well, we held this meeting, and I am bound to say I never heard a more clear and convincing statement than that made by Mr. Longe. He demonstrated, as I thought, to every one present, though it turned out I was mistaken, that whether on the ground of economy, efficiency, or public safety it was desirable that, instead of appointing, at very small salaries, a number of petty officers in the different sanitary districts of the county, we should all unite to appoint at a high salary, such as would compensate for private practice, some medical practitioner highly versed in sanitary matters. There was a motion made in favour of appointing the Poor-law medical officers as the officers of health. An amendment was moved, and seconded by myself, in favour of appointing a medical officer of health for the whole county, paying him liberally, excluding him from private practice, and requiring him to give his whole time to his duties. The amendment was carried by 27 to 5, and I congratulated Mr. Longe on the success of his undertaking. It was a lamentable example of the fallacy of human expectations. No sooner had the delegates who had been convinced by Mr. Longe, and perhaps in some degree also by others, that the plan they had adopted was the right one, returned to their respective bodies, than with a single exception every one of those bodies repudiated their act, and resolved to appoint the union medical officers. At this time, there is not within the county of Worcester, although it is more than a year since the Act received the royal assent, a single medical officer of health. I leave you, then, to judge, as far at least as some districts are concerned, of the utter failure of the Public Health Act. If the advice of our deputation had been followed, and if the sanitary administration had in the provinces been made a matter of county government, so far from a twelvemonth having elapsed without anything being done, not a single quarter of a year, I venture to say, would have passed before our Quarter Sessions, finding themselves invested with the requisite authority, would have proceeded to carry out their public duty by appointing a highly paid medical officer of health for the county, taking care that he devoted his whole time to the work, and taking care, if necessary, that he did his duty. And although it may be very true that we county magistrates do our work gratuitously, which seems to be the reason for regarding us as inefficient, I think that we should have been at least as upright and prompt as the number of small sanitary authorities throughout the kingdom, who have discovered that their duty, perhaps their interest, is to do nothing to carry out the law.

I propose to refer to another matter bearing on the control which we can exercise over special diseases. My wish has been to keep to my own experience, which has no doubt a narrow range, that I

might know I am entirely accurate. I am desirous of saying a few words as to my experience as a Royal Commissioner on the subject of the Contagious Diseases Acts. I am not going into all the controverted questions that affect the subject; but I wish to tell you in a very few sentences what I saw as to the results of the Acts. I may say that I went upon the Commission, as I told Mr. Bruce when he asked me to join it, in a purely judicial spirit—in the spirit of simply hearing the evidence, investigating the facts closely, and coming to an impartial conclusion upon them. In order to enable me the better to do so, I determined to pay a visit to one of the towns placed under the operation of the Acts. I went, therefore, to Plymouth and Devonport, to ascertain how the measures were working, without giving notice to any person concerned in their administration. I slept at the Royal Hotel. I took the pains to walk in the streets the evening that I arrived, and was very much struck by the extraordinary degree of quiet and order manifested in a seaport town by that class who in this metropolis and most other towns in the country are apt to be very demonstrative. On the following morning, I went to the examining room; and, having rung the bell and given my name, was at once admitted. I went first of all into the waiting room, where women have to wait their turn to go to the surgeon; and was anxious to ascertain the actual state of the room, because one of the complaints before the Commissioners was, that it was so crammed, and the language so indecent, and the scenes so disreputable, that it was a shame that any young girl should be obliged to wait her turn there. I found the street outside quite empty, and in the examining room saw twelve women waiting. It was a moderate-sized room; and they were sitting on benches, not at all crowded. They were perfectly mute. One of the girls began to giggle; whereupon she was immediately reproved by several others, who said, "You must not do that; you must be quiet before the gentleman." This was said without any person being there to preserve order. I told them I was neither a police officer nor a magistrate of the locality, but simply wished for information; and I asked them whether they were harshly or unfairly treated. One of the women smiled, and said: "Oh no. We know these things are said, but they are all untrue; and we are quite aware of the benefit we derive from the treatment." I went to the surgeon's room, and asked him to show me his book for the past week. I had previously ascertained the number of men in garrison at the time; and, including Marines, there were upwards of seven thousand. I found from the surgeon's book that during the week there was one case of primary syphilis reported to him. That simple fact speaks for itself as to whether the Acts are beneficial or not in a physical point of view. So far as that part of the question is concerned, the evidence is absolutely irrefragable. I am well aware that some to this day maintain the contrary, but I will only venture to say this:—I have been all my life, or at least a quarter of a century, engaged in occupations enabling me to judge closely of evidence, whether as a counsel at the bar, or as a magistrate sitting judicially with or without a jury—and I have to sit in both capacities—I have been obliged to acquire the habit of judging accurately of the veracity, trustworthiness, and information of witnesses before me. I can only say I was never more convinced in my life than that the witnesses who came before us in favour of the Acts, were witnesses of truth as well as witnesses of competence, owing to their full knowledge and experience of the matter. No doubt there were many witnesses on the other side, but who were they? Mere theorists or mere fanatics, who did not pretend to know anything of the subject, but only told us what in their opinion must be the evil results of the Acts. Against this I put the good results which do actually follow, whether they ought to follow or not.

If I believed, after going into the whole subject, that notwithstanding the physical benefits, moral evil accrued from the Acts, I would not advocate their maintenance. I would not put physical good against moral wrong; but I am perfectly convinced, from facts which have come to my knowledge, that great as the physical benefits are, the moral benefits are greater still. I should therefore deeply lament if any misplaced popular emotion, and any weak yielding to popular clamour, led our legislature to take a retrograde step—to do what a former Parliament were asked to do in regard to vaccination, when a set of ignorant misled people cried out against it. I trust our Parliament will be as firm and patriotic as that of a former time, and will refuse to repeal legislation which physically and morally is demonstrably of the highest benefit to the populations among whom it is applied.

To conclude, I feel deeply that the future of sanitary science—that is, the future health of the community amongst whom we live—depends in a large degree on the zeal and exertions of the medical profession, and therefore it is that I rejoice that this Association—in which perhaps

more than any man living I have a right to take a warm interest, and which I shall owe till the day of my death a profound loyalty—has made the subject of Public Medicine prominent as one of its Sections. I trust that, great and glorious as the efforts of the profession have been in all ages for the alleviation of suffering and cure of disease, its future glory will be still greater in the prevention of disease, in elevating the standard of health, and thereby the happiness and prosperity of all among whom they live. I trust that future history will have to record that it was owing in no small degree to the efforts of the British Medical Association that this English nation became at last, what it is not now, but what it can be if it so will, a thoroughly healthy people, a people endowed with unalloyed vigour, both of body and mind, who will have ceased to lament an amount of preventable suffering and mortality, disgraceful to the civilisation which permits them to exist among us.

AN ADDRESS

PREPARED FOR THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE.

At the Annual Meeting of the British Medical Association,
in London, August 6th, 1873.

By J. BRAXTON HICKS, M.D., F.R.S.,*
Obstetric Physician to Guy's Hospital; President of the Section.

GENTLEMEN,—When the honour of the presidency of this Section was offered me, I felt, as I have no doubt my predecessors had done, a difficulty in selecting a subject with which to introduce, as is expected of the President, the business of the meetings.

Taking into account what had already been given, and thinking that the papers to be read would have mainly a practical tendency, it occurred to me that a few remarks on the more recent advances, both in the anatomy and the physiology of the parts connected with our department, would not be out of place at this time.

I am quite aware that with the majority, especially of those actively engaged in practice and the stern necessities it demands, there is a yearning after that which appears more immediately practical; yet who can say what the bearing upon practice of the revelation of any new facts shall have? Who can define at once their relations to the practical wants of mankind?

Gentlemen, whatever advantages there may be in the divisions of our profession into Sections, it will be a great disadvantage if each branch fail to employ fully the opportunities such a subdivision of labour gives to it, and a still greater disadvantage if it fail to make use of the information which the workers in the other departments have by their strenuous assiduity gained. By this very subdivision knowledge rapidly advances, the discovery of a new principle changes the whole of practice, and unless constant intercommunication is made, a Section in a year or two may be left far behind. But I am sure you fully appreciate all this, and will agree with me that unless we are at every step of practice guided by scientific accurate investigations, we can never be sure that we are in the right path, nor feel confident we may not have to retrace our steps.

The short time allotted to me does not permit me to do more than allude to a few points, and I must ask your indulgence on this account, though were it longer I might have to crave it for the opposite reason.

There are many aspects in which we may view the sexual organs of women, each one presenting an appearance more or less distinct from the other. Thus we have the parts concerned in the development and discharge of the ovum; then the organs concerned in impregnation, generally, but not necessarily mixed with sexual desire; and again, there is the wonderful growth of the muscular element, and consequently, the enormous increase of its expulsive force, together with the laws which govern the mechanism of that force, and its effects. The first, namely, the formation of the ovum, is connected with its cell elements; the second involves largely the nervous element, both sympathetic and spinal; the third involves the nervous element acting upon the organic muscular fibres, and developed, the one certainly, both probably, beyond all comparison with any other parts of the body. The effects of the force bear rather upon well known laws of mechanics, for they depend upon power and opposition; and, as a great obstetrician remarked, given the physical condition of the passage and of the foetal head, one could beforehand pronounce the exact motion. It would be flattering ourselves if we asserted that our knowledge is perfect in

either of these directions. In common with our colleagues in other departments, we must confess much uncertainty in our knowledge of the intimate structure of the various elements, of the physiology of many parts, and of the forces developed by the action of the uterus. Still there is no reason to despair of some day possessing a complete knowledge, and very much has been done of late years. I would take this opportunity of pointing out to the more ambitious of my younger colleagues, how excellent an opportunity is afforded them of laying the foundation of a solid reputation.

Having said this much, let us proceed to pass in review the more recent advances of importance.

Within the last few years the opinions as to the development of the ova and Graafian follicles have undergone much change. So long ago as 1859, E. Pflüger published in a paper "*Ueber die Bewegungen der Ovarien*" in Reichart and Du Bois Reymond's *Archiv*, an opinion that the Graafian follicle originated in tubes, and he pointed out therein the analogy to the seminal tubes of the testis, and that these were formed in the stroma, and continued to do so even after the birth of the foetus. In near accordance with this view is Kölliker's; and more recently, Waldeyer in a work, "*Eierstock und Ei*" (1870), and still later, in an article in Stricker's *Histology*, while agreeing as to the tubular origin of the Graafian follicles, has pointed out that these tubes are formed by the inflection of the surface of the ovary by the growth of the stroma around; that the ovary is covered by columnar epithelium, and not by tessellated epithelium, as is the case in serous membranes; and, that this epithelium lines the inflection throughout. He then points out that among the epithelium from very early life (four days in the chick), there are enlarged epithelium cells, and these are drawn into the inflected portion, and ultimately become the ova. He says that the ordinary epithelium cells about these large cells arrange themselves so as to surround them, and form not the Graafian follicle, but the outer membrane of the ovum or zona pellucida. Where there are many of the large cells, the tube separates up into as many ova, and these become so many centres of Graafian follicles. Waldeyer further says, that in all animals the ova seem to be simply more highly developed epithelial cells of the ovary, which have undergone some peculiar modification, so that the follicular epithelium and the egg-cells stand in direct genetic relation to each other. Waldeyer's account is generally well received, though hardly sufficient time has elapsed to give confirmation, or refutation, to his opinion.

One is tempted here to ask whether these cells have any more direct and immediate descent from the protoplasmic matter of the ovum which has only itself just started into life. It is only a few hours since it assumed activity, and at once it multiplies certain cells, which it stores up, and which endure without renovation till required for reproduction. Are these immediate descendants of the mother ovum, or are they like the other cells of the body differentiated off by the general laws which cause this also wonderful phenomenon? One is tempted also to remark upon the force which is evoked by the fusion of the male and female elements. It may ultimately prove to be simply chemical; in any case, it is the highest example of what we may still, for the want of a better name, call vital force. And it has this peculiar property, that the product of the fusion not only holds the force within itself, but upon the tissues on which it rests it acts as a powerful stimulant, and that not tending to its destruction, but ending it with an increased vitality, whereby each elementary tissue is increased and multiplied.

Simultaneously with investigations on the nerve distribution in other parts of the body, attention has been directed to their arrangement in the uterus and the vagina by various observers. The investigation of the termination of the nerves in the non-striated muscular fibre of the uterus will be acknowledged by all to be a very difficult matter; still, the researches of Frankenhäuser in his work *On the Nerves of the Uterus, and their Mode of Termination in the Smooth Muscular Fibres* (1867), agree very much with the researches of J. Arnold in his article on Organic Muscles in Stricker's *Histology*. They have, at least, traced the ultimate fibre into the interior of the nucleus of the muscle-cell, but they differ as to whether the extremities end by a plexus in the nucleus, or end in its granules. In any case, so close and intimate a relationship exists between nerve and muscle that one can hardly look upon muscle as otherwise than the outward expression or exponent of nerve force. The termination of nerves on the inner surface of the uterus has not yet been satisfactorily traced out. A nerve has been said to pass into each papilla of the cervix; and still further, Lindgren even finds a fine plexus of granular masses, which, breaking up in a brush-like manner, extend to the epithelium; upon this point, however, there is some doubt, though it is much in accord with what has been noticed in other surfaces.

Very recently the termination of the nerves of the vagina has been made the subject of a paper by Chrschtschonovitch before the Imperial

*Owing to the indisposition of Dr. Braxton Hicks, this address was not delivered.

Academy of Sciences of Vienna. Here it is stated that there is a network beneath the epithelium from which branches pass between the epithelium cells, but which do not join the connective tissue cells. This arrangement much approaches the description given by Klein in *The Quarterly Journal of Microscopical Science*, of the peripheral distribution of non-medullated nerves on the cornea, for he says that the fibres, having reached the base of the epithelial cells on the anterior surface of the cornea, and forming there a deep intra-epithelial network, run up between the cells and form plexuses between the superficial layers, being all but exposed on their surfaces, from which, indeed, they are separated by only one or two of the thin laminated cells, and form here a superficial intra-epithelial plexus. This arrangement is not peculiar to these mucous membranes, at least, the close contact of the epithelium with the ends of the nerves is marked in all—so much so, that in some the nerves appear to enter the epithelial cell. Besides this, the recent investigation of Frankenhäuser, Koch, Kehrer, and others, show that, as in other parts of the internal organs, there are ganglia in the sub-mucous membrane with which two or three pale nerve fibres are in connection. These researches point out to us that we cannot ignore in our clinical pathology, indeed, that we must give a prominent place to, the nerve-element. May I be permitted to make the remark that this very free interblending of nerves with the other tissues has not received, at least, judging from the writings of authors, that general consideration which it deserves? Blood-vessels and exudations, mechanical pressure and obstructions are freely mentioned; and instruments are used as if the uterus were a simple elastic tissue to be dilated by main force like a piece of India-rubber. Considering the large nervous supply to the os and cervix uteri, we can understand the great effect, of a reflex character, which a small abrasion may produce; and can point out a satisfactory explanation to those who still remain incredulous to the practical experience of all gynecologists. Obstetricians more than others have the opportunity of viewing the effect of the reflex function, both of the spinal and the sympathetic systems. The uterus is almost the only organ which, endowed in the main with nerves from the sympathetic, is capable of being seen and freely handled. It should neither cause surprise nor disbelief if the phenomena recorded by careful observers do not in degree, or exactly in kind, tally with observations made upon organs not so much dependent on the sympathetic nerves. Then, again, the addition of sexual desire can never be completely left out of consideration, and often has to receive considerable attention, both in explanation of the phenomena which are brought before us, and in the correction of the abnormalities.

Since the admission that the ovaries are a very influential factor in many of the great phenomena of woman's life, we cannot in any case leave their influence out of consideration, but this only removes the causation one step back, and it still remains to be explained what influence it is which excites the ovaries, and how it is set a going. It may be the regular growth of the ovum in the Graafian follicle which stimulates the nerves by pressure, causing an increased flow of blood and some congestion, and this by putting pressure on the contents of the ovary causes the ripe follicles to burst. The same irritation causing stasis in the blood-vessels of the uterus, a rapid growth of the mucous membrane elements, and the other phenomena of menstruation, ensue. Let anyone listen carefully to those who suffer at the menstrual period, and it will readily be perceived how widely the general nervous system is affected by the nerve disturbance of the uterus. Need we then wonder at the distress which, in highly sensitive conditions of the system, is felt in the various other disorders of the uterus?

Neither is there any other organ of the body which grows as the uterus does in pregnancy. This is, of course, through the agency of the nervous stimulation and not from immediate contact; because the uterus grows in a marked manner in extra uterine pregnancy, where the ovum is at some distance from the corpus uteri. And this brings me to the question, whether the once disputed point, as to whether the nerves of the uterus grew during pregnancy, has received any recent answer. Dr. Chrobak, in his article on the Structure of the Uterus, in Stricker's *Histology*, makes this remark: "There is an indubitable growth of the nerves also during pregnancy (Tiedemann, Remak, and others), and, according to Kilian, the double-contoured nerves may be followed further in pregnancy than in the virgin state." If decentralisation of the sympathetic nerve be the character of its arrangement, then it is easy to understand that, although an increase corresponding to the growth of the muscular tissue may take place, yet this does not necessitate a large increase of the nerve-trunks which come from the hypogastric plexus.

I feel that I have already detained you long enough on anatomical points, but must just mention some interesting observations made by Kundrat, (*Medizin. Jahr.*, vol. ii., 1873, and *Med. Times and Gazette*, July 26th, 1873), on the mucous membrane of the uterus before, during, and

after menstruation. He describes the ordinary characters of the mucous surface as markedly altered at the monthly period of uterine activity; it is swollen, thick, and loose, and almost diffuent, covered with a whitish or bloody mucus, freely ejected in parts, and in many cases uniformly coloured of a deep red. A microscopical examination reveals increased abundance of the cellular matrix, with great elongation and dilatation of the glands. But what he especially points out is that the condition of the uterus just described, probably precedes the occurrence of the discharge of the ovum, and, what is perhaps more striking, the menstrual flow by several days. The uterus appears prepared for the receipt of the ovum a certain time before the rupture of the Graafian vesicle. At the menstrual flow, and for a short time after it has ceased, careful examination shows a remarkable change in the microscopical appearances. The cells of the stroma and the vessels, as well as of the epithelium of the glands and surface, are dull in appearance, and filled with fat granules. Kundrat believes that the hæmorrhage does not cause the fatty change, but is caused by it. The anatomical sequence of events is the swelling of the mucosa, fatty change in the cells and vessels, vascular rupture and hæmorrhage. The type of the impregnated uterus is seen in the active uterus when the mucosa is swollen and menstruation has not yet commenced. If the bleeding does commence, it is a sign that the ovum has perished, and that the mucosa is returning to its state of rest. According to this view, a developing ovum or growing embryo belongs, not to a menstrual period just past, but to one just prevented by fecundation.

One of the most important questions in obstetric physiology under discussion of late, has been that of the forces employed in labour. Many have raised the question, as, for instance, Haller, and Lithopædus Scriveneris, quoted by Swift in his *Tale of a Tub*. Both these placed the force at a high point, the latter, indeed, at 400 lbs. The question, however, remained latterly in abeyance, until Dr. Matthews Duncan, and, at the same time and independently, Poppel of Munich, carried out numerous experiments on the power required to burst the membranes. Dr. Duncan found the toughest membrane of an easy labour to require 29 lbs. for an os uteri of four and a half inches; Poppel, 19 lbs. for an os uteri of four inches. Two or three years after these experiments, Professor Haughton calculated that the full force of the uterus itself was about 52 lbs. on an os uteri of four and a half inches, calculating from the area of the uterus, the thickness of its walls, and its curvature. Having obtained this result, he argues that, as nature does not employ more power than is required, the resistance of labour is only somewhat below this. But, in calculating the force of the accessory powers, he came to the conclusion that they were far in excess of that of the uterus, equal, indeed, to 523 lbs. on the area of four inches and a half diameter; that is, for the maximum power exerted. It would be out of place to go into the calculations, but I may say that he took two bases of calculation; one, the weight of a mass of given size, capable of being lifted on the centre abdomen, and then calculating for the whole area; and, the other, the thickness, area, and curvature of the abdominal muscles. He assumes that the uterus itself does no more than rupture the membranes, and that the auxiliary forces do the major portion of the remainder.

It is evident that, before this important point is thoroughly cleared up, some further experiments must be made; because, I think, most persons accustomed to operative midwifery would find it difficult to acknowledge that a force equal to a quarter of a ton can be, in even the most forcible labour, put on the parturient passage. Either some loss of force takes place, or else Professor Haughton has overstated the strength of the muscular tissue of the uterus and the auxiliary forces. No doubt, where the waters have escaped, the pressure is not so direct nor so great as when plenty of fluid is present, because a considerable amount of force is exerted laterally against the body of the child; and we know that, in some forms of labour, although the uterus is acting most violently, the effect on the foetal head, *quoad* descent, is next to nothing, the whole force being exhausted in compressing the child, to its great detriment. Again, although in easy labours the contractions of the body and fundus take place universally on the contents, yet those who believe in the peristaltic nature of the contraction, will see that the whole of the uterus is not engaged in the action at any one time, and that something must be taken off its total force when considering its expulsive power.

The power of the uterus could be roughly reckoned by finding the tensile resistance of its attachments. Now we know that in some cases the uterus does rend its attachment to the vagina; in ordinary cases, of course, it does not, but we may say roughly that the force of the uterus alone is rather less than the total resistance of its attachments—*i.e.*, the vagina, the round ligament, and the peritoneal reflexions, the broad ligament the principal. Of course the auxiliary forces, by pressing on the abdominal contents, support the uterus, and prevent it from recoiling

when the head has escaped, and thereby rending its attachment. But should the auxiliary forces not be capable of acting, as from paralysis, extremely lax abdominal walls, heart or lung mischief, then the force of the uterus, supposing the head has escaped and the uterus meets with an obstacle, is thrown on the attachments. Thus a gauge may be approximately made as to its force. With regard to the auxiliary forces, put at so high a figure by Professor Haughton, I think that his data as to women must be much reduced. The muscles of women are much less and less powerful than those of men; they are seldom in anything like condition. This last observation, however, does not always hold; because in some women who work as hard as men the labours are very severe, and doubtless in them the total labour power is at the maximum. Supposing Professor Haughton correct in his data, then I think it has yet to be shown experimentally that on the brim or cavity the downward force is so great as he believes, or nearly so.

Some observations have been recently made on the contractions of the uterus during pregnancy. Uterine contractions have been generally recognised towards the end of pregnancy, but in a recent paper I have shown that they occur spontaneously throughout pregnancy from at least the third month, and are of great value in the diagnosis of pregnancy. The cause has been attracting some attention abroad. Drs. Aser and Schlesinger, in the fifty-second number of the *Centralblatt für die Medicinischen Wissenschaften* (1871), pointed out that in rabbits, whenever the blood in the brain or the uterus became highly charged with carbonic acid, tetanic contractions of the uterus occurred. They experimented in various ways with the same result. Excitation by galvanism of nerves, such as the femoral or radial nerve, produced contractions; but when the spinal column was divided as high up as possible, compatible with respiration, the effect was the same, even though the nerve chosen was above the division. The channel by which the effect was carried would seem to have been the sympathetic branches. At any rate, it would appear that the uterus is excited in many ways. But the suggestion which I threw out in the paper to which I have referred, to the effect that the uterine contractions act as a supplementary heart to relieve the stagnant state of the blood in the uterus, receives some confirmation by the first named experiments. Dr. Reimann of Kiev has also published some observations on the innervation of the uterus and on its contractions. He experimented on bitches and cats, and subjected the uterus, partly or wholly separated from the body, to various kinds of irritation. He found that the uterus, separated from the cerebro-spinal axis, and even removed from the body, responded to the irritation by peristaltic and rhythmical movements of the whole organ, even when only a portion of it had been subjected to the irritation. He also found that the uterus separated from the body, but maintained at its normal temperature, spontaneously contracted and relaxed for about an hour after the death of the animal. Dr. Reimann concludes, from these experiments, that the contractions of the uterus are under the influence of certain organs (ganglionic) not yet anatomically demonstrated, but which are situated in the uterus itself; and that, like the contractions of the heart, they are independent of the cerebro-spinal system, though physiological and pathological facts prove that the latter has certain influence over them.

Regarding the great question as to the cause or the causes which conduce to set up labour at full term, we are still without definite information. There may be, as indeed I believe there is, more than one factor. But in regard to the direction in which the forces act when once established, there is yet some uncertainty. Does the fetus, during a pain, enter the area of the brim with its long axis coincident with the axis of the brim? If we refer to the description of authors, we find them varying much. Formerly, as most of you remember, it was believed that the axis of the fetus inclined more forward by a few degrees than that of the brim. Some later writers, amongst whom I may name Dr. Leishman, have endeavoured to show that they are coincident, or, as it has been called, "synclitic." Again, Schatz and Schultze have been over the subject, and they, in contradistinction, make out that the axis of the fetus is more perpendicular than that of the brim. This would tend to throw the axis of the head of the fetus against the pubes. The condition of the abdominal parietes would probably regulate the direction to a great extent. Unquestionably the uterus, having fallen forward owing to the relaxed abdominal parietes, would not, even in the most forcible contraction, straighten or erect itself completely. This I have noticed to be the case even when the uterus has not been fully developed.

It has been thought that a lateral inclination of the axis of the uterus has been discovered, and Dr. Matthews Duncan in this country, having followed out this point, has noticed that there is a distinct inclination in the majority of those cases which he has observed. What influence this may have on the direction of the head and upon the relative frequency of one parietal bone overlapping the other, has not yet been determined.

More numerous investigations are yet required to establish the value of these observations.

The line of the auxiliary forces is said by Schultze and Schatz to be directed still more in the line of the perpendicular than is the uterine action, so that there is a loss of power by the head being driven against the pubes instead of against the sacrum. But, as Dr. Duncan points out, this condition has been looked upon not as the natural position, but rather as an unnatural one.

Although accuracy on these points may be of little importance in a natural case, because any slight error is readily overcome, yet in difficult cases it is not so. The position of the transverse rupture of the upper vagina and cervix uteri depends on the inclination of the forces. If the foetal head presses with undue angularity, then it can readily be seen how the wall against which the head projects would be liable to be rent, provided the pressure be great or the tissues weak.

It is the generally received opinion that the vertical axis of the head in its passage through the pelvis does not correspond with the mesial axis of the pelvis, but latterly Dr. Kieneke has, in a work called *The Four Factors of Labour*, endeavoured to show that it is synclitic throughout; in other words, that not the angle of the parietal bone, but some point in the antero-posterior diameter is the presenting part. This has been contested by Dr. Matthews Duncan, and he asserts that the head descends to the middle of the cavity as it entered the brim, synclitic, because it meets with no opposition, but that after this point the axes never correspond. He and Schroeder observe that the pressure of the head is mainly against the posterior wall of the cavity, and at the point of contact there is retardation by friction of that side of the head to a greater extent than the anterior, which bears but slightly on the pubic bone. A familiar illustration of this mechanical point may be seen on any railway curve. Of course it will occur to many that the variability of the size and shape, both of the foetal head and also of the pelvis, must render this point a difficult one to investigate, for it will always be difficult in any given case to say how far the conditions of both were normal. It can only be by observation of a large number of cases that the natural tendency can be made out.

The examination of the form of the head after delivery, and particularly after laborious labour, is a point which has perhaps not received the attention which it deserves. Many practical hints might be gathered in this way.

Tied as I am to time, I must omit much interesting matter regarding the circumstances which determine the various presentations and positions of the fetus. Of late years, as most of you are aware, much information has been gained on these points. It was also my intention to have spoken a little in detail of a subject of great interest to all engaged in obstetrics and gynaecology. I refer to what Dr. Matthews Duncan has called the *retentive power of the abdomen*.

But I must hasten to point out that Schultze and Duncan have taken up a very interesting, but surprisingly neglected subject, namely, the mode by which the placenta is naturally expelled. Baudelocque and Schultze agree in saying that blood is effused between the placenta and the uterus, and thus, having been dislodged nearly to the os uteri, the placenta is expelled by a contraction. Duncan asserts that this mode is not to be considered natural, but that the placenta is, in a normal state, rolled together in a long roll, with its amnial surface inside; this shape adapts it to pass readily through the os uteri. I believe further observations will confirm Duncan's assertion, so far as those cases where the placenta is attached to the side of the uterus more than the fundus, are concerned, but that, when it is mainly attached to the fundus, particularly if the funis have been dragged upon, the description of Schultze is applicable to at least one of the modes of delivery. But this latter mode is often attended by considerable hemorrhage. Every one must admit that any facts which bear upon this stage of labour possesses a highly practical interest.

In conclusion, let me mention that investigations have been carried out with a view to determine the size of the fetus, and also the sex of fetus in utero. Ahfeld of Leipsic has attempted to ascertain the size of the child, in order to calculate the period of gestation, and more especially to make out before labour if any disproportion exist between the fetus and the genital passage. He pays special attention to the size of the head, the hardness of the bones which form it, and the condition of the sutures and fontanelles. The patient being placed on the back, with the thighs flexed, if the long axis of the uterus be from above down, the position of the fundus uteri is marked on the abdomen, and then one arm of Baudelocque's pelvimeter is guided by the finger along the vagina to the occiput of the child. The length from head to breech is thus ascertained, and by doubling this we have the entire length of the child. Ahfeld has collected the results of measurements made in two hundred and fifty cases, and gives much interesting information. In one of the tables which he gives, the relation between

the length of the child and the two transverse diameters of the head is recorded. So far as these investigations go they are very valuable.

The interesting fact that the sex of the child can in a large proportion of cases be ascertained by auscultation during pregnancy has also lately been made known. When the fetal pulsations number 144 per minute, the child is probably a female, when they are 124 per minute, probably a male. It is said that a little variation from 124 upward, and from 144 downward, will not alter the diagnosis, provided auscultation be practised towards the end of pregnancy. Steinbach was correct in forty-five out of fifty-seven cases which he examined, while Frankenhäuser was right in all the fifty cases which he examined with a view to determine the sex of the child.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE OBSTETRIC SECTION,

*At the Annual Meeting of the British Medical Association,
in London, August 1873.*

By GEORGE H. KIDD, M.D., F.R.C.S.I.,

Vice-President; President of the Dublin Pathological Society; Hon. Fellow of the London Obstetrical Society; Obstetric Surgeon to the
Coombe Lying-in-Hospital, Dublin; etc.

GENTLEMEN,—It has fallen to me, as one of the Vice-Presidents of this Section, to occupy the chair to-day, owing to our President having met with an accident, from which he has not yet sufficiently recovered to enable him to take the place he would have filled much more worthily and much more to the advantage of the Section. When your Council nominated me one of your Vice-Presidents, I accepted the office, believing it would be altogether an honorary one; but, when I found, within the last few days, that it would be necessary for me to assume the responsibility of opening the proceedings of the Section, I regretted exceedingly that I should be obliged to occupy a position of such honour, and to address such a distinguished audience, even as deputy for another, without having had time for the careful and deliberate preparation the due performance of the duty would require.

It is one of the advantages arising from our annual meetings, and not the least, that we are led by them to pause for a time and review our position, to ask ourselves, Are we making progress, are our labours so directed as to enable us to obtain the best results, or is it possible that we have been so occupied with particular branches of our great subject, that we have neglected others of equal importance? There is, I believe, no department of medicine, the recent progress of which has been so marked and so rapid as that of uterine pathology, and for this we are indebted, in a large degree, to two members of our Association, one of whom is, alas! no longer among us, no longer with us to stimulate us by his enthusiasm, to lead us on by his example, or to open new fields for us by his great inventive genius. The other (though absent to-day) we are proud and happy to have among us still, ardent and courageous as ever, and ever ready to assist and guide us by his matured experience. To these two leaders and their followers we are indebted for a knowledge of uterine diseases as perfect and as accurate as our knowledge of the diseases of any other organs in the body. Henry Bennet has taught us the pathology and treatment of the diseases of the neck, and Simpson has made our knowledge of the diseases of the body of the uterus equally accurate, and, by teaching us the use of the uterine sound and dilating tent, made the diagnosis and treatment of its diseases as simple as those of the more easily accessible parts.

Now the question I would here raise is, whether the very rapid progress we have made, and are still making, as to diseases of the uterus, has not led us away from the study of the diseases of other organs of not less importance, especially of the ovaries. That this question must be answered in the affirmative will, I think, be proved by an examination of contemporary literature, and, still further, by the frequent occurrence of cases where treatment directed exclusively to the uterus had quite failed to afford relief. That we should have fallen, in any degree, into this error is the more remarkable, because, in our standard works of a few years ago, such as those of Tilt, of Churchill, of West, and of others, the diseased conditions of the ovaries have been accurately and minutely described.

Dysmenorrhea is one of the diseases, in reference to which the tendency to refer all the symptoms to the condition of the uterus, and to neglect or ignore the influence of the ovaries, is perhaps most marked. That dysmenorrhea, dependent on an obstruction to the exit of the

menstrual fluid from the uterus, is of frequent occurrence, no physician of practical experience can doubt. Moreover, that, when it does occur, it can only be relieved by treatment directed to the uterus, and of such a nature as will remove the impediment, is a matter of every day experience, and cannot be questioned; but, when we find it asserted that, without obstruction, there cannot be dysmenorrhea, or that obstruction is the essential cause of the disease, and that it can only be cured by removing this obstruction, then we are bound to enquire whether clinical experience will confirm the statement, or prove that it is one founded on a too limited sphere of observation. I shall ask you, then, to allow me to trace, in rapid outlines, the clinical history of dysmenorrhea, and to inquire into the varying nature of the symptoms we meet with. In the first place, I shall speak of cases in which the pain is, beyond a doubt, due to some cause preventing the escape of the menstrual fluid from the uterus.

The typical and most simple form of this class of cases is when the obstruction is produced by a small os uteri and narrow cervix. In a typical case of this kind, the condition of the os is a malformation, and is congenital; but it may also be an acquired condition, and is then the result of the contraction either of a cicatrix or of effused lymph. The impediment may, however, and often does, depend on other causes, such as a flexion, and then the symptoms may manifest themselves from the beginning of menstrual life, or not till a later period. A polypus, especially if so situated as to cause a valve-like obstruction, as in one of Marion Sims' cases, or the growth of a fibrous tumour, or some forms of inflammation, may also give rise to obstruction and dysmenorrhea as an acquired disease.

The pain in dysmenorrhea, depending on obstruction, commences either when the discharge is beginning to flow, or some time afterwards. Patients frequently say it begins some hours before the discharge; but, if an examination be made with the speculum when the pain begins, it will be found that the discharge is actually exuding from the uterus, though not in sufficient quantity to make its way out of the vulva and attract the patient's attention. When the obstruction is not very great, and the discharge scanty, the pain may not occur for some hours, until, in fact, the discharge becomes so copious, that it cannot escape through the narrow os.

The pain is paroxysmal in its character, and seems to depend on the efforts of the uterus to expel its contents. As soon as these efforts have so far overcome the obstruction as to allow the free escape of the discharge, the pain ceases. During the interval of menstruation, there is freedom from pain, and the general health may be unimpaired, but the same cause that hinders the exit of fluid from the uterus prevents, in general, the entrance of semen into it, and the result is sterility.

On examination, the impediment, its position, and true nature, can be ascertained, and, in the majority of cases, it can be removed by means adapted to the circumstances of the case.

I have thus sketched the history of dysmenorrhea caused by obstruction to the exit of the menstrual fluid, chiefly from the facts recorded in my own case-books. From the same source, I have now to describe another form of the disease, one in which the symptoms are so different, that it is impossible they can depend on the same condition. In these cases the disease, instead of being usually congenital, is always acquired. It may be in early girlhood, or it may be after having given birth to several children. In one case, the patient had been married eighteen years and had no family. "While at school, through neglect," she said, "uterine disorder commenced, and has continued without intermission ever since." In another case, the patient had been married six years; she had had two children, the youngest nearly four years old. She had not nursed either. She had never recovered thoroughly after the birth of her last child, but it was only within the last year menstruation became painful. In another, the disease set in after the birth of the third child. The patient became pregnant a fourth time, and nursed this child three months; but she was in bad health all the time of her pregnancy and while nursing. When menstruation returned, after weaning the child, it was as painful as ever. In many cases, the disease supervenes on the mechanical dysmenorrhea, but the symptoms are so different, that the patient can herself tell when this took place.

In the former group of cases, the pain commences simultaneously with the discharge or after it has appeared. In this the pain begins a week or ten days, or more, before menstruation, and at the same time that the pains occur in the pelvic region the breasts become painful, hot, swelled, and tender to the touch. The pelvic pains are spoken of as dull, achy pains; they are felt in the pelvic region, and extend down the thighs to the back. They are not the acute paroxysms of pain of the former cases; they are aggravated when menstruation actually begins, and often continue throughout the whole period, but more frequently are relieved as soon as the discharge is established. They then cease, and return on, it may be, the fourteenth day; that is, at the

middle of the interval. This "intermediate pain," as Dr. Priestley calls it, may last only a few days, or it may continue and increase in severity till the next menstruation, the only interval of ease being for the first ten or twelve days after menstruation.

Menstruation in these cases is often irregular, generally retarded, sometimes it comes too soon, and in some cases, a whole month may be passed over, but the pain occurs when the menstruation is due, even though the discharge does not appear.

The discharge is generally scanty, but sometimes it is excessive. Its appearance is almost always preceded or followed by severe headache, often by vomiting, and, during its flow, palpitation is often complained of, also frequent micturition, and sometimes tenesmus and kneading in the rectum.

Miss H. states that menstruation has always been painful during the first two or three hours, but for the last two or three years she has suffered very much from pain for a week before menstruation begins, and at the same time her breasts have also become very painful. She has had much palpitation lately, and severe headaches before menstruation begins.

Mrs. W., married seven years, no children, states that menstruation was always painful at the beginning, but, since marriage, she has suffered for a week before it begins, from pain round the sides, stomach, and back, and from pain in her breasts, which become swollen. About five years ago, the os uteri was slit, after which she became pregnant, but aborted at the end of the third month. The painful menstruation continues, notwithstanding the operation and pregnancy. These were cases in which the form of dysmenorrhœa, of which I now speak, supervened on that due to obstruction; on examination, in this latter case, the uterus was found normal in position and size. The os and cervix were quite healthy, but the os was very open in consequence of the operation that had been performed on it. The right ovary, however, was found to be swollen, and very tender to the touch.

In many cases, in addition to the symptoms already described, there is a constant dull, aching, sickening, pain in the back; and there is so much pain, *in coitu*, that all attempts at intercourse have to be given up. Mrs. C. has been married ten years, and has no family. For many years she has had painful menstruation, the pain beginning more than a week beforehand. The os uteri was twice slit, without in any way relieving the pain of menstruation. She has also had the orifice of the vagina dilated, for the pain *in coitu*, but without benefit. On examination, the vagina admitted a full sized speculum with ease; there was no contraction or spasm at the orifice. The uterus was found with the cervix slit, but otherwise healthy, and the right ovary was found lying in Douglas' space, somewhat enlarged and tender to the touch, the pain, on pressure on it, being of the same character as that caused by intercourse.

This prolapse of the ovary into Douglas' space was described by the late Dr. Rigby. It is a frequent accompaniment of the form of dysmenorrhœa, now spoken of, and is productive of great pain *in coitu*. If it should be the left ovary that is prolapsed, there is also pain in defecation, and this pain and the pain in intercourse can generally be relieved by the use of the lever pessary of the late Professor Hodge.

It has been mentioned that, when the menstruation has missed, the pains occur at the time, notwithstanding the non-appearance of the discharge; and it may be further mentioned, that in some cases it continues for a year or more after menstruation has finally ceased.

When we make an examination in these cases, we may find the os uteri small and contracted; or the uterus bent on itself, or presenting evidences of endometritis; but that these are only complications, is made evident by the fact that in a large proportion of cases we find the uterus normal in position and size, and its tissues perfectly healthy. If we place the patient on her back, with her head and shoulders raised, and her legs well drawn up, and, having introduced the right forefinger into the vagina, make pressure with the left hand over the hypogastrium, we shall find the ovaries, which in the healthy state can seldom be recognised, one or both of them enlarged and very sensitive to pressure. If one of them should lie in Douglas' space, the true nature of the case will be recognised still more easily, and there will be no hesitation in referring the symptoms to their true pathological cause—subacute inflammation of the ovaries.

To understand clearly the sequence of the symptoms and their true nature, it is only necessary to bear in mind the function of the ovaries, and their sympathetic relations with other organs, especially the breasts; to remember that the ovaries preside over and initiate the process of menstruation; that, in preparing for this, the Graafian vesicles, originally deeply seated in the substance of the organ, gradually enlarge and approach the surface till they become prominent, and then, rupturing its coats, discharge their contents into the Fallopian tubes, thus constituting the essential part of menstruation. It is not necessary

to dwell on the physiology of menstruation on such an occasion as the present; but, if we consider for a moment, as was suggested by Dr. Meigs, the pain and various reflex irritations that so frequently attend the performance of another physiological process—dentition—we will have less difficulty in understanding that pain and various reflex irritations may attend the growth of the Graafian vesicle, its approach to the surface, and its bursting through the coats of the ovary, if this organ be in an unhealthy state.

In dysmenorrhœa arising from obstruction, we may speak with much confidence of effecting a cure by dividing or dilating the os uteri, or by other appropriate means. In dysmenorrhœa caused by subacute ovaritis, surgical or other treatment directed to the uterus is of no avail, and, indeed, we must be very cautious in promising permanent relief. Leeching, especially at the anus, hot baths, hot syringing, sedatives to the rectum, counterirritation over the ovaries, the internal use of the bromides, and, above all, rest, and especially physiological rest, will procure relief, and in my hands have often done so after surgical operations have utterly failed.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY.

At the Annual Meeting of the British Medical Association,
held in London, August 1873.

By T. HARRINGTON TUKE, M.D.,

President of the Section.

GENTLEMEN,—I feel very deeply the distinction conferred upon me, in having been selected by the General Council to preside over your Psychological Section. I am well aware of the responsibilities and difficulties of my office; but these have been materially diminished by the appointment of the eminent physicians who have done me the honour to act as vice-presidents and honorary secretaries; to their presence and influence is chiefly due the large number of valuable papers on various important points of psychological medicine that will be read and discussed before you. I consider these papers to constitute the more important business of our meeting, and therefore will not unnecessarily detain you from them by a long address. I propose very briefly to sketch the rise and progress of the present system of treating insanity in England, and to point out the reasons for anticipating that, each year, advance will be made in psychological medicine, and its alliance with general medicine strengthened.

The proper treatment of mental disease must always be considered as involving two distinct divisions. In the one, "moral" management, it is necessary to gain regard and willing obedience, to check wayward impulse, to beat away disturbing fears, to cheer the despairing, to restrain, not by force, but by patience and firmness, the angry and the violent, and to catch the moment, in which the swiftly wavering mind may be brought to rest, and its balance permanently retained. The other division embraces the correct employment of hygienic and purely medical remedial agents.

As, in the treatment of nervous disorders affecting the intellect, separation from family and friends is sometimes imperatively necessary, and, as the appliances for treating mental disease were more certainly to be found in an asylum, the care and treatment of the insane became a special branch, unfortunately not of medicine only, but of trade.

Even so late as the beginning of this century, the treatment of the insane was, with few exceptions, in the hands of men whose object was to retain their patients at the least cost of money or trouble to themselves. There was no thought for the amelioration or cure of the malady. A very large proportion of the mentally afflicted were, by day and night, under degrading personal restraint. Scenes of brutal violence were of constant occurrence; and it is not surprising that the insane, treated like wild animals, should have really become so, and their condition, instead of tender pity, should have excited feelings of repugnance, and even horror.

William Tuke, a member of the Society of Friends, struck by the enormities perpetrated in the York Asylum, was one of the first to introduce the humaner systems of the French physicians, Pinel and Esquirol. Tuke was one of the founders of the "York Retreat," a model institution, still retaining its high character. A description of it was published by his grandson in 1813.

In the Lincoln Asylum, from the year 1830 to 1839, Dr. Charlesworth and Mr. Hill effected great improvements in the condition of

their patients, especially in reference to the employment of mechanical restraint. In this last year, Dr. Conolly, whose attention had been much directed to the experiments of Gardiner Hill, was appointed resident physician at the County Asylum at Hanwell; in his report for 1840, he publicly announced that, in that large institution, mechanical restraint had been found unnecessary, and was entirely and absolutely abolished! A new era in the treatment of insanity had commenced; the very type of the malady seemed to be changed; fearful raving, desperate struggling, and maniacal excitement, heretofore the ordinary symptoms of mental disease, were now seldom seen; gentleness and kindness were shown to be not only possible, but essential to the proper management of the malady. Under this system, the aspect and demeanour of the patients became so altered, that a foreign physician, visiting the asylum, after seeing all its inmates, gravely inquired, "where it was the real lunatics were confined."

The great success of the "non-restraint system," as it came to be called, in not only rendering insanity a less painful malady, but in conducing to the restoration of reason, had one disadvantage; absorbed in his beneficent work, Dr. Conolly, although an accomplished physician, somewhat neglected medicine. He was so perfectly a master in the art of moral management, and found it so often sufficient, that by him, and to a great extent by his school, the use of drugs was abandoned, or became restricted to a few simple remedies.

Dr. Conolly was one of the founders of this great Association. Many whom I now address must well remember his ever kind and courteous manner, his evidently consummate knowledge of his subject, and the fervid eloquence with which he advocated the beneficent system to which his life was devoted. I was myself his pupil, and it is with no irreverence that I venture to dispute an opinion of one so much loved and honoured. But the time is coming when the medical treatment of insanity should assume its proper place; without it, psychology is not a science but an art—we are nurses and not physicians; a wider study of pathology, an increased knowledge of the effect of remedies upon the organism, and a higher standard of education among those specially engaged in treating mental disease, has led to the recognition of the paramount importance of prompt and judicious medical treatment. At the same time, our obligations to the great advocate of non-restraint are none the less; and no physician, however able, can forget those essential principles of gentleness and forbearance in the treatment of the insane, which were so earnestly inculcated by Dr. Conolly.

The improvement in the medical treatment of the insane has also a definite history and a recent origin. In 1845, and in subsequent years, Lord Shaftesbury and the Commissioners in Lunacy were instrumental in passing through Parliament several Bills for the benefit of the lunatic poor, especially one providing for their treatment in county asylums, and placing them under the charge of qualified resident physicians. Hence arose a new race of practitioners, carefully trained and selected, and anxious to raise the character and increase the usefulness of their respective institutions. Accepting entirely the doctrine of "non-restraint," there has been no new remedy or method of treatment that has not received due attention and trial from the medical officers of these asylums. In 1841 the *Journal of Mental Science* was suggested and commenced by Dr. Bucknill. Its pages, and those in other periodicals, and the annual medical reports presented to the Committees of each asylum, attest the zeal and talent of their officers, especially in relation to therapeutics, and a still more satisfactory proof, the report of the Commissioners in Lunacy, demonstrates that a very high and increased rate of cure has been attained.

The treatment of mental disease in private practice, has improved in a still greater degree. The Commissioners in Lunacy report that the number of the insane in private asylums has diminished, and although the absolute number of the insane has increased, and must still increase, it is amongst the poorer classes only. The table before you, taken from the last report of the Commissioner, shows that while the ratio of increase in the insane population generally has been from 1.97 per thousand in 1861 to 2.49 in 1871, the increase in the pauper class has been from 3.61 to 5.98 per thousand, during the same period.

I think I do not err in ascribing this great improvement to the more general knowledge of insanity as a disease, and its better medical treatment. While it was considered an inscrutable malady requiring recondite knowledge, and peculiar methods of healing, special physicians were sought for, and were, indeed, indispensable; but since the relation between the body and the mind has been better understood, and mental affections are recognised to be nervous disorders, as amenable to treatment as any other corporeal malady, psychical medicine has ceased to be the sole province of a class; the educated practitioner is now more or less acquainted with affections of the brain; the physician engaged in the care of the insane must be well trained in general medicine; the y

will meet on common ground, in the treatment of those numerous complaints, such as hysteria, epilepsy, and chorea, which depend, as insanity does, upon disorders affecting, primarily or otherwise, the great nervous centres.

It is sufficiently obvious that, in many cases, the knowledge and experience of the physician, who has devoted himself to the treatment of a particular form of disease, is of great value; like the *tactus eruditus* of the practised surgeon, the art of controlling and persuading an insane person, is a gift which is strengthened by its exercise. I do not assert that in a doubtful case of intellectual aberration, the ordinary practitioner is likely to make as correct a diagnosis as the man to whom insanity is the study of his life; or, in a difficult one, that his treatment will be as successful. I say only that, in the majority of brain disorders, medical knowledge is applicable, without training in an asylum, and that the latter is useless unless conjoined with medical knowledge.

In illustration of the union, each day becoming closer, between general and psychological medicine, I would point out the valuable Croonian lectures on insanity, delivered last year by a general physician, one of the vice-presidents of this section, already known for his work on Convulsive Disease. Another of your vice presidents, whom I am proud to see here to-day, is technically a specialist, if a physician can be so called, whose work on Statistics is a standard one, and whose researches in ethnological science are known wherever science herself is known and loved. Again, Dr. Guy, one of the professors in this College, will read to us to-day a purely psychological paper; and another, Dr. Ferrier, is at this moment engaged in a series of scientific experiments, bearing on the nature and treatment of insanity, in conjunction with my talented colleague at the West Riding Asylum. But no better evidence of this happy tendency to treat insanity as a branch of general medicine is the fact that this great Association has made a Psychological Section an integral part of its useful work. The unremitting work of the general practitioner, the wide extent of his study, and the continued attention which the daily discoveries in medicine render necessary, make it scarcely possible that he should attempt to master all the difficult questions which are involved in psychological inquiries. The difference between the mind and the soul, the action of the will, the relation between insanity and crime, the hereditary transmission of mental disorder, the propriety of consanguineous marriages, the responsibility of criminal lunatics, the philosophy of sleep and dreaming, are special subjects which few physicians have power or opportunity to study as Sir Benjamin Brodie and Sir Henry Holland have done. He may study these if he please; it is not necessary. The one thing essential is, that he should understand something of the practical treatment of mental disorders; and this year by year has become more widely known. I am convinced that to the more general study of mental disease by the profession generally, to its earlier recognition, and to its improved medical treatment, we owe the gratifying fact that, in spite of the hurry and bustle of this great railroad age, the press of business, the greater wealth of the middle and upper ranks of society, insanity among them is not increasing, and we may well hope that it may be materially diminished.

REPORT OF THE COMMITTEE ON THE REGISTRATION OF DISEASE.

IN obedience to a resolution passed at a general meeting of this Association held in Birmingham on August 8th, 1872, a memorial to the Local Government Board, and a petition to Parliament, have been prepared and duly forwarded to their respective destinations. A copy of the petition is appended to this report; it has already appeared in the *BRITISH MEDICAL JOURNAL* for June 14th, 1873. The thanks of the Committee are due to Dr. Lyon Playfair, for his courtesy in taking charge of this document.

The memorial was similar in its tenour, and an official acknowledgment of its reception has been received from the Local Government Board. There is reason to believe that some kind of registration of sickness will shortly be attempted by the aid of the newly appointed medical officers of health.

It is interesting to notice that Clause 13 of Sir Charles Adderley's Public Health Bill, brought in last session, but not passed, referred to the subject of the registration of sickness; but it must be stated that its proposed enactments were open to most of the objections which have before been urged by this committee, more especially in requiring Poor-law medical officers, and other medical men, to furnish returns of sickness, without making any provision for their payment.

Your Committee suggest that it is desirable again to present a memorial and petition on this subject during the next session of Parliament.

REPORT OF THE MEDICAL REFORM COMMITTEE.

IN reporting the course pursued with regard to Medical Reform during the past year, your Committee regret that they are unable to announce a settlement of the question; but they believe that good has been done by the introduction of the "Medical Act 1858 Amendment Bill" of the Association into the House of Commons, although it has not become law. The Bill has in consequence been printed by order of the House of Commons, and may be obtained by members and others desirous of possessing it for a few pence.

The necessity for Medical Reform still remains: the several Universities and Corporations, nineteen in number, continue to possess the power of granting one, two, and some even three different qualifications at fees varying from half-a-guinea to more than one hundred times that amount; each qualification entitling the possessor to be placed on the Medical Register, and thereby enabling him to practise all departments of the profession, though possibly qualified only in one. Notwithstanding the improvement that has taken place with many of these Corporations, in requiring a better preliminary education than formerly, as well as a more stringent professional examination, this improvement must, in some measure, be attributed to the influence of public opinion, and in no slight degree to the pressure exercised by the British Medical Association.

The Universities and Corporations however still retain the power of independent action, and until legislative enactments render it impossible, unworthy competition in granting licenses, which it is admitted did exist, may at any time be revived.

In the interest of the public and of the profession, as regards the former, to protect those afflicted by illness from the inefficient or ignorant treatment of incompetent men, and as regards the latter, to elevate by a liberal education their social position, and thereby increase their influence, your Committee, adhering to the principles laid down and contended for by the Association, provided, in the Medical Act Amendment Bill, for the compulsory enforcement of a sound general education, and for the formation of a conjoint Board of Examiners in each division of the United Kingdom, subject to the approval of the General Medical Council and the Privy Council; the examination to be practical as well as theoretical.

The license granted by each Board to be registered as the license of the General Medical Council. This license only would entitle the possessor to practise and to be registered as a medical practitioner, but having obtained it he might join such of the Corporations, or obtain such University degree as might enhance his self-respect and add to his reputation. By this method, competition upwards and not downwards, would be established between the Universities and the Corporations, to the manifest advantage of the community.

Your Committee need not remind the members that the General Medical Council has hitherto been unable to control the Corporations. By the Bill of the Association, greater power would be given it, but before doing so, a modification of its constitution, by the introduction of direct representatives of the profession, in accordance with the repeatedly expressed will of the Association was indispensable. It is unnecessary to remind the Association that the whole of the expenses of the General Medical Council are defrayed by the fees exacted from medical practitioners on registration, and that the wealthy Universities and Corporations which send representatives to it, do not contribute one farthing to their payment.

The Association has always maintained that the registered medical practitioners, who thus defray all the expenses of the General Medical Council, are entitled to be represented in it, and the Bill of the Association provided for the admission and mode of election of direct representatives of the profession, in the proportion of one-fourth of the number of the Council.

By the printing of the Bill, an opportunity has been afforded of studying and becoming thoroughly acquainted with all its provisions. The Bill has been supported by petitions from the provincial medical schools, the professors in the Newcastle College of Medicine, and in Liverpool and elsewhere, and by the registered medical practitioners in many towns have petitioned unanimously in its favour. Had the Bill gone on to the second reading, hundreds of additional petitions would have supported it. All the petitions in its favour were sent from registered medical practitioners—all the petitions against it, from individuals, as distinguished from Corporations (which we had an opportunity of examining), though with M.D. attached to the signature, emanated from persons whose names could not be found in the *Medical Register*, a convincing proof that, whether advantageous to the community and profession or not, unqualified practitioners and quacks regarded it with peculiar dread and displeasure.

The chief opposition on the part of the Corporations came from the College of Physicians and the College of Surgeons of Edinburgh, which continue to attract many English candidates across the border to their examinations; on the other hand, the representatives of the Irish College of Surgeons, which has not so remarkable a reputation for the attraction of English students, withdrew their opposition, and the support of many Irish members of Parliament, which might otherwise have been arrayed against the Bill, was thereby secured.

The Right Honourable Mr. Headlam, who agreed to take charge of the Bill of the Association in 1871, was unfortunately absent from England during the winter, and your Committee was unable to communicate with him until the end of March. Your Committee were supported in their adhesion to Mr. Headlam by the advice of several members of very great influence and of much experience; amongst others, by the late deeply lamented Mr. Graves of Liverpool, who repeatedly evinced his approval of the Bill of the Association both in word and in deed. Your Committee have also to express their obligation to Sir H. Selwin-Ibbetson, Dr. Lyon Playfair, who has distinctly expressed his approval of direct representation of the profession in the General Medical Council, to Dr. Dalrymple, Mr. H. Cecil Raikes, Mr. Mitchell Henry, and Dr. Brady for their countenance and aid.

During the months of January, February, March, April, and May, your Committee had personal interviews with Mr. Headlam and other members of Parliament; and on the 7th of April the "Medical Act (1858) Amendment Bill," the Bill of the Association, endorsed by Mr. Headlam and Sir H. Selwin-Ibbetson, was read a first time and printed. In the same month, your Committee met to decide on the action to be taken to support the Bill. On the 9th of May, your Committee had a special conference with Mr. Headlam to consider suggestions from the representatives of the Irish College of Surgeons and from Mr. Rumsey. On the 16th of May, your Committee and the Council waited, as a deputation, on Lord de Grey, the Lord President of the Privy Council, and were introduced by Mr. Headlam, who addressed his lordship in support of the Bill of the Association. The deputation was courteously received, but if at the time hope was entertained of a favourable result from the interview, that hope was not realised.

On the following day a deputation from the Edinburgh Colleges waited on his lordship, and retracted their former approval of the Government portion of the measure, and doubtless intimated unflinching opposition. The request made to his lordship to take charge of the Bill of the Association, or at least to approve of it was not successful, though there is good reason for assuming that the Government would not have opposed the second reading.

The difficulties in the way of carrying private measures through Parliament, unless aid be given by the Government, are not generally known: your Committee could adduce many facts in illustration. The second reading of the Bill was put down for the 15th. It could not come on for want of time. It was then put down for the 26th; but on the 25th, Mr. Headlam wrote to your Committee that the second reading could not come on upon that day, and that every day was filled up to the end of July. It was put down for the 25th of July, but the utter hopelessness of doing any good by persisting when opposition was threatened, decided Mr. Headlam to withdraw the Bill.

Your Committee deeply regret that all their efforts should have proved unavailing during another session. There can be little doubt that the Bill might have been supported by the Government, but for the element of direct representation. This principle your Committee felt they could not abandon nor even shelve.

Your Committee have specially to thank Mr. Michael for his valuable and ever ready assistance.

Your Committee have good reason to know that the views of the Association, in the matter of direct representation, meet with the approval of a large proportion of the members of Parliament, and one advantage will, at any rate, have resulted from the action of the Association, inasmuch as it has been again shown that no measure of medical reform will be accepted by the Association and the profession generally, which does not provide for the direct representation of the profession in the General Medical Council.

Since the last annual meeting, further and effectual steps have been taken for the establishment of a conjoint Board of Examination. The Universities of Oxford, Cambridge, and Durham, and the University of London, which was the first to give in its adhesion to the plan, will now, by the Bill of Sir John Lubbock, the Vice-Chancellor of the University, be enabled to send its representatives to the Committee of Reference of the conjoint Board for England, a power which it will speedily exercise.

Your Committee welcome gladly this approach to the establishment of the general scheme they have persistently advocated.

Your Committee feel that at the present conjuncture of political affairs, the active pressure of this question would be inopportune, but the Committee feel that it should be reappointed to take advantage of any opportunity that may present itself.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

THE Parliamentary Bills Committee begs to report that it has held numerous meetings during the year upon subjects arising out of Parliamentary measures and proceedings of the Government affecting medical interests.

Although fruitful in measures aiming at modifying the relations of medicine to the State, and of amending legislation for public health, the Session has been nearly barren in results, and your Committee cannot pretend to outstrip Parliament in its works.

The most important measures introduced were the Public Health Bill of Sir Charles Adderley and the Registration of Births and Deaths Bill. Your Committee felt it necessary especially to call the attention of the Government to the clause which provided for powers to compel Poor-law medical officers to render services, but made no provision for paying them for those services. Mr. Donald Dalrymple, M.P. for Bath, was good enough to place on the paper a clause intended to remedy this defect, and your Committee has had the satisfaction of receiving from Mr. Stansfeld the assurance that he approved and would support the principle involved in that clause. Various amendments were effected in the Registration of Births and Deaths Bill at the instance of your Committee. A clause introduced by Lord Morley in the House of Lords would have met some of the abuses connected with the unregistered burial of still-born children, which were represented to the President of the Local Government Board by a deputation of your Committee. Other clauses directly providing for the registration of still-births for the purposes of burial were drawn by your chairman, and approved by Dr. Lyon Playfair, who placed them on the paper of the House, and would have supported them. That Bill has, however, gone over till next session. The efforts in both these respects are by no means wasted, but will affect the future character of these Bills when brought forward again, as they will be, next year.

The large number of ignorant women practising as midwives, the absence of any sufficient means for affording or testing their education, have long been a public evil. Your Committee have made careful representations to the President of the Local Government Board on this subject, that officer of the Government being directly concerned in it, since his Department gives employment to a large number of midwives, of whose qualifications it has no sufficient information, and as to whom it is unprovided with any official test of qualification.

Mr. Stansfeld has expressed warm approval of the general views laid before him. The Obstetrical Society is also prepared to give its assistance, and Mr. Stansfeld has this week requested Mr. Ernest Hart to prepare and submit to him a scheme for the education and registration of midwives, with a view to its consideration by the Department. Means will, of course, be taken to consult the best authorities on this subject, and it may be hoped that permanent good will result. It is already something to have secured the assent of the Government and their warm approval in respect to a public need which some years since they positively refused to take into consideration. On the whole, the year has been passed in labours which have produced a sensible effect, and of which the fruit will be subsequently apparent in useful legislation.

Your Committee includes a representative from every Branch of the Association, as well as ten members elected at the annual meeting. The attendance of delegates from distant places is, no doubt, difficult, but the earnest desire must be expressed that gentlemen who are so good as to accept the office of parliamentary representatives of their Branches will endeavour to attend as frequently as possible at the meetings to which they are summoned; and, in case of their non-attendance, will endeavour to obtain the sense of their Branches, or to record their own opinions on the subjects submitted for discussion. Many members of the Parliamentary Bills Committee have shown a deep interest in its work, and have submitted to considerable sacrifices in furthering it. The Secretaries of the Branches, and the Branches generally, have afforded a warm and steady support to its operations, which have materially conduced to its influence with the country and with the Government.

One subject only remains to be mentioned. The War Office recently issued a new army warrant materially modifying the constitution of the army medical department. In its main features that warrant has met with the support of your Committee, since they believe it to be beneficial to the army at large, however inconvenient in some respects to the

medical service. Some of its provisions, however, appeared inequitable, and financially, as well as personally, unjust. A very detailed and careful statement on this subject was prepared. The general dissatisfaction arising from these defects was represented to Mr. Cardwell by a deputation of your Committee, which attracted considerable public and professional attention; and recently Mr. Cardwell has stated in the House of Commons, in reply to a question which Mr. Dalrymple was good enough to put, that he has had the written statements submitted to him under careful consideration, and that the modifications which he is disposed to base upon it involve financial concessions which require the assent of the Treasury. It is much to be hoped that that assent will not be withheld, for whatever is detrimental to the efficiency of the army medical department is detrimental to the interests of the army itself and of the whole country. We still await Mr. Cardwell's answer, although satisfactory omens may be drawn from the announcement referred to.

CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

A CONFERENCE of medical officers of health was held in the large hall, King's College, on Thursday afternoon, August 7th, when the Chairman, Mr. ERNEST HART, delivered an address on Public Health and the Public Health Act, which is published at page 177.

Mr. DYKE (Merthyr Tydfil) said, as President of the South Wales Branch last year, he read a paper which attracted the attention of Mr. Doyle; and, in conversations they had together, he laid before that gentleman the views of the Association with regard to the arrangements necessary to secure the efficient working of the sanitary law. Mr. Doyle was then convinced not only of the practicability, but of the extreme usefulness, of the scheme as now mentioned by Mr. Hart. He felt that the whole arrangement was one that would tend to the perfect working of the law. In February last, Mr. Doyle laid before certain meetings of the medical profession a plan for appointing union district medical officers of health for rural districts. The gentlemen present at those meetings concurred fully in the plan. It was then proposed to the unions, and in a large majority of cases was adopted by them. It was, however, only adopted temporarily. At the same time, inspectors of nuisances were appointed; and it was the distinct desire of Mr. Doyle that those inspectors should everywhere be subordinate to the district union medical officers. [*Hear, hear.*] The inspectors visited the different areas, and their reports were subsequently published by the Government. Direct information was thus obtained as to the state of each district in South Wales; and similar proceedings were taken in North Wales. From the reports of the medical officers of health and of the inspectors of nuisances, the Government were now in possession of information regarding the sanitary state of the whole of Wales. Subsequently, at meetings of county authorities called together for the purpose, Mr. Doyle recommended the appointment of a consultative inspecting officer, to be chosen by delegates from the different Boards. The scheme looked very well; but, as Mr. Hart had pointed out, it was simply a rope of sand, and it was found to be an utter impossibility to get the unions to act in concord in the selection of such an officer. Several persons, however, expressed their willingness to agree to the appointment if it rested with the Government. At their last meeting, Mr. Doyle said he should gladly consent to the suggestion; but the Government had not the power to carry it out. At the present time, two of the four districts had assented to the plan of appointing a general officer, to be simply a consultative inspector, amenable to the union and to the Central Medical Department of the Poor-law Board. It should always be remembered that a medical inspector had no power under Act of Parliament; his power was entirely under the sanitary law.

The CHAIRMAN said the medical inspectors of the Privy Council were now inspectors of the Local Government Board, and could, if necessary, exercise the power to insist upon the execution of the works which were recommended by the local officer of health.

Mr. DYKE said, if that were so, he was quite sure that in a very few years an immense improvement would take place in sanitary matters.

Dr. BOND (Gloucester) expressed his concurrence with a great part of the paper which had been read, believing that it laid down accurately the principles which the Government should have adopted in drawing up a system of sanitary organisation, if there had been no difficulties in the way. The Chairman had, however, regarded the matter rather as a medical man than as a politician; for it did not require the knowledge acquired during the last few days of the scandals existing in the Government itself, to prove that there were considerable difficulties in the way of doing what might be considered theoretically right. It was easy enough to provide an organisation, but then payment must also be provided for; and, while Mr. Stansfeld might have been tho-

roughly convinced in theory of the correctness of the principles advocated in the paper, he might have found practical difficulties of a peculiar kind in carrying them out. He himself had heard with considerable surprise that the medical officers of health were under the supervision, either tacitly or avowedly, of the lay inspectors of the Local Government Board, because he had had no experience of any kind to justify such a supposition; and he could scarcely understand the circumstances under which such a state of things could occur. He had every reason to believe that his own reports had gone direct to the Medical Officer of the Local Government Board; and, whenever he was brought into collision with a lay inspector on a subject that involved medical knowledge, he should be quite prepared to throw up his appointment. [*Hear, hear.*] He regarded the notion that the medical officer was subordinate to the lay inspector, as a chimera, a thing which could never be where the medical officer was competent to the performance of his duties. One point of some little importance was the relation of the medical officer to the inspector of nuisances. In his own district, he had found that there were two objectionable conditions with which he had to deal: first, that the inspectors made reports of a sanitary nature upon the sanitary condition of the population; and next, that they recommended rather extensive structural alterations. In the former case, he had informed them that it was not their duty to present such reports; and in the latter case he had strongly urged the authorities not to permit any structural alterations until a thorough survey had been made. In every instance, his remonstrance had been taken in good part. He had felt it necessary to deal with this question of the inspectors at the very outset, so that there should be no mistake about their relative positions. He had provided new forms both for the record of nuisances and for the sanitary survey; so that he might have the opportunity of expressing an opinion on every fact recorded by the inspector of nuisances. The authorities in his district had made no difficulty about adopting those forms.

The CHAIRMAN: Will Dr. Bond state how he gets his information from the registrars?

Dr. BOND said he had taken no steps beyond informing the authorities that it would be necessary he should have the returns, and he had never, until to day, heard that there was any difficulty about the paying for them.

The CHAIRMAN: How do you get your information about the actual progress of disease in small districts?

Dr. BOND said he had arranged with all his inspectors of nuisances that they should send in a report of sickness, founded on information obtained from any sources. The whole question of the registration of disease was a most important one, and would have to be dealt with by the Government before long.

The CHAIRMAN: Has Dr. Bond devised any plan in his district for bringing him into collective action with any conjoint committee of the authorities?

Dr. BOND said he had not; and he felt that it was a defect in the arrangements. The Poor-law Board had not laid down any scheme for the purpose. All the central authority could do was to say, "We advise such and such a thing." The relations which should exist between the three essential elements in a sound sanitary organisation—the inspector of nuisances, the district medical officer, and the central medical officer, was a very delicate and difficult point to settle.

The CHAIRMAN: The three elements which I have mentioned were the Poor-law medical officer, the consultative medical officer, and the inspector who was the means of bringing him into connection with the Poor-law.

Dr. BOND said he would leave the inspector of nuisances altogether out of consideration. He had started with a very strong conviction of the importance of the association of the district medical officer and the central medical officer, but the more experience he had in the working of his district, the more difficulty he found in assigning theoretically to the district medical officer any definite work except the supply of information, if the inspector of nuisances and the central officer were thoroughly efficient; and, if the functions of the medical officer were to be still further limited, it would be difficult to convince either the central government or the local government that he deserved a large remuneration. The inspector of nuisances was the man who ought to take action with reference to nuisances, and give information; and the central medical officer was the man who ought to be able to co-ordinate all the information which was derived from different parts of the district, and to give advice, and when those two elements were abstracted from sanitary work he did not know what was left. It was the duty of the central medical officer to see that the inspectors did their duty. The great point to settle was, what was the area which one man could effectually accomplish.

The CHAIRMAN said his idea was that the work of the union medical

officer would be this. In the first place, his registration of disease would constitute the first elements for the sanitary work of the whole district. Then he would be authorised to take all routine steps, such as sending some to the workhouse, others to hospitals. The area he would have to attend to was supposed to be 1000 square miles. Unless there were a local medical officer, he could see no means of checking epidemics. An inspector could not do it.

Dr. BOND said no doubt such work as checking epidemics, where the action was to be very rapid, might be handed over to the district medical officer. Of course the same observation would apply to zymotic diseases, which might become epidemic. Such work, however, though very important, would not be heavy. The question of overworking might also be very properly referred to the district medical officer.

Dr. TRIPE moved: "That this meeting expresses its approval of the suggestions of Mr. Hart, and desires to see medical inspectors of the Local Government Board employed in place of lay inspectors, to inspect the work of medical officers and to advise and assist them; and that it considers the great variety of schemes adopted by Government inspectors injurious, and some of them impossible." He was, he said, a metropolitan medical officer of health, and therefore, in no way connected with the Poor Law Board, except as an analyst, or under their authority or directions, except at a time of epidemics, when they had power to issue certain orders; but it had long been his feeling that it was an unheard of, almost an infamous thing, that lay inspectors should have been appointed to superintend the work of medical men who had passed medical examinations, and possessed medical knowledge and skill. It was really an insult to the profession. Although he had no personal interest in it, he spoke strongly upon this point, because he had been a public man, almost ever since he passed his examination. To be supervised by a person who could know nothing about the subject, or only know anything at second-hand, was an arrangement which ought to be protested against. Some misunderstanding appeared to exist about the relative positions of medical officer of health, and the inspector of nuisances. The inspector of nuisances was an officer appointed under an Act of Parliament, and had certain duties laid down, to be performed irrespective of any control or authority, save that of the Board appointing him. He himself had taken care to obtain from his Board, such a supervision over the inspector of nuisances that he could suspend him at any time if he did not do his work. That power had only been acquired by an arrangement before appointment; that, notwithstanding anything in the Act of Parliament, the inspector should be under his control and direction in everything. It was most important for all who were newly appointed that they should do the same thing, and struggle for their rights. They should try to indoctrinate the authorities with the notion that they were the chief in all sanitary matters, and that they must be the best judges as to how things were carried on. If works were not carried out as they wished, it was their duty to endeavour to act upon the Board by means of the press, or in any other way. He therefore could not see the use of lay inspectors, if the medical officer was well informed and active. It was necessary to the medical inspectors, who should be clothed with supreme power, to say to the local board, "You must do this or that"; and if they did not do it, the Local Government Board should do it themselves. It was a disgraceful thing that there should be even two sets of schemes in one country, but to have four or five was worse still. If sanitary measures were to be taken at all, it was necessary they should be carried out on one uniform plan, and one of the great drawbacks to the sanitary arrangements in London was, that each board had its own particular power. For instance, in Hackney each adult was expected to have 350 cubic feet for sleeping room, while in Bethnal Green only 300 cubic feet were required; so that it sometimes happened when one part of a house was in Hackney, and the other part in Bethnal Green, two bedrooms in the one dwelling were measured on different standards. No improvement could be effected until the appointment of one head officer, to whom all these matters could be referred, and one authority who should enforce his decision.

Dr. VERNON (Southport) seconded the motion. In doing so, he said that, while he agreed with the greater part of the observations addressed to the meeting by the Chairman, it appeared to him that the organisation of sanitary districts upon the scheme which had been recommended might not be capable of being carried out always and everywhere. As far as regards rural districts, and districts composed of a number of small boroughs and rural populations, the scheme might be an admirable one, but in a large city a different state of things existed.

The CHAIRMAN: It is not proposed for any large city.

Dr. VERNON said it appeared to him that the main blot in the act of last year had not been touched upon. The weak point was, that the appointments in some cases might be made by or with the concurrence of the Local Government Board, and districts receiving Government aid, and

some might be made by the districts themselves without any such participation on the part of the Local Government Board. He himself fortunately happened to act under an authority which was keenly alive to the necessity of doing all that could be done, and even desired to go beyond what might be considered absolutely necessary, in order to exhibit to the public a model borough. There were, however, a vast number of localities not possessed of such advantages, and when it was absolutely necessary to the proper discharge of his duties, that the medical officer should be the moral support, derived from the fact that he could not be removed without the concurrence and sanction of the Local Government Board, and that he held his office *quamdieu se bene gesserit*. It was all very well to say that an honest and courageous man would retire if he found he could not discharge his duties, but the only result of that retirement would be to place another person in the same predicament. He considered that all these appointments should be made with the concurrence of the Local Government Board, and that no officer so appointed should be removable without their sanction. He thought the relative positions of inspectors of nuisances, and medical officers of health might be left to the natural influence of superior education and intelligence over inferior. The inspectors of nuisances were appointed for a class of society certainly very much beneath that for which the medical officers of health were taken, and they might be left to fall naturally into their own position. The function of inspector of nuisances was simply to be the eye, the hand, the nose, of the medical officer of health.

Mr. LIDDLE said, that though the power to discharge or suspend a medical officer of health might not belong to the local authority, it had the payment of the salary, and might reduce it to so insignificant a sum that it would amount to actual dismissal. The salaries ought not to be altered except by consent of the central authority.

Mr. E. CHADWICK said the confusion of administrative principle that had been allowed to prevail in different parts of the country was such a grave fault, that it ought to be made known to a Committee of the House of Commons, because it implied an entire ignorance of administrative principle and capacity on the part of the central authority which permitted it. He was a great deal alarmed when he saw it announced by Mr. Stansfeld that he would not interfere with local authorities; that he would defer to them and trust to them in matters which they were utterly incompetent to decide upon. It was a case of half-knowledge, or less than half-knowledge, saying that it would defer to entire ignorance, and was a great dereliction of public principle and duty. One point would be matter for grave consideration on the part of ratepayers. Very large outlays had been incurred in various parts of the country, which, if properly applied, would have reduced the mortality, but which had either not affected the death-rate at all, or tended even to augment it. That was a matter which ought to be fully inquired into; and it was a default on the part of the Sanitary Commission, that they had not inquired into the circumstances connected with the previous expenditure and the non-decrease of the death-rate. He had heard that local inquiry was at first intended; but that the Treasury objected to it on the ground of the expense. No expenditure in any locality, either for offices or for works, was justifiable until inquiry had first been made into the cause of the failure of any previous expenditure. He believed that in Lancashire there had been an enormous outlay on sewers, without any water-supply to work them. In the Government Board itself, some time since, bad smells arose from an immense deposit of a character similar to what might be found in many miles of the metropolis, but which might have been removed by a judicious and timely expenditure. Before any further steps were taken, there ought to be a searching inquiry into the failure of previous attempts at improvement, whether central or local.

The resolution was carried *nem. con.*

Mr. DYKE proposed—"That the Branches of the British Medical Association be requested to arrange for the establishment of health-sections of the Branches, in the interests of the medical officers of health."

Dr. FARR seconded the motion. He said there was really no difficulty in getting the returns from the registrars. The Local Government Board had urged the sanitary authorities to pay for such returns.

Dr. THURSFIELD said, that after a great deal of trouble, he had arranged with the sanitary authorities in his district to get returns of the deaths from the district registrars—the information, of course, being essential to the proper discharge of his duties; but, to his surprise and disappointment, last week he received a letter which had been sent from the Secretary of the Local Government Board, stating that that Board had no power to sanction any payment to the registrars for such returns.

Dr. FARR: Did you propose any particular rate of pay?

Dr. THURSFIELD said, that the rate had been fixed at twopence per entry, in accordance with the provision inserted in the last Bill before Parliament.

Dr. FARR said, if the Registrar-General's department could in any way assist medical officers of health in obtaining the returns, they would be glad to do so; but of course the registrars could not be expected to provide the returns without some remuneration.

Dr. GRIFFITHS (Sheffield) said he had found it absolutely necessary to have the statistics of the births and deaths; and he now received the information weekly. Of course it was paid for.

The CHAIRMAN: In Sheffield, it is not necessary to have the authority of the Local Government Board; but it is in rural districts.

Dr. GRIFFITHS said he could well understand the importance to all medical officers, whether urban or rural, of obtaining these statistics; and he therefore hoped every effort would be made to secure their supply to all officers of health throughout the country.

Dr. SAUNDERS (Hertfordshire) said he had only just succeeded in persuading the authorities in his district to pay for returns from registrars of deaths, and from the Poor-law medical officers; and it was particularly annoying now to find that there was a chance of having the cost struck out of the estimates by the Local Government Board.

Dr. ROBINSON (East Kent) thought there must be some mistake in the letter sent from the Local Government Board to which Dr. Thurstfield had referred, because one of the regulations issued by the Board was, that the medical officer of health should make a quarterly return to the Board, and also a return of sickness, if he was able to ascertain it. He had never experienced any difficulty in obtaining the sanction of any of his boards to the payment for returns. The rate paid was twopence per entry. Some of the registrars had, however, expressed a sort of indisposition to supplying the returns so regularly as he wished, and had stated that it was purely a voluntary act on their part.

Dr. ALFORD (Taunton) said the sanitary authority in his district had willingly agreed to pay for the returns.

The CHAIRMAN: Have the accounts been passed by the Local Government Board?

Dr. ALFORD: No application was made to the Local Government Board.

Dr. FARR said it was quite possible that the Local Government Board might have no power to sanction the expenditure; but in reality a great number of medical officers did get the returns which they required.

Dr. C. FOX (East Essex) said that in his district ague prevailed to a great extent; and, unless he had the returns of sickness from the union medical officers, it was impossible for him to know the localities principally affected.

Dr. MAC CORMACK (Lambeth) said, that if he had not obtained early information of the returns, it would have been impossible for him to have met and treated the cholera of 1866. When a vacancy occurred in the office of Superintendent Registrar of Births and Deaths, he made some suggestions as to the advisability of appointing a medical officer to the post, so that early information might be obtained of the breaking out of epidemic diseases; but though his suggestions were recognised as just, they were not acted upon, because the appointment was in the gift of members of Parliament, and was bestowed as a reward for political services. In all new measures, it would be important to bring prominently before the Government the necessity of placing all such appointments under the control of the health-officers. In his district he had very little trouble in obtaining weekly returns of zymotic diseases. The vestry made an arrangement with the clerk of the guardians to have returns of deaths furnished from the books of the medical officers, but ten days often elapsed before he heard of a case of small-pox, scarlet or typhus fever, or other diseases that required to be dealt with immediately. That would not be the case if the registration of births and deaths became a part and parcel of the health-officer's department.

Dr. ROSS (St. Giles) regretted that no legal means existed of obtaining returns at once. He had given instructions to his inspectors to obtain from the medical officer of the union, information as to fresh diseases,—to go to the medical officers of dispensaries and ask them to furnish the same information, and also to apply to several private medical men. That plan was habitually adopted, whenever there was the slightest suspicion of disease occurring. The information was duly obtained, but the injustice was, that there was no payment for it. What was wanted was, that it should be done by act of Parliament, so that payment might be given for the services rendered.

The motion was put by Mr. DYKE, who acted as Chairman in the absence of Mr. Ernest Hart, and unanimously agreed to.

Dr. GIBBON proposed a vote of thanks to Mr. Hart for calling the meeting. This was seconded by Mr. Wade, and agreed to.

The proceedings then terminated.

On Friday forenoon, during the delivery of Dr. Burdon Sanderson's

address, a further meeting of medical officers of health was held in the anatomical theatre; but the attractions of the address and the remoteness of the theatre interfered with the attendance, which never reached a dozen. The chair was taken by Dr. Bond; and the Chairman and Dr. Thursfield moved and seconded the following resolutions, which were agreed to.

"That the clerks to rural sanitary authorities should, as part of their duty, furnish health-officers with abstracts of all new cases on the books of the union medical officers laid before the authorities at each meeting."

"That, in the opinion of this meeting, it would greatly facilitate the work of medical officers of health acting for unions of sanitary authorities, if provision were made that the sanitary committees of such authorities should meet at least once in each year for the purpose of receiving an annual report from the officer of health, and also periodically at such times as might be found necessary, for the purpose of consulting on matters the interest of which is common to the district as a whole."

"That copies of the preceding resolutions be forwarded to the President of the Local Government Board, with a respectful request that he will, in case they should meet with his concurrence, bring them under the notice of sanitary authorities, with such recommendations for their adoption, and as to the means by which they may be carried out, as he may think it desirable to give."

THERAPEUTIC MEMORANDA.

A SIMPLE METHOD FOR THE SUBCUTANEOUS APPLICATION OF MORPHIA.

SIR,—In consequence of the dearth and delicacy of the syringe, the hypodermic application of morphia, although by far the most beneficial when the drug has to be continued for any length of time, has not come to be so extensively used as otherwise it would. I have devised a singular and much less expensive method, by coating a fine silk thread with the required quantity of morphia, which, when introduced in the manner of a seton, by means of a fine needle, with the eye close to the point, enables us to deposit the morphia beneath the skin, by slowly drawing the thread through the opening. This suppository has to be dipped in water immediately before application, and as it is passed through, which must be done slowly, a drop or two let fall on the end still to be passed, so as to moisten the morphia. The process does not cause more pain than injection by the syringe, even when the point of the latter is in condition, as only one-eighth of an inch of skin is traversed, and, as it simply requires a needle, does not entail expense, either for purchase or repairs; and, so I should hope, may be the means of extending the benefit of subcutaneous morphia among the poor, for whom the syringe is too dear and too delicate an instrument. Messrs. Mackey and Co., of Bouverie Street, E.C., supply the suppositories (containing one-sixth, one-fourth, and one-half grains hydrochlorate of morphia), with the needles in packets of one dozen and upwards, directions for use accompanying each. The suppositories were exhibited in the museum of the British Medical Association.

JOHN M. CROMBIE, M.A. and M.D., Brompton.

FAREWELL DINNER TO MR. T. N. TREW, ASPLEY GUISE.—A complimentary dinner was given last week to this gentleman by the Board of Guardians and others of the parish. Mr. Trew is about to relinquish private practice in the neighbourhood; and it would well appear, to judge from the newspaper report of Mr. Trew's speech, that he has left a gentleman, as successor, who is well supplied with medicine prepared from the same "receipt." Boards of guardians do not every day express their appreciation of the parish medical officer, by indulging in the extravagance of a dinner; we are therefore glad to chronicle the present case. The parishioners generally of Aspley, it would appear, intend to present Mr. Trew with a handsome service of plate before he leaves the village; whilst the Foresters recently showed their appreciation of their medical man by presenting him with a valuable piece of plate.

A PUBLIC BENEFACTOR.—A bronze statue to Dr. Samuel Taylor Chadwick of Southport was lately unveiled at Boston, in the presence of a large number of spectators. Dr. Chadwick formerly practised in Bolton, and a few years ago made a gift to the town of £20,000 for erecting model dwellings and an orphanage. It was to commemorate these gifts that the statue was erected. At the conclusion of the ceremony a banquet was held in the Town Hall.

FORTY-FIRST ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

SECOND GENERAL MEETING, Wednesday, August 6th.

THE second general meeting of the members was held in the Great Hall, the President in the chair.

Next Year's Meeting.—The Secretary, Mr. F. Fowke, read a report from a meeting of the Council held that morning. It recommended that the meeting of 1874 should be held at Norwich, and that Dr. Copeman, of that city, should be President-elect. [Cheers.]

Dr. FALCONER proposed the adoption of the report.

Dr. SIBSON seconded the motion, which was carried *nem. con.*

Dr. COPEMAN (who was received with cheers) thanked the meeting for accepting the invitation of his brother practitioners of Norwich, and for the honour they had done him in electing him President for that year. It was, to his mind, a most serious thing that Norwich should have to follow such a meeting as this, as the contrast between the Norfolk city and the metropolis would be most marked. Competition with the London meeting was entirely out of the question, except, perhaps, in one particular, for Norwich had a splendid old hall, which would dine, if need be, a thousand persons at the time. [Laughter and cheers.] He thanked them again for the honour done to Norwich and himself, and, if the members would be kind enough to come to Norwich, the practitioners and town would do their best to make it an interesting meeting. [Cheers.]

Invitation from Baroness Burdett Coutts.—The PRESIDENT stated that, since the previous evening's meeting at the Mansion House, he had received a letter from a noble lady who was present at that magnificent gathering—[cheers]—Lady Burdett Coutts—[cheers]—who, to show her esteem for the profession, and her good will, as she had to all humanity, had written to say she would be happy to receive members at Holly Lodge, Highgate. [Cheers.] Her ladyship further said that, though her house was somewhat dismantled, in undergoing repair, her housekeeper would get refreshments for the visitors. [Cheers.] Professor Tennant, too, would also show and explain some geological collections at Holly Lodge.

Address in Medicine.—Dr. PARKES, of Netley, delivered the Address. It was published at page 141 of last week's JOURNAL.

Dr. SIBSON, referring to the cheers given to the reader of the address, said the echoes of that loud applause rendered it needless for him to speak with regard to the merits of that address. Those who had worked with and under Dr. Parkes, as, indeed, everybody who had come into contact with him, loved him as they could scarcely love any other man. They could see at a glance the large perception which was in him, and there was not probably any other man who could give, step by step, all that medicine had done in the course of his career as Dr. Parkes had laid before them. And had not what Dr. Parkes had shown them made them proud of their profession, of their country, and of their linking in with France and Germany? For he had shown them how they had laboured from point to point, and that, as their knowledge of disease had heightened, the knowledge of treatment had heightened as well; and they had attacked the foe with energy and decision. [Cheers.] He had shown how Dr. Fleming had destroyed one of the most loathsome diseases to which flesh was heir, and had thereby done not only an incalculable good to humanity, but had encouraged others to lead the same path of discovery. But it was unnecessary to say more in praise of that vivid address, which had struck upon their minds like lightning across a wall—[cheers]—and would ask them to give Dr. Parkes a hearty vote of thanks. He moved—"That the best thanks of the Associations are due, and are hereby given, to Dr. Parkes, for his able Address in Medicine."

Dr. RADCLIFFE HALL (Torquay), in seconding the motion, said that not one additional word of praise was needed to be said respecting that splendid address; but he would fancy that Dr. Parkes was not present, so that he might be able to express his own personal feelings with regard to him. He then proceeded to say that Dr. Parkes would always stand as an example of what men might do; for, though a man of weakly constitution, he had, by his self-control and care of himself, been able to do more mental work than men of the same age and of robust constitution had been able to get through. He had a happy combination of amiability of temper, precision and extensiveness of

knowledge, and that firmness of opinion which could only arise from well-founded sources of learning. Sir William Jenner said the only fault he had to find with him was, that he thought too well of everybody, and the meeting could not think too well of Dr. Parkes. [*Loud cheers.*]

The motion was carried with acclamation.

Dr. PARKES, in returning thanks, said he could assure the meeting he thought extremely well of everybody there for their kindness.

Committee of Council.—Mr. SOUTHAM then read the list of the new Committee of Council, as published at page 172 of the JOURNAL of last week.

The meeting then closed, and the business of the Sections commenced.

THIRD GENERAL MEETING, Thursday, August 7th.

The PRESIDENT, on taking the Chair in the Great Hall, said that, looking at the large amount of business to be done in the hour before the address by Mr. Wood, he must urge upon all the necessity of being as brief as possible.

Report of Committee on the Registration of Disease.—Dr. RANSOME (Bowden) read the report of this Committee. (See page 189.)

Dr. RUMSEY (Cheltenham) moved the adoption of the report, thanks to the Committee for their services, and the Committee's reappointment.

Mr. EYTON JONES (Wrexham) seconded the motion, and urged the necessity of the registration of disease being made compulsory instead of permissive. He said that various boards of guardians were pooh-poohing suggestions in this direction, and he was quite convinced that the registration of disease would be a failure until the legislature took the appointment of medical officers out of the present hands, and made registration of disease one of the duties of that office.

The motion was carried unanimously.

Report of Committee on State Medicine.—Dr. A. P. STEWART read the report of the Joint Committee of the British Medical and Social Science Associations on this subject. It will be published in our next issue.

Dr. RUMSEY proposed the adoption of the report, that the Committee be thanked, and that they should be reappointed. At the same time, he said there were words in the report to which he took the greatest exception. They had heard Mr. George Hastings describe the Public Health Act in the Public Health Section, and it was quite apparent that words in the report speaking of the "same force and authority" as applied to the Act did not apply, for there was no force or authority in it. [*Laughter.*]

Dr. AVELING seconded the motion. He hoped that the same Committee would at no distant time take into consideration the subject of midwives and their qualifications for their duties. At the present time, there were ten thousand ignorant women practising as midwives in this country, and he thought it was a fitting part of the duty of the Committee to consider the subject, with a view of proposing a remedy for the existing evil of the present system. [*Hear.*]

Dr. STEWART, in reply to Dr. RUMSEY, said the words referred to by him should be altered.

Dr. RUMSEY hoped, too, that a minute would be made of the objection taken to the words.

The motion was agreed to; and, on the motion of Dr. STEWART, Dr. Rumsey was added to the Committee.

Report of Medical Reform Committee.—Dr. WATERS read the report of the Medical Reform Committee. (See page 190.)

Mr. HARRISON (Chester) moved the adoption of the report and the reappointment of the Committee. He said he considered that the gentlemen composing the Committee deserved the thanks of the profession for the hard labour given to this subject.

Dr. WILKINSON seconded the motion.

Dr. STEELE (Liverpool) said he wished to say a few words about the work of this Committee; and before he proceeded to criticise their work, he would say he had a thorough appreciation of their energetic services. What he had to say, however, was that the Committee seemed to convey the view that the Bill of the Committee was the Bill of the Association; and he had to complain that members were got to sign for it without having read the provisions of it—provisions of which they had disapproved when they came to know them. The Committee said they would not accept any Bill which did not provide for the direct representation principle; yet there was the fact that the respected chairman of the Metropolitan Counties Branch and other eminent members differed from that view, and it was felt that an useful Bill would have been passed but for the uncompromising manner in which the Committee proceeded with regard to obtaining direct representation.

Dr. SIBSON gave his entire concurrence to the principle of direct

representation, and urged that to abandon that would be to abandon what the Association had laboured for for years. [*Cheers.*] He regretted, however, to see in the report, that it was proposed that reference should be made to the Privy Council; for, if the profession came under the Privy Council, then they would not know where they were. [*Cheers.*] If the profession came to rise above its present position, it must rise out of itself; but, if it had to submit to the Privy Council in the way indicated in the report, then would be taken away the very source and foundation of the position which it was desired to achieve. The medical profession should be self-governing, like the Law and the Church.

Dr. WATERS (Chester), in reply, said the last speaker had worked on the Medical Reform Committee from the commencement, and his name had ever been associated with medical reform as it ever had been with the Association. [*Cheers.*] As to the objection taken to the interference of the Privy Council, and the reference to the legal profession and the Church, it was a fact that the Government did exercise influence in both; and, in an important profession, that leading men in the country must exercise an influence upon its government was an inevitable conclusion. The Privy Council was not pleased with the promoters of this Bill, because it deprived the department of the powers it sought to obtain under the Bill of 1870. In this Bill there was only one matter in which the Government had a voice, and that was to approve the general board of examiners. The Government were bound to exercise a supervision over such a matter as this, which was closely connected with the public weal; and it could scarcely be denied that, on so important a matter as that of an examining body, it should be said that the General Medical Council should recommend, and the Privy Council should approve. With regard to Dr. Steele, he would say there was no gentleman for whom he had a higher respect than for him; but, when that gentleman had said that the Bill contained things not based upon principles approved by the Association, he begged to reply that it contained nothing else. [*Cheers.*] The principles in the Bill had been approved, year after year, at the annual meetings of the Association; and at the Dublin meeting, when objection was made to the report being received, there were only two hands held up in support of the objection. Then, as to the objection made regarding the opposition of the President of the Metropolitan Counties Branch, they knew that Dr. Quain, as well as Mr. Simon, had always held their opinions on direct representation; and whether the Bill should or should not contain the principle, was fully argued out at Newcastle, and as fully adopted; for five influential gentlemen advocated the rejection of the report, but they on received the support of two others, after the report was printed and circulated. The principle of direct representation was so well known that he would not trouble them with any remarks upon it at this time. [*Cheers.*]

The motion for the adoption of the report, and re-appointment of the committee, was then put and carried.

The Hastings Medal.—The PRESIDENT introduced the successful competitor for the Hastings Gold Medal, Mr. Lawson Tait, of Birmingham, who was warmly received. The President said he had to congratulate Mr. Tait upon achieving the distinction; and this honour was the greater, inasmuch as an award was not made as a matter of course, for, though in some years there had been competing essays of singular merit sent in, the medal had not always been given, while this year it had been awarded with every imaginable approbation; and that circumstance showed that the winning essay very much redounded to the credit of the writer. [*Cheers.*] The question proposed was one of comparatively modern date, and one on which some of the best workers of the day had been most recently engaged. This being the fact, it was marvellous to him that the committee on these essays should have decided that Mr. Tait had achieved the distinction which entitled him to the medal. The subject was one of the most original surgical subjects of the century, for it was one which had been developed in modern surgery. It was something for Mr. Tait to have earned distinction in this way; and all present would feel themselves honoured in having the opportunity of congratulating Mr. Tait. [*Cheers.*] It was his (the President's) duty to congratulate Mr. Tait in the name of the Association, and he performed this task with the greatest pleasure. He proceeded to refer to the teaching of the Medical School of Edinburgh, of which Mr. Tait had proved himself a distinguished pupil; but the winning of this medal had been his greatest distinction, and he had done honour to the teaching of Sir James Simpson, who, he added, had done much for modern medicine and surgery. He concluded by wishing Mr. Tait prosperity in a career which he had so admirably begun.

Mr. TAIT said a few words in acknowledgment.

The PRESIDENT then stated that the Dean of Westminster had sent word to say the whole of the Abbey would be thrown open each day to

the members of the Association. He stated also that a photographic group of the members would be taken. [*Cheers.*]

The Address in Surgery was delivered by Mr. JOHN WOOD, F.R.S. It was published at p. 146 of last week's JOURNAL.

Dr. MCLEOD (Glasgow) proposed—"That the best thanks of this meeting are due, and are hereby given, to Mr. John Wood, for his able Address in Surgery." He said that they had expected an address of great merit, and they had not been disappointed. [*Cheers.*] The task had been a great one, and it had been discharged in a manner which had been fully appreciated. [*Cheers.*]

Mr. CADGE (Norwich) seconded the motion. He said that it appeared to him that nothing could be more fitted to a great occasion like the present than the address they had heard, for Mr. Wood had touched upon a principle which it was to be hoped the profession would work out to its end; for, on behalf of the public, the profession should come to a conclusion on the antiseptic principle to find out whether it was a professional truth or a professional error. It was the duty of the profession to work it out to find where the truth lay or where the fallacy. Mr. Wood had given the lesson which he had acquired, and they had before them the results of his laborious work.

The motion was put and carried.

Mr. WOOD, in response, said the manner in which he had been received more than repaid him, and he regarded what he had done as most imperfectly fulfilling his task. He announced that two of the patients to whom he had referred in his address were present, and could be seen.

The meeting then closed.

FOURTH GENERAL MEETING, Friday, August 8th.

The fourth general meeting was held in the large Hall, at 11 A.M.

The Address in Physiology was delivered by J. BURDON SANDERSON, M.D., F.R.S. It was published at p. 152 of last week's JOURNAL. Before commencing the address as published, Dr. Sanderson made the following remarks.

Before beginning my address I propose, in accordance with what appears to me to be a good custom, to give you a summary of the most important events which have happened during this year in connection with the science of Physiology. In doing so I shall limit myself to those in which we, as members of this Association, are more or less directly interested. I am prevented from going beyond these limits, partly by the nature, partly by the numbers, of the researches which I should otherwise have to chronicle; for, now that the position of Physiology as a branch of physical science is beginning to be recognised, and, in consequence of this recognition, physiological research has been, more or less, completely organised in all the great centres of human knowledge, a much larger quantity of work is being done, and a much larger number of persons are engaged in it. In every great school throughout the world, even in London, where the temptations are so strong and difficulties so great, young men are to be found who are willing to devote, at all events, a certain proportion of their lives to research. But it is not merely the quantity, but the quality, of the work done which would make it difficult to give a summary of it. Physiologists have now, for the most part, already accomplished most that can be done by what may be called naked eye or rough observation of the phenomena of living beings. They have, for the most part, resolved the functions of life into their constituent processes. Thus, for example, we treat the function of circulation not as a whole, but under heads, each representing a single phenomenon or process—such, for example, as arterial pressure, velocity of the blood-current, contraction or relaxation of muscular fibres, and the like. Digestion, again, is treated of as consisting of various processes, each of which can be made the subject of separate chemical investigation. The physiologist does not now much concern himself with the general teleological questions which, in the earlier days of the science, used to interest us; such, for example, as those relating to the uses of particular organs, the reason why some animals are warm-blooded, while the temperature of others is variable, why some animals hibernate, why some plants are irritable, and the like. All such general questions he is content to leave aside, in the confidence that in due time they will answer themselves, fixing his attention on the simplest physical phenomena or processes into which the bodily functions can be resolved, and applying to each the appropriate methods of experimental investigation. In this way it comes to be the case—as one may judge, for example, from a glance through the papers in any journal devoted to us—not merely that work is found for a great number of investigators, each of whom is called upon to accomplish his own little bit of research and earns credit if he does it well and permanently, but that each observer works independently of, and without regard to, the connection of his own special question with

others; for he knows that the value of his work depends, not on his comprehension of its bearing, but on the exactitude and completeness with which he carries it out. In this respect (*i.e.*, of this specialising of different kinds of research) we may compare the progress of recent physiological investigation to that of one of the great campaigns of which we have seen such remarkable examples during the last few years. Just as in war on a large scale, the successful accomplishment of great results is seen to depend on the accuracy and completeness with which the leader of each *corps d'armée* performs the part assigned to it, so in research nothing great can be accomplished without the systematic co-operation of many men, each of whom, whatever else he may know or be ignorant of—and the more he knows, without doubt, the better—knows thoroughly how to carry out the work he has undertaken.

By way of illustrating what I have been saying, I will first refer to a beautiful bit of experimental research lately carried out by our distinguished friend Professor Marey, some facts relating to which he is about to demonstrate to us this evening. It will serve to illustrate both my points—namely, the resolution or analysis of a function like that of the circulation into phenomena of relatively great simplicity; and the successful application of rigidly exact methods of research to such separate phenomena. Let me state first that the inquiry relates to the conditions or causes which regulate the frequency of the heart's action. Now, we know that the two conditions which influence under constant conditions of temperature are—1, the direct influence of the nervous system; 2, the resistance which the organ (regarded as a pump) has to overcome. M. Marey is to show us—1, how one of these questions is to be separated from the other by resistance from the nervous system; 2, how we measure the effect of resistance on the frequency of the heart. He has arranged a beautiful apparatus by which it can be shown that if the heart of the tortoise is removed and set to work to do the work of a pump, and the experiment is so arranged that the resistance it has to overcome can be varied and measured, it is found that the rate or frequency of the heart's action varies inversely as the resistance; the greater the resistance the less the frequency, etc. The fact is not a new one to the physiologists present. I need not say the mode of demonstration is very exact and beautiful.

I must next refer to the admirable recent investigations of Mr. Dewar and Dr. M'Kendrick on the physiological action of light; they afford still better illustrations, for the function in question is much more difficult to investigate. In the act of vision, the impression of light is received by the retina, transmitted by the optic nerve, perceived by the brain. In this momentary process, changes occur in the retina of the intimate nature of which little as yet is known, in the sensory centre of which we know only the effects, and in the optic nerve. It is to these last that Dewar and M'Kendrick have directed their attention. Just as when a message is transmitted along a telegraph wire a change takes place in the wire, the existence of which we can demonstrate by connecting the wire with the coil of an electro-magnet, so, by using methods infinitely finer, we can demonstrate that when a message is transmitted from the retina to the sensory centre—the centre of vision—an electrical change occurs in the nerve. Here, however, the resemblance ceases. Both changes are electrical, but they are of a different nature. A nerve is not a telegraph wire. Dewar and M'Kendrick's research proceeds from two fundamental facts. The first is that there is a difference between the electrical state of a living nerve and that of the same nerve when it is not living, even though it may be all but living, and that this difference manifests itself in voltaic currents, the intensity of which currents varies with the excitability of the nerve. In other words, the vitality of a nerve, its fitness for its function—that of transmitting impressions—is expressed by the intensity of voltaic currents, which are not transmitted through it, as in the case of the telegraph wire, but developed in every part of it, and can be shown to exist even in the smallest fragment by appropriate means. This fact is expressed by saying that nerve, so long as it is alive, possesses electromotive force. The second fact is that in nerves in general the normal nerve-current—*i.e.*, the voltaic current, which can be shown in any living nerve under observation—is diminished or weakened the moment that the nerve is excited—*i.e.*, whenever an expression is conveyed along it. This is expressed by saying that the normal electromotive force of a nerve is diminished when it is in action. The diminution in question is called the "negative variation" of the current. On these facts, which were first investigated by Matteucci, and, I need not say, apply to muscle in the same sense that they do to nerve, the science of nerve and muscle physiology (the most advanced chapter in the whole subject) has been founded by Du Bois-Reymond, and built up by Chauveau in France, by Pfüger, Eckhardt, Bernstein, and others in Germany. The sum and substance of their discovery is that, according to Doth, the same electrical change which occurs in an ordinary nerve, when it is excited by the passage through of induction currents, a similar negative variation of the normal

current, a similar diminution of its electromotive force is determined in a nerve of a special sense, the optic nerve, by stimulus of light—that is to say, that the optic nerve in transmitting the impression of light from the retina (where it originates) to the centre of vision (where it is perceived) undergoes the same physical change that a motor nerve does when it determines the contraction of a muscle. But this is not all, for Dewar and M'Kendrick have not merely determined that the optic nerve behaves to stimulus in the same manner as a motor nerve does. They have accomplished what to those who are not conversant with the application of the exact methods to vital phenomena will, I think, appear somewhat surprising; they have measured the quantity of effect produced, and compared that quantity with that of the stimulus used. Light, I need not say, is a thing which can be measured with great accuracy. By means of suitable galvanometers, such relatively inconsiderable currents as exist normally in nerve, can also be measured with equal accuracy. Dewar and M'Kendrick have carried out such measurements; and they have found that, when the numbers expressing the results are set down in two columns, so that the effect produced in each observation is placed opposite the number expressing the quantity of stimulus which produced it, the two sets of numbers are not proportional to each other each to each, but stand to each other in relations which are governed by a mathematical law—the so-called psychophysical law. It is not difficult to see how important such a confirmation of Fechner's law is, considering that the law itself was deduced from data of an entirely different kind.

The next event to which I shall refer also relates to the physiology of the nervous system. It is equally important in a scientific point of view, and more directly interesting, partly as being an outcome of clinical observation, partly as possibly furnishing data for diagnosis. I refer to Dr. H. Jackson's clinical and Dr. Ferrier's experimental investigations as to the localisation of certain groups or combinations of voluntary movements in certain parts of the surface of the brain, and particularly in the convolutions of the hemispheres. From the clinical observation carried on for many years of cases of paralysis and convulsion, in which in the one class of case abnormal movements of certain groups of voluntary muscles, in the other class absence of movement, were found, after death, to be associated with, topographically, well-defined lesions of the convolutions, Dr. Jackson had, with wonderful sagacity, reasoned out the physiological relation between the injured parts and the combined movements which, in some way or other, they controlled or influenced. Following out the principle thus deduced from clinical observation, Dr. Ferrier was led to undertake the very extended and laborious experimental investigation of the motor functions of the brain, of which some of us have seen the results. Compared with that employed in the research last referred to, Dr. Ferrier's method of experiment is simple. It consists simply in exposing the brain of an animal and directly exciting different parts of the surface by induction currents and observing the combined movements which are thus induced. The result is simply this: that definitely combined and purposive movements of the extremities, of the muscles of expression, of mastication, of the tongue, of the eye, and so forth, are determined by excitation of particular parts of the brain surface, and that these motor regions are so limited from each other that although the spot which rules over one movement may be very close indeed to the spot which rules over another, there is no difficulty in defining the topographical relations, or in throwing one into action without affecting the other. What happens when a convulsion is excited electrically? It would be premature to attempt to give an answer to this question. I would, however, like to point out that in these facts there is nothing subversive of the notion usually entertained, that these superficial parts of the hemispheres are not, in the physiological sense, *motor centres*—i.e., not centres from which the channels for motor impulses spring, but that they are the seats of thought, the organs in which the "procession of ideas" of which thought consists goes on. If this is true it is very natural to suppose that when we excite those organs the effect must be to induce thoughts, dreams, fancies. Of these no doubt some, perhaps the greater number, find no visible expression (Dr. Ferrier finds that there are regions of great extent where excitation does not lead to movement), others being congenitally or by habit associated with movements, act on the centres of movement situated in the central parts of the brain, and produce their visible effects reflexly, just as excitation of the retina by light determines contraction of the pupil, or as excitation of the organ of smell determines sneezing. But in physiology it is scarcely worth while discussing theories. What has been gained by Dr. Ferrier's research is not a theory, but a fact. We owe our thanks to him for giving us a method by which one, at least, of the highest functions of the nervous system can be brought under the control of experimental investigation, and for having brought us one step nearer to a knowledge of its mechanism.

Among the many other subjects to which it might be interesting to

refer, there is one which I cannot persuade myself to pass over, although it is wholly unconnected with those about which I have been speaking—that of the part played by the smallest of all living organisms, bacteria, in the physiological and pathological processes of the higher animals, and particularly in the production of disease in man. I feel, however, a degree of reluctance in entering on the subject, which will be sufficient to induce me to deal with it very cursorily—not because I am not sensible of its great importance, but because observations relating to it, though already very numerous, are not yet sufficiently connected to be readily summed up. While on the one hand additional proofs have been given by Klebs and Lister, that in the perfectly healthy condition of the organism, bacteria are not present either in germ or in visible form in the blood or tissues, the range of conditions under which they may be present without having been directly introduced from outside otherwise than through the circulating blood. With reference to this question—namely, the conditions which determine the existence of bacteria in the blood, three facts have been established during the past year—the first is, that in certain persons apparently healthy, and in many animals, organisms belonging to this class (*Schizomycetes*) are always present in the blood; (2) that in all acute inflammations which are attended with the destruction of living tissue, bacteria are to be found in the exudation liquids, even when the foci of inflammation are remote from the surface; and (3) that in one specific febrile disease, at least—namely, relapsing fever, living beings are present so long as the febrile state lasts, which exhibit characteristic forms not observed in healthy blood, in traumatic fever, or in other diseases. This last fact, first described by Obermeier, has been confirmed by the highest authorities, both pathological and botanical, and may probably be regarded as definitively established. Notwithstanding this apparent paucity of results, there are some considerations connected with the subject which are satisfactory. One is, that this subject, which, partly from its unlucky association with the question of spontaneous generation, and partly from the too enthusiastic way in which it was taken up by certain persons, was at first avoided both by physiologists and pathologists, has now attracted to itself the attention of the best investigators in Europe. Among these I would particularly refer to Professor Cohn of Breslau, whose reputation as a mycologist is second to none, and whose research on the development and classification of bacteria, published during the last two years, afford to us pathologists a safe morphological basis for recording our observations. In a question of this kind, where we have to do with the study of living forms, we want the help of the zoologist or botanist, as the case may be, just as absolutely as we require the help of the chemist in the investigation of the chemical processes of life.

Of recent events interesting to physiology which are not of the nature of research, I would mention two. One of these is the progress which has been made in the establishment of working places—laboratories—where those who are capable of carrying out investigation may find the space, the material, and the appliances for their work. The other is the establishment of a journal, the *Medical Record*, which is intended for the purpose of keeping those who are actively engaged in practice *au courant* of the work which investigators are doing in different parts of the world for the advancement of medicine. For there is nothing which is so likely to stimulate and maintain an interest in physiology and pathology among the younger members of our profession as the facility which a journal of this kind affords for acquiring accurate information as to the progress of research.

Dr. BURDON SANDERSON then proceeded with the delivery of his address as already published.

Professor VIRCHOW (Berlin), who was received with applause, said: Gentlemen,—I have accepted the agreeable duty of proposing the thanks of this meeting to Dr. Burdon Sanderson, for his able address. Indeed, he has touched the most important questions concerning the relations between physiology and pathology, or, in other words, between theory and practice. Is it correct, is it a thing of public necessity, to advance in the path of experiment and of research, and to induce the profession to bring their practical theories into strong connexion with the theoretical views of modern science? In my country, this question is answered in the affirmative sense. I myself commenced the struggle, when, twenty-five years ago, I began my *Archives* of pathological anatomy and physiology, and of clinical medicine, and when I proved the postulate that clinical medicine should be applied to practical physiology. The victory of this tendency was confirmed when, in 1856, the Prussian Government took the decision to found the first pathological institute. Since that time, each year has brought new proofs of the correctness of this way. In all civilised countries this science has followed the same course; and if now the English Government and the English profession agree to found large pathological institutes, what they do is nothing else than to accomplish that national tendency originated by those two most illustrious members of the College of Physicians and of the College of Surgeons,

William Harvey and John Hunter. Each pathological institute in the world is a monument erected to the memory of those two heroes of science; and, gentlemen, I believe, if no other reason existed, it should be a duty of gratitude to establish that sort of institute, where their method could be pursued and transmitted to the coming generation. But I am somewhat surprised that such a question should be discussed, and the answer be doubtful, in the country which, for many centuries, has given to the whole world the highest representatives of that successful combination of medical or surgical practice and theoretical speculation. May I be allowed to recall at this time, and in this place, the memory of that man who, after my opinion, is for ever the best example of what a correct method and an intrepid philosophical sense can attain, I mean the memory of Glisson. He has shown what calm and diligent observation produces in the investigations of the most dark points of practical medicine, when based upon good anatomical knowledge. But the same Glisson, who seemed to be a mere empirist, employed the most earnest efforts for finding a general formula for the phenomena of life; and it was by following in his footsteps that Haller came to the doctrine of irritability, the fundamental thesis of modern biology. We also, in prosecuting the so-called physiological theory, are in the way of Glisson, in the way of good practice. The scientific man, whether he be a practical man or not, analyses, diagnoses, divides the phenomena of life. In this way he arrives very soon at an apparently distinctive result. The unity of life, the unity of disease, however, is destroyed. So in the theory of fever we find no resemblance between the modern, and generally accepted, view of fever dependent on various local and general influences, and the former doctrine of essential fever, placed in each system of older medicine as the head of the special diseases. What is inflammatory fever now, and what was it forty years ago? Now we know that pneumonia is a local affection, developing itself in a regular series of stages. But these stages do not correspond to the stages of fever concomitant and excited by that local affection. Nay, the fever can cease; the disease, considered as unity, can be finished by a larger crisis; but the local affection is not always finished, it can make further progresses, and it can persist by a series of dangerous metamorphoses. The old unitarian doctrine could not give any explanation of these particulars. We observe that pneumonia is a local affection, proceeding ordinarily from lobule to lobule; and, if we look upon the inflamed lung of a man who has died in the stage of acme, we see in the same way, placed side by side, all the different stages of local development. Thus the fever makes its way, and the local affection makes its way; and sometimes we find the local affection without fever, or with only a very insignificant fever. But also the local affection is not a single one. Each affected lobule, each affected lung-cell, presents its particular and independent affection. Should the practical man not recognise these compound things? Should he continue to contemplate the disease as an unity, only because the patient is an individual? No, gentlemen, disease is an unity only in an elementary organism—in a cell. It is always a compound phenomenon in a higher, in a compounded organism; and nobody will have a perfect knowledge of disease if he be not enabled to divide the disease into its elementary components. This is shown by that branch of medical science which has now reached the highest degree of scientific surety—ophthalmology—whose methods make it possible to fix real elementary pathological alterations, and their continuation to compound diseases. So, gentlemen, will the physiologist divide the so-called fever into a series of elementary processes. But I hope the future will show that it was not completely erroneous to believe that all these elementary processes could be reduced to a primary central affection. But never can we return to the so-called practical view of essential fever; never to the opinion as if not only the fever, but also all the local affections combined with it, could form a real unity.

Dr. NOEL GUENEAU DE MUSSY (Paris) said he could not pretend to add anything to the address just made, or to the immense authority of the learned and respected professor; but he would remark, in seconding the motion, that all the foreigners had thoroughly enjoyed the address, and entirely concurred in the resolution.

The motion was carried with acclamation.

Dr. SANDERSON briefly replied, and expressed his gratification at being thus spoken of by the greatest of living pathologists.

CONCLUDING GENERAL MEETING, Friday, August 8th.

The last general meeting was held at 2 P.M.; the President in the chair. There was a good attendance up to the last.

Report of the Parliamentary Bills Committee.—Mr. ERNEST HART read the report of the Committee (see page 191).

Mr. A. BAKER (Birmingham) said that there was no other committee

whose duties were more important to the profession at large than of the Parliamentary Bills Committee; for the Committee carefully watched every Bill which might directly or indirectly affect the profession. During the past year the Association had reason to rejoice at the way in which the Committee had dealt, not only with the Bills affecting the profession, but also with the action of the Government in regard to the profession in the army and navy. [*Hear, hear.*] He need not refer to the wonderfully successful advocacy of the Chairman of the Committee whenever the Committee was brought face to face with the Government, and the great ability displayed by Mr. Hart. All the members knew what he had done. He moved—"That the Report of the Parliamentary Bills Committee be received and adopted, and the Committee reappointed; and that the thanks of the Association are due, and are hereby given to them for their valuable and important labours during the year."

Mr. HECKSTALL SMITH (St. Mary Cray) seconded the motion. It was apparent that an immense amount of labour had been given by the Committee under the able and energetic superintendence of Mr. Ernest Hart, whose services ought not to be overlooked.

The motion was carried unanimously.

Vote of Thanks to the Queen.—Dr. FALCONER (Bath) moved—"That the best thanks of the British Medical Association be given to Her Most Gracious Majesty, the Queen, for her kindness in throwing open the special apartments at Windsor Castle."

Dr. A. P. STEWART seconded the motion. Her Majesty had given special orders to open to the Association the rooms not generally seen. Her Majesty and the Prince and Princess Christian took the deepest interest in the Association.

The resolution was carried with much cheering.

Qualification in State Medicine.—Mr. G. W. HASTINGS, referring to the proceedings of the Section of Public Medicine, over which he had presided, said that they had passed the following resolution:—"That a Committee be appointed to consider the best means of providing for an adequate qualification in State Medicine for all public medical officers. That the Committee consist of Mr. Donald Dalrymple, M.P.; Mr. G. W. Hastings; Dr. Parkes, F.R.S.; Dr. Heslop; Dr. Ransome; Dr. Anstie; Mr. Ernest Hart; Dr. Tripe; Dr. Stewart; Mr. Michael; Dr. Arlidge; Mr. Ceely; Dr. R. Macdonnell; Dr. Rumsey; with power to add to their number." He had since found that the Section could not of itself pass a resolution of this character, and he had got the Section to make it a recommendation to the general meeting that such a Committee be appointed. He moved accordingly—"That the recommendation of the Public Medicine Section be approved and carried into effect, and that the following gentlemen be the Committee on Qualification in State Medicine: D. Dalrymple, Esq., M.P.; G. W. Hastings, Esq.; E. A. Parkes, M.D., F.R.S.; T. P. Heslop, M.D.; Arthur Ransome, M.D.; F. E. Anstie, M.D.; Ernest Hart, Esq.; A. P. Stewart, M.D.; W. H. Michael, Esq.; J. T. Arlidge, M.D.; Robert Ceely, Esq.; R. Macdonnell, M.D.; H. W. Rumsey, M.D.; J. W. Tripe, M.D. (Secretary); with power to add to their number."

Dr. RUMSEY seconded the motion, which was carried *nem. con.*

Votes of Thanks—Mr. JOHN MARSHALL (London) moved—"That this meeting, cordially recognising the distinguished position of the illustrious visitors in their respective countries, begs now to tender them the warmest thanks of the Association for their presence and for the additional interest thus given to this annual meeting."

Dr. DUPLEX (London) seconded the motion, which was carried unanimously.

Dr. A. P. STEWART said that, when the Association met in London in 1862, it could be accommodated in the Royal College of Physicians. Now, however, when, from the increased size of the meetings and the formation of sections, more room was required, the authorities of King's College had most kindly placed their extensive rooms at the disposal of the Association. He moved—"That the cordial thanks of the British Medical Association be given to the Council of King's College, and to the secretary, Mr. Cunningham, for their kindness in granting the use of the College for the annual meeting in 1873, and for their continuous exertions in facilitating the arrangements of the meeting."

Mr. ERNEST HART seconded the motion. Four weeks' observation and close connection with the authorities of King's College, in making the arrangements for the meeting, had shown him that an earnest desire to entertain the Association with the warmest sympathy and most untiring energy had been manifested. The Reception Committee were personally very grateful to the authorities of the College, and the Association would, he was sure, carry the motion with acclamation.

The motion was carried with cheers.

Dr. CHADWICK (Leeds), moved—"That the cordial thanks of the British Medical Association be given to the Right Honourable the Lord Mayor and Lady Mayoress, for their hospitality in giving a reception

the Mansion House, on Tuesday, August 5th." He said that the Association had been recognised by many municipalities, but it must be admitted that the assemblage at the Mansion House would stand in the memory of all there, and it was beyond comment or praise. [*Cheers.*]

Dr. WM. FARR (London), seconded the motion. He said that a short time ago the Lord Mayor received the king of kings, and much as the Lord Mayor had done, he had crowned all with receiving the Association, the members of which would feel that they were second only to the king of kings, after their reception in London. [*Cheers.*]

The motion was carried amid cheers.

Dr. SIBSON (London), moved—"That the cordial thanks of the British Medical Association be given to the President and Council of the Royal College of Surgeons, for their splendid hospitality in giving a reception at the College on the occasion of the forty-first annual meeting of the Association."

Dr. STEELE (Liverpool), seconded the motion, and reminded the meeting that, eleven years ago, the Association received the hospitality of the College, and then no one could have supposed the Association would prosper as it had. If the Association prospered as much in the next as it had done in the last ten years, they would need still more room than they had had this year.

The motion was carried unanimously.

Mr. CURLING, the President of the College, acknowledged the vote, and, in the name of the Council of the College, said they were glad of the opportunity of bidding the Association welcome.

Dr. AVELING (London) moved—"That the cordial thanks of the British Medical Association be given to the President and Council and the Medical Faculty of University College for their munificent hospitality, in giving a reception at the College on the occasion of the forty-first annual meeting of the Association."

Dr. BALTHAZAR FOSTER (Birmingham) seconded the motion. He said that the Association had shown in the other votes their thoroughly English gratitude for favours received; and now they were showing their gratitude for favours to come.

The motion was agreed to *nem. con.*, and was acknowledged by Mr. MARSHALL, the Dean of the Faculty of Medicine at University College.

Mr. CURLING moved—"That the warmest thanks of the Association be given to the Reception Committee, to the Local Treasurer, Dr. Quain, and to the Local Secretaries, Dr. Stewart, Dr. Henry, Dr. Wilks, Mr. G. Callender, and Mr. Ernest Hart, for their arduous labours in connexion with this most successful meeting." He congratulated the Committee on the successful termination of their arduous labours.

Mr. CADGE (Norwich) seconded the motion. He knew that most arduous labour had fallen upon the Committee. He had stayed during the meeting in the house of the Treasurer, and knew that the Committee on one occasion did not separate until three or four o'clock in the morning.

The motion was carried.

The Rev. Dr. BELL (Goole) moved—"That the warmest thanks of the Association be given to the President and members of the Metropolitan Counties Branch, and to the members of the Association in the metropolitan district generally, for their hospitable reception." He congratulated them upon the success of their work. He expressed the great pride he felt in the extension of the Association, of which he had been a member during thirty years.

Mr. A. BAKER (Birmingham) seconded the motion, which was carried *nem. con.*

Mr. ERNEST HART proposed, Dr. UNDERHILL (West Bromwich) seconded, and it was unanimously resolved—"That the warmest thanks of the Association be given to Dr. Edis and Mr. Waren Tay for their arduous labours in connexion with the excursions and the annual museum."

Dr. RISDON BENNETT (London) proposed, Dr. ROYLE (Manchester) seconded, and it was unanimously resolved—"That the cordial thanks of the British Medical Association be given to the Baroness Burdett Coutts, the Duke of Sutherland, the Duke of Wellington, the Marquis of Westminster, the Archbishop of Canterbury, Mr. Holford, the authorities of the National Gallery, British Museum, Woolwich Arsenal, and Post Office, the Committee of the Royal Botanical Society, Burlington Fine Arts Club, the Universities and Medical Clubs, Dr. Langdon Down, and others, who have granted special privileges to the members of the Association, and who have in consequence contributed much to the success of this the forty-first annual meeting."

Dr. A. P. STEWART proposed—"That the best thanks of this meeting be given to the Honourable the Society of Lincoln's Inn for the use of their hall for the dinner of the Association." He said that this was only the second time that the Benchers had lent their hall to a foreign body.

Mr. HECKSTALL SMITH seconded the motion, which was carried with cheers.

Dr. COPEMAN (Norwich) proposed "That the warmest thanks of the Association are due, and are hereby given, to Sir William Ferguson, Bart., for the ability and courtesy with which he has presided over this the forty-first annual meeting." [*Cheers.*] He said that it had been a great pride to the Association that the foremost surgeon of the day had occupied the presidential chair. Every one appreciated the way in which he had presided. It was a great responsibility for a man to have to be at the head of this large Association; and Sir William would wield the power he possessed as their head in the same way as he wielded the instruments peculiar to his occupation in daily life, for the good of the body on which he operated. [*Cheers.*]

Dr. GRAILY HEWITT (London) seconded the motion. He referred to the President's opening address, and said that if any of the Association had reason to find fault with the water of London, he hoped that they had none to find with the wine.

The meeting then rose, and carried the vote by giving three hearty cheers.

The PRESIDENT, who was loudly cheered on rising, announced to the members that he had received information that Mr. F. Buckland was ready to show his museum of economic fish-culture, at South Kensington. He then proceeded to thank the meeting for their vote, and to declare that the success of the meeting was not due to his exertions, but partly to their own determination to make the meeting a success, and partly to those who made the arrangements which gave them this magnificent building. He could not part with them without expressing his deep gratification at being associated with them on this occasion, which had been most brilliant, not only as regarded this Association, but the greatest meeting of the medical profession recorded in history; and, while they were all proud of it, he, as their president, was still more proud of it. [*Cheers.*] It was pleasing to him, too, to see so many young faces showing their ardour now in the profession; and he hoped those faces would live to see three, four, or five meetings in London, and would have an opportunity of contrasting them with this. There were some things which overgrew, and fell asunder by reason of their greatness; all would hope that the Association would strengthen as it grew, and flourish in its brilliancy for all ages to come. [*Cheers.*]

The meeting then closed.

THE DINNER.

The annual dinner took place in the Great Hall of Lincoln's Inn which had, by the kind courtesy of the Benchers, been placed at the disposal of the Association for the purpose. About eight hundred members had entered their names as being desirous of attending the dinner; but as accommodation could be found for only three hundred and fifty the Entertainment Committee were obliged to reduce the number. After providing places for the invited guests and the leading metropolitan and country members by balloting for the names of those to whom dinner tickets were to be issued. The chair was occupied by Sir WILLIAM FERGUSSON, Bart., President of the Association, and among the guests at the principal table were the Right Hon. W. E. Gladstone, M.P.; the Bishop of London; Professors Virchow and Langenbeck, of Berlin; Sir Edward Ryan; Sir Francis Grant, President of the Royal Academy; Dr. Paget, President of the General Medical Council; Dr. Burrows, President of the Royal College of Physicians; Mr. Curling, President of the Royal College of Surgeons; General Sir John Adye; Professor Bardeleben, of Berlin; Dr. For-dyce Barker, of New York; Dr. Noel Gueneau de Mussy, and Dr. Cusco, of Paris; Dr. Simon, of Heidelberg; Dr. Busch, of Bonn, etc.

The CHAIRMAN: Gentlemen, I propose to you as the first toast of the evening that which is the favored toast in England and all her dependencies, "the health of Her Majesty the Queen and that of the Royal Family." [*Cheers.*]

The CHAIRMAN: I have now to propose a toast which is always received with great enthusiasm on occasions like the present. We delight to do honour to those who give us those privileges which we enjoy above all other nations. We owe a debt of gratitude to our army and navy, and we never neglect to display this gratitude on occasions like the present. And we associate with that toast the auxiliary forces, because we feel that those citizens who have allied themselves with those forces give us an additional reason to consider that all this joy and peace which we have had so long in this land will be continued to us throughout our lives and the lives of generations to come. With these few remarks I propose to you the toast of the army, the navy, and the auxiliary forces, and in association with the toast I beg to give you the names of General Adye and Mr. Jolliffe Tufnell. [*Cheers.*]

Sir JOHN ADYE: My lords and gentlemen, I feel much honoured in being called upon to reply to this toast in the presence of so distinguished a company. The army during the last few years has undergone many great, and I may almost say momentous changes, and perhaps I may be allowed for one moment to refer to one or two of the more important. These are the abolition of purchase on the part of the officers, the localisation of the forces in districts, the system of short service, and large reserves, in lieu of the former one of long service and pensions. Speaking as an old officer I will say that these changes are in my opinion all in the right direction. They are being prudently carried out, and will tend to increase the efficiency of the army, and therefore add to the security of the country. With regard to the *matériel* of war our condition is eminently satisfactory; I believe our arms and ordnance, whether as regards their power, efficiency or simplicity, will compare favourably with those of any other nation. Therefore as an old soldier I feel convinced that should war unhappily arise the army will maintain its reputation in the future as it has done in the past. [*Cheers.*]

Mr. TUNELL: I know not, Sir, how it is that I am called to occupy the proud position of returning thanks for the medical departments of the army and navy. I have been for many years examiner in the Royal College of Surgeons of Ireland, where we rear for the public service and for the general service men who will do their duty by the public both in the army and the navy. They will do their duty to England, and I only hope and expect that England in its turn will do its duty by the medical officers of the army and navy.

The CHAIRMAN: The next toast that I have to propose to you is the toast of "the Clergy and the Ministers of Religion." In an assembly like this there is not a man who will not respond to the toast. We in our position in relation to the rest of society have the opportunity of recognising those bonds which hold society firmly united, and among such bonds there are none so strong as those which are formed by the gentlemen whose names are implied by the toast which I ask you to drink. I think it is a particularly graceful toast on our part, and we ought to feel gratified in the extreme that we have this public opportunity of testifying our appreciation of the gentlemen in question. We as a body of medical men feel proud of the position that we hold in society. It is our duty to administer the comforts that our professional aid will give to all members of society, and in doing so we can readily appreciate those comforts which are offered by the clergy to those who are in the extreme of distress. There is another reason why I think we ought to be proud of having the honour of giving this toast: it is to express individually and collectively the admiration we have for that profession that we are now about to toast, and believe that admiration is founded upon the best possible principles, and this gives us an opportunity of showing that we appreciate these principles, and that we among all classes of the community associate with all in paying our respects to that part of social society. It is often said with regard to men in our profession that we think less of these matters than we ought to do. [*No, no.*] I believe that there is no class of society that has a greater reverence for the Power which is revealed by the gentlemen to whom I allude, than the class to which we ourselves belong. I scorn the insinuation that we are men who feel less on those things than other classes. [*Cheers.*] On the contrary, I believe that we from our knowledge possess information which the rest of the community could scarcely be supposed to possess, and that we come nearer to the highest power that we all worship by having a knowledge of what that great Power has done in the development of medicine itself. [*Loud cheers.*] Gentlemen, if I were asked to give a short and emphatic proof of what I say and what I believe will echo in your hearts, it is the circumstance that we began our business this week under the dome of St. Paul's. We feel that a most friendly act has been done towards this Association by the authorities of St. Paul's, who expressed the greatest delight at the idea of seeing us there assembled to pay our devotions to the Supreme Being before we began our business. [*Cheers.*] I therefore propose to you the toast of "the Clergy," and in association with that toast I have the greatest pleasure in giving you the name of the Lord Bishop of London, who has honoured us with his presence. [*Loud cheers.*]

The BISHOP OF LONDON: In returning thanks, which I do most heartily and sincerely, for the clergy, you will allow me perhaps to take this opportunity of expressing my very great regret that I was not present at that service at the cathedral church of my diocese to which the president has just alluded. In point of fact I was not aware of its occurrence, and, had I been, professional duties in another part of the diocese would have prevented me still from being there. But it is difficult to conceive any occasion which can be more fitly inaugurated, I think, by solemn prayer and praise to Almighty God than when such an assembly as I see before me now is collected together,

not merely from Great Britain, but from other parts of the world, to consult together how best to mitigate human suffering, how best to repair the wonderful but delicate frame, the human body, how best to prolong, it may be, and strengthen the powers of enjoyment and usefulness of human life. This is not the time to detain you by theories, or one would be tempted to indulge in some considerations how the profession which you, sir, adorn, and that of which I have for so many years been a member, run together in such very parallel sympathetic lines. [*Hear, hear.*] But I keep entirely to the fact when I remember, to speak from my own memory, that among the many members of the medical profession whom it has been my good fortune throughout life to know and esteem, I know many who have together with their own peculiar work unconsciously as it were carried on at the same time the pastor's duty, men who have administered to the diseased soul as they have to the diseased body, men who have dropped a word in season that has touched a deeper evil than that which they were called upon to heal. Their unobtrusive example has preached louder sermons all the more powerful from the humility and unconsciousness with which they were delivered. [*Hear, hear.*] We have heard a great deal lately in the daily papers of the practice of auricular confession. Well, I take it that the family confessor in most of our families is the family physician. [*Hear, hear.*] But the physician has been so gentle, so discreet, so reticent, so wise, to whom are entrusted these secrets or sins of those to whom he ministers, and it seldom happens that they are entrusted to him without receiving benefit and the best of advice. Perhaps I may venture to claim for the clergy, although perhaps the claim will not always be admitted, that we, in our ministrations, if prudently and discreetly given, do tend to assist the curative processes which you gentlemen are so anxious to carry out. It is possible for a rash or an unskilled clergyman to injure by terrifying and by working on human fears, and I suppose it would be possible for a rash or unskilled surgeon or physician to do serious and fatal injury. But what I have observed myself in some degree, and what I have learned from the experience of others, is this, that the pastor's visit, if he really knows his work, if he uses it to soothe the conscience and to excite hopes of pardon where he feels there has been dangerous sin, has a tendency to quiet the tremors which interfere with the curative process, to inculcate patience, submission, and that gently lying in the hands of a higher power, which I believe you all find is the most favourable position for cure. [*Cheers.*] Thus it is that to some extent at least our work is intertwined, and when carried out on the principles which your chairman has so nobly enumerated to night they do go very closely together, and I trust that the time will never come in the history either of medicine or of theology when what God has joined together man should attempt to put asunder. [*Cheers.*]

Dr. FALCONER: My lord and gentlemen: amongst the many happy recollections which you have just thrown around the memory of this very successful and very useful meeting, none perhaps will cling to it more strongly than the recollection of the kindness that we have received at the hands of the Benchers of the Honourable Society of Lincoln's Inn [*cheers*]. Though perhaps we are not so closely associated with the sister profession as that of the church, still there are occasions, and melancholy occasions, when the God-given intellect becomes weak, when we become the handmaids to the execution and the administration of the law. These, though it may seem but weak points in our connection, are still associated in our memories. Besides, there are not a few of our profession who can boast of having been the fathers of some of the leading lights of the law. Our thanks, sir, are eminently due to the Benchers of this Hall, and with that toast I would associate the name of the Right Hon. Sir Edward Ryan, whose past history entitles him not only to our small meed of praise, but to the praise of the whole nation. I trust that he will receive from you the warmest thanks as the representative of the Benchers of this Society, and that he will take the earliest opportunity of conveying to them our warmest, our most cordial thanks for the kindness which we have received at their hands. There are other officers, I am told, connected with this Society, though not holding an equal rank, but who have still rendered their meed of assistance and have done everything possible to second the good feelings of the Benchers. I must not forget that there is another branch associated with this toast—the Bar—who are younger men, it may be, aspiring to the same position; and if in other years we may assemble here, they will recollect that we were not ungrateful for their kindness, and may extend a similar hand of friendship to our Association in time to come [*cheers*]. In the name of this great body, I would, through you, tender to the Right Hon. Sir Edward Ryan our warmest thanks and our high appreciation of the kindness of the Benchers of this great Society [*applause*].

Sir EDWARD RYAN: I beg to return you, on behalf of my brethren generally, the Bar of this Honourable Society and myself, my best thanks for the honour you have done me in drinking my health and that of my colleagues. I am sure it will be most gratifying to them when I inform them how much you have esteemed the kindly boon which they have granted in the use of this Hall for your most distinguished gathering. My brethren on the bench unfortunately are now dispersed, or in the course of breaking up. I regret it extremely, because otherwise you might have had the presence of some representative of the bench infinitely better able to return thanks than I am [no, no]. Still I will convey to them your feelings, and I am sure it will be most gratifying to them that this hall has been applied to such a worthy purpose [cheers].

Sir JAMES PAGET: I believe you are already aware that the toast which I have the honour to propose is "Health of Her Majesty's Ministers" [cheers]. The reason that toast has been committed to me I take to be because, more easily than most who are present, I can divest it of anything like a political meaning, for it has always seemed to me that in political science there is so much to be said upon many sides of most questions, that unless I could devote to it as much time as I had to devote to my proper calling, I could never come to any strong conviction on the subject. [Cheers and laughter.] I belong to no political party, and therefore my ignorance and indecision receive their unjust reward in having the honour put upon me of proposing this toast. I propose to you, gentlemen, the Health of Her Majesty's Ministers, but I think I may interpret all your feelings if I pass quickly from the many to the single [hear, hear], and propose to you the health of the illustrious chief of the cabinet [loud cheers], the man who has honoured this Association with his presence to-day, and will render this meeting more memorable than any that have hitherto been held. [Cheers.] It would be impertinence in me to recommend to you this toast. Let me remind you how perfectly the chief of the cabinet fulfils that which I suppose would be the ideal of a first minister of the crown amongst all Englishmen. Apart from political views, I can believe that if all Englishmen could join with one voice to say what should be the character of the chief adviser of the Queen—the chief guide of the affairs of this country—they would say he should begin his life distinguished in all academical pursuits. [Hear, hear.] He should be fond of the land and of the produce of the land, and yet he should find his recreation in the renewal of some of the severer studies of his earlier life. [Cheers.] He should be one very jealous of the honour of his country, remarkable for his knowledge of all the things most difficult in political science, and yet familiar with the merest details of every department of the State. Especially he should be skilled in finance. Then, doubtless, he should be a great orator, [Cheers.] He should be one ready alike for study and for debate, skilful in attack but unconquerable in defence. He should be a perfect master of the use of the priceless treasure of the English mind, the rich and various English language. Besides, the First Minister of the Crown, according to the imagination of all Englishmen, should have within his reach all the happiness that can be given by competency and wealth, by the most perfectly cultivated intellect, by admiration of nature and of art, and by all the happiness of home, and yet he should be ready to sacrifice all this in the service of his Queen and his country. [Applause.] He should believe that in that service he renders the best service to his God. [Hear, hear.] This is our ideal of England's First Minister of the Crown. Gentlemen, this is what England has. [Loud cheers.] While we render all honour to Her Majesty's ministers, let us drink, not separately, but as leading all, the health of Mr. Gladstone [applause], and let us drink it as I venture to think will be most pleasing to himself, without regard to his being in office. Whether in office or out of office he can never be otherwise than in power [applause], and power all the more felt because all men know that he never exercises that power except upon a thorough conviction that it is exercised for the welfare of the whole country. [Cheers.] You will drink his health with all honours. Let our cheers be so loud that, as we shall never forget his goodness in coming here, so he shall not soon forget our gratitude. [Cheers.]—[The toast was drunk with enthusiasm.]

Mr. GLADSTONE: Sir William Fergusson, my lord and gentlemen, I felt it to be a very high honour to receive an invitation to join your great professional gathering on this day. That honour has been enhanced by your being pleased to express in this toast your regard for the executive power in the hands and in the persons of Her Majesty's ministers, and it has received its crown in your committing the proposal of the toast to that distinguished member of your profession, to whom you have just been listening. [Hear, hear.] If Sir James Paget has well established his claim to political neutrality, I doubt if he has been equally successful in making good the case of his personal

impartiality. [Laughter.] He has laid upon me a debt which I would fain find myself able to pay, and he has also placed me in some embarrassment from which it is difficult to escape. But this view at least I take of his kind and eloquent speech, that in setting before you the picture of a true and worthy English minister he has held up to my eye a standard to which at least his speech will form an additional incentive and stimulus to lead me to endeavour to attain to it. Do not for one moment suppose that I could have mistaken the character in which the toast of Her Majesty's Ministers is received at a banquet such as this. I hope, and I have not a doubt, that I address many political adherents; but I do not address them in the character of political adherents; I address them as those who have done just honour to the highest authorities, the supreme authority, and to the great professions of the country, and who are not willing to omit from the list of their toasts those who represent what must ever be a great reality in our nation, namely the bearers of the executive power. For, gentlemen, it must not be forgotten that the executive power entrusted by the confidence of the Crown to the ministers of the day is a power as real as any other power known to the constitution. [Hear, hear.] It is not, and God forbid it ever should become an independent power. On the contrary it lies within the will of the two Houses of Parliament, and especially of the House of Commons, to determine to what hands it shall be entrusted; but when the trust has been given those who have perhaps aspired, but at any rate consented to receive it are responsible for the discharge of the trust to something higher even than any Parliament or any assembly. [Hear, hear.] They are responsible to their Sovereign, to their consciences, to their sense of right, to the general verdict of the people, to the ultimate judgment of posterity, and it is no sufficient warrant for doing wrong on the part of the executive Government to say that it was the will of the House of Lords or of the House of Commons. [Hear, hear.] I feel that that Government which I represent has at least not passed a stagnant existence. It has considerably outlived the average of governments, and perhaps the state of active exercise in which we have for the most part existed has been healthy to our constitutions. [Cheers.] However that may be, there may be those among you who think that we exhibit signs of decay. [Laughter.] It is not for me to pronounce whether this is or is not the case, nor to say the truth, is it with me a prime subject of my anxiety. My own desire as I trust, and the desire as I know of the distinguished men and political friends with whom I am associated, is not so much that our tenure of power should be unusually long as that while it subsists it should be honourable, and when it passes away it shall leave behind it no bitter memories and some record of good accomplished. [Loud cheers.] Above all I trust it will not be open to any of those who may hereafter criticise its acts to say that it has been neglectful of its primary duty in maintaining the dignity and credit and authority of those who are charged with the high functions of administering the affairs of this great and extensive empire. [Cheers.] But I must own that in coming here I had in view a purpose different from that of merely acknowledging, however well pleased I am to acknowledge, your kind feeling of respect towards my colleagues as the bearers of the trust of the executive power. I came here to acknowledge the debt of gratitude which I think society owes, but which at least I feel that I individually owe to this distinguished profession—[Cheers]—for I am very well aware that, had it not been for the care and watchfulness of a succession of able medical advisers, it would have been totally impossible for me, not gifted with any special gifts or any special endowments either of mental or of bodily endurance, to go through the fatigues of a political life of forty years. I am deeply indebted to those gentlemen whose names I might recall, and regret to say several of them are numbered with the dead; and it is, sir, among the noble and mournful distinctions of your profession, that it will ever be remembered how many of its members, although they have not that acknowledgment which follows the soldier when he falls upon the battle field, how many of them, ay, countless numbers, are true martyrs of humanity, exhausting themselves in a ceaseless unnoticed anxiety for those whose sufferings they seek to alleviate, and with all whose cares and all whose pains they deeply sympathise. [Cheers.] To all these gentlemen, and to one distinguished member of your profession sitting at this table, I feel a gratitude which I am glad to have the opportunity of recording in these few passing words. But let me say a few words, sir, also on the subject of your society and on the subject of your illustrious profession. I believe this society to be genuinely representative of this great profession in its several branches of physicians, of surgeons, and of general practitioners. [Hear, hear.] I believe it represents your tendencies to unity and your upward aspirations; aspirations upward, not in the sense of augmenting your well-earned and hardly earned emoluments, but of augmenting your unity, augmenting your knowledge, augmenting your true dignity, and your

claims upon society. [*Hear, hear.*] I rejoice then to think that in the prosecution of this work you should have been enabled to blend in one what were once the conflicting or alien, or at least unacquainted elements of the town and the country profession; that you should have been able to do so much for promoting beneficent sanitary legislation—[*Hear, hear.*—] and for ministering in so many ways to the good both of individuals and of the country. But, gentlemen, permit me to say that if I am right it is more interesting to review the recent history of your own profession than that of some of the great professions of the country. The great profession of the law, with which to-night you have had the opportunity of placing upon record in terms of gratitude your kindly relations,—that great profession of the law has ever borne from the earliest period of our history the high place which it now bears as one of the most essential conditions of our national life, and of the great safeguards of the country; but it has been given to you, gentlemen, I think, to achieve within the memory of living man a degree of real improvement and real advancement, such as has perhaps hardly accrued to any other profession. [*Cheers.*] It would be presumptuous in me or in any one not belonging to your ranks to presume to pass a judgment upon the scientific excellence of the physician or surgeon of to-day and the physician or surgeon of fifty years ago, and I am aware that fifty years ago as well as a hundred and a hundred and fifty years ago and more, there were physicians, and there were surgeons whom as I believe none of you can either hope or desire individually to surpass. [*Hear, hear.*] I speak now of the body of the profession, and not of the few, the elect and favoured children of fortune and of skill; and speaking of the body of the profession even as an observer from without, it is impossible for us not to notice the change, it is impossible for us not to see how far more strongly now than of old the medical man of to-day conforms to those general laws of common sense and prudence, which are after all universal laws of human life in every one of its departments. It is impossible not to see his greater and more sustained earnestness of purpose, that elevated sense of his professional dignity, that desire to make it subservient to the good of humanity, that general exaltation of his aims in the exercise of the profession. And, gentlemen, in every way, as it seems to me, the course of affairs tends to show that this process will continue. Your position has long been, and I think must continue to be, one of constantly increasing influence and power. [*Hear, hear.*] Never in my life but once before had I the honour of addressing a medical assembly; it was at the Middlesex Hospital, on an occasion when the distinguished staff and the pupils connected with the hospital were assembled, and I think then, some thirty years ago, I ventured to express to them the same opinion, that both they and their profession had before them a rapidly opening and extending career. [*Cheers.*] And I think so, gentlemen, for this reason, that this age is distinguished by an unbounded activity in all the sciences of observation, and that of all the sciences of observation conversant with material things yours is the noblest. [*Hear, hear.*] For if there be a danger it seems to me in regard to the classification of pursuits which besets us at this time it is this, that we are sometimes too apt to forget that man is the crown of the works of the creation—his soul and mind in the sphere unseen, his body in the sphere of that which we see of that marvellous body, that many-voiced instrument, so attuned to the wants and purposes and capacity of the soul by which it is inhabited, you are the observers—you observe it not merely in the heyday of youth and health, you observe it in grief, in pain, in care, in agony, under pressure in every varied form. It is given to you to have opportunities such as are perhaps given to none others of studying the relations between the wonderful body and the yet more wonderful mind and soul of man. You tread upon the border land in which the two come into contact one with the other. And, gentlemen, it is very difficult to know how we are to treat those sanguine and I think often hasty estimates which we find too often formed about human progress. Human progress is a subject not to be described by a formula. You cannot dispose of it by saying that we are wiser than our ancestors because we have all they had and we have something of our own besides. Neither that nor any other formula will dispose of such a subject or solve the problems which it suggests. The nature of man is a deep, a wonderful, an unfathomable thing. It may be going forward in this while it recedes in that. It is very easy to describe the progress of the post-office or the progress of the railway system, or the increase of the steam navy, or the gradual conversion of the armaments to which we trust for our defence, but you rise into a higher region, and you have to deal with a more subtle and intangible subject-matter when you attempt to grasp human nature as a whole. The true way to come at the understanding of it is by those patient observations on which alone sound and comprehensive knowledge can be founded; and you, gentlemen, are happy if amidst your incessant cares and that combination of bodily with mental labour which

I fear too often presses you hard, you are enabled to devote your minds in some degree to this subject of such marvellous interest and marvellous capability which continually opens itself before you, and which assures to you, both collectively and individually, that as the *physicus* of the middle ages on his first appearance established his place among the great branches of learning and of human culture, so from age to age he will more and more vindicate his title to perhaps a yet higher place in the more noble emulation in which he has ever stood with the great professions of society. To you, gentlemen, it belongs to accept the great opportunities and the great responsibilities which are open to you by your noble calling. I owe my personal debt to the care and skill of some of your most distinguished members, and fervently and earnestly do I trust that you may be worthy of the vocation with which you are invested, and more you cannot be, and may at once be ministers of healing and ministers of knowledge and truth. [*Loud cheers.*] I have now to ask you to drink with all the enthusiasm which it deserves, "Prosperity to the British Medical Association"—[*cheers*]—associating with the toast the name of Mr. Southam.

MR. SOUTHAM: Mr. President, my lord and gentlemen; having been present on former occasions when the toast of the British Medical Association has been proposed, I know that it has always been received most cordially, but I never remember an occasion when it was received so cordially as on the present one. We must give some credit for the enthusiasm with which it has been received to the distinguished orator who has proposed the toast. I shall not occupy your time after the eloquent manner in which the toast has been proposed; but I may be permitted to state, for the information of some strangers present, that this Association has been now forty years in existence, that it has steadily increased in influence, and I believe it has now obtained such influence that no question of a medical character coming before Parliament has a prospect of obtaining the sanction of the legislature unless it meets our approbation. How has this influence been obtained? By steadily keeping in view the principles on which the Association is founded. Amongst these principles are included the maintenance of the honour and respectability of the profession, and the contributing to the sanitary condition of the community. I have been requested to propose a toast, namely, "the health of our President." [*Loud cheers.*] In proposing this toast, permit me to say a few words. At the conclusion of our annual meeting at Birmingham, we were without a home for the first time since the Association has been formed. Many towns wished to invite us, but the sumptuous manner in which we were received at Birmingham led them to shrink from the undertaking. It struck me that this was the time to cement the friendly feeling which eleven years ago was established between the profession of the metropolis and of the provinces. I therefore communicated with two or three influential members of the Metropolitan Counties Branch, amongst the number our esteemed president Sir William Fergusson, and they cordially received the proposition to hold the meeting in London, and it is due to them that we are here to-day. As President of your Council I may have been guilty of many deficiencies, but I do not think I have been guilty of a deficiency in suggesting that this meeting should be held this year in London. [*Hear, hear.*] With regard to Sir William Fergusson, it is useless for me to make any observation or to say a word in his praise. His name is among the most eminent of British surgeons of this age as a household word. I will not speak of the manner in which he has discharged his duties as President of this Association, and the urbanity of manner and the kindness of heart with which he has received everybody entitles him to our warmest thanks. I therefore propose to you the health of our President and long life to him. [*Loud cheers.*]

THE CHAIRMAN: I have so recently offered you my thanks for the honour which you have conferred upon me by electing me your President for this season, that I do not deem it incumbent upon me to offer my thanks a second time in any formal manner; but as this is a scene of festival, and as you are on the present occasion referring to me perhaps as much in the chair that I occupy this evening as in the position of your President for the year, I beg to tender you the thanks which I most cordially feel in my heart for the honour that you have done me this evening by drinking my health. I assure you that I feel deeply the honour that has been conferred upon me. This is one of those sort of things that can only befall a man once in his lifetime. It is said that some men are born to honour, others achieve honour, and some have honours thrust upon them. I suppose it is my fortunate lot to have had this honour thrust upon me. [*No, no.*] I assure you that, if there be any significance with reference to the term "thrust", I am most agreeably touched by the thrust that you have put upon me. It is a proud position for any man to occupy, and, as I have already said on another occasion, it is one of those

posts that no man would possibly aspire to or anticipate in any ideas that he may have had with regard to his progress in the early years of life in anticipating what might befall him. Gentlemen, I shall not dwell longer on this topic, but I shall ask you now to do one of the duties of the evening, which I am sure you will feel a pleasure in doing, that is to drink to the prosperity of the great medical corporations of this country. [*Cheers.*] I believe that we cannot as yet call ourselves a corporation, and there is I believe a great anxiety on the part of some members of this Association that it should become a corporation. Well, if it does become a corporation—and I have little doubt that it will, with the enthusiastic views that I see entertained on the subject—it will then appear that this perhaps is one of the largest if not the largest corporation, although it may be the youngest. Now I think it is always a beautiful thing in social life to see the young having a proper respect for the aged. It is a matter of history that almost all things do come to an end; and even corporations, although they have a wonderful tenacity of life, will come to an end. Now supposing we become incorporated, we shall just be as it were really at the beginning of our corporate life at all events, and it would be most respectful on our part, as I know it will be felt respectful on our part at the present time, that we should bear in mind all the good that has come to the general mass of the profession out of our corporations. [*Hear, hear.*] Whatever objections there may be to sundry features associated with them, we must all feel this, that for many centuries these corporations have guided the conduct of the profession at large in this country, and even to this day many of these corporations live and prosper and show as much vitality as the most sanguine among us here hope that our Society will display some three hundred or four hundred years hence. Without dwelling longer upon this toast, I shall ask you to permit me to join in association with it the name of a gentleman who is one of the most distinguished of this Association, that gentleman who so ably presided over your deliberations some eleven years ago. [*Cheers.*] And whether you take Dr. Burrows as the representative of the medical corporations, or look at him as a representative man in our profession irrespective of any corporation, or again take him as representing one of the most revered of our old institutions, the College of Physicians of England—in whatever view we take him I am sure that individually you will be pleased to drink the toast—in the collective capacity in which I am placing it you will be still more pleased, and I therefore ask you to dedicate this bumper to our friend Dr. Burrows as representing the corporations. [*Applause.*]

Dr. BURROWS: Mr. President, gentlemen, and brother associates, it may appear an easy task to return thanks for such a toast as that which has just been given from the chair, inasmuch as all of us are, with the exception of the distinguished visitors who sit at this table, members of one or other of those corporations, and some of us probably members of more than one. It is difficult, I say, to return thanks for this toast, because we are all more or less interested in the toast, and by receiving the toast we are, to a certain extent, receiving a compliment to ourselves. However, the toast has been received kindly and cordially, and I must infer therefore that the sentiments which were expressed from the chair are sentiments to which this Society thoroughly responds. I am sure, speaking for the corporations individually, all in this room must admit that we have a large debt of gratitude to pay to one of those corporations, I mean the Society of Apothecaries, who ever since the year 1815 have had confided to them the administration of an Act of Parliament, and who have performed the duty in such a manner that they have progressively improved the condition of the whole profession. [*Hear, hear.*] The stimulus given to medical education by the body half a century ago has since pervaded all other ranks of the profession, and it has had that admirable effect upon it generally which has been so eloquently, so ably, so kindly and generously adverted to by the Prime Minister in his speech. We owe a debt of gratitude also, and I am sure we acknowledge it in accepting this toast, to the Royal College of Surgeons. It is impossible not to feel a debt of gratitude to the great and noble institution for the manner in which they have cultivated the great sciences of anatomy and physiology, upon which are founded all sound medical knowledge, the generous and spirited manner in which they have maintained that great museum, the pride of England, the Hunterian Museum. They have not only maintained that which was confided to them by the legislature, but they have, by a lavish and yet, at the same time, by a prudent expenditure, augmented and increased the value of the great collection which has become the pride of the country, and one of the objects that all men of science throughout the world are anxious to visit. We owe them I say therefore a great debt of gratitude for what they have done to uphold medical science in this country. Our Association at the present moment are

also deeply indebted to them for the kind and hospitable reception that they gave us last night. [*Cheers.*] I have now to speak of the ancient and learned body over which I have the honour to preside, the Royal College of Physicians of England. I think all who look back into the history of our profession must acknowledge that for three hundred and fifty years the College, by the presence of its Fellows, have maintained the learning, the science, the dignity and social position of our profession, and I do not hesitate to maintain that the social position of the English medical profession would be very different in the present day if we had not had in the Royal College of Physicians a long succession of men who are eminent for their learning, their science and their great social qualities. I believe that the Royal College of Physicians is not unmindful of its present position; and although upon the present occasion the College of Physicians has not been able to show our Association the same courtesy, the same hospitality as they did on a former occasion when you did me the great honour to elect me your President, and when, in co-operation with my revered and I believe reverend friend, Sir Thomas Watson, then President of the College, we did all we could in our power at our last meeting in London to promote the success of the meeting. Circumstances have recently occurred which have placed the Royal College of Physicians for a time in a wrong point of view. From an unfortunate accident, the miscarriage of a letter, feelings were engendered and misunderstandings arose between the governing body and the College of Physicians and the executive of our Association. Through that most deeply to be deplored and lamented accident the Royal College of Physicians was prevented doing that which they would have been glad to have done. [*Hear, hear.*] I do not mean to say that the Royal College of Physicians could upon the present occasion have done for the Association what they did upon the last occasion when we assembled in London. Upon that occasion the College of Physicians placed at the entire and unrestricted disposal of the Association their College—they surrendered the College for a whole week to the unrestricted uses of the Association. Gentlemen, that could not have taken place a second time. The glorious success, the rapid augmentation in numbers of our Association quite preclude the possibility of admitting such an Association as we have now within the walls of the Royal College of Physicians. Unless some of you, younger and more clever than I can pretend to be, could accomplish the wonderful feat of condensing into the same cubic space two or three solid bodies at the same time, it would be utterly impossible for us to have received within our walls, whatever our wishes might have been, such an Association as this. We have seen, even in the largest reception-rooms of the metropolis, that numbers of our friends who have come very far have unfortunately been excluded, from the pure want of space. Therefore I hope you will feel it has been no want of cordiality, no want of interest, no want of continued interest in the welfare of this Association which has prevented the Royal College of Physicians from doing for you this time what it has done in former times. If you have the memories that I have, if you can look back upwards of thirty years when I joined this Association as a member, when we assembled in the provincial town of Worcester under the presidency of my friend and relative, Sir Charles Hastings, the founder and leading spirit of our Association—I say if you look back to that time, our proportions were small, our mode of proceeding was modest, and our aims were as noble as those which now actuate it. Then the provincial members of our profession had but few opportunities of meeting together and consulting as to their common interests, and stimulating one another to general improvement. But from that time forward successive swarms went out from the individual hive, each forming different centres, and at last it came to this, that the Provincial Association merged into the British Medical Association, and then it was that you did me the great honour when you came to London to make me your President. I entertain the most lively recollections of the honour you did me, and I trust I shall carry my feelings of gratitude to the grave. As I am myself drawing to the conclusion of my own professional career, so also I am coming to the end of my speech; and as you know Persian ideas have been very prevalent in the minds and habits of this metropolis for some time past, I venture in making my final salaam to make use of a Persian expression, and, saluting you as a body, to say, "May your shadows never grow less." [*Cheers.*]

Mr. ERNEST HART: Were these walls as expansive as our hospitable desires, the guests whom we have desired to include in our invitations would have been at least as numerous as the whole company now assembled, and we who are assembled to greet them would have been not less numerous than the whole number of those who have assembled within the walls of King's College during the last three days. Though our guests might have been more numerous they could hardly be

more distinguished or more eminently representative of all those qualities and those kinds of eminence, those forms of corporate activity and of national character and capacity which hold a high place in our admiration and our affection. We are honoured by the presence of representatives of all the great professions, sisters to our own. We are honoured by those who represent art, law, letters, and arms, and I have to ask you at once to allow me to propose to you "Our guests," that your acclamations may by action endorse the expression of the welcome which you authorise me to give to them. The association of the arts with medicine is personal, enduring, and illustrated by illustrious examples from the days of Da Vinci down to those of Milne. Illustrious physicians have rarely wanted illustrious painters to hand their lineaments to posterity, and if medicine has failed to furnish a like immortality to artists, it has at least supplied them with friends, consolers, assistance in their hours of pain and sadness, as well as with warm and constant friends in all their social pleasures. I propose to you, then, as one of our guests, the name of Sir Francis Grant; and since many nations are represented among our guests, I am authorised to add to it, as representing Germany and German medicine, the name of the illustrious Virchow, foremost in the senate, foremost in the halls of science, a leader in the art of life, at this moment the first promoter in Germany of the great branch of state medicine, which aims at the prevention of disease, the bearer of the name destined to be read so long as pathological science endures, and so long as its history is ineffaced. And since France is represented by many of her most distinguished and most able sons I add to the toast the name of Noel Gueneau de Mussy, who unites all the great qualities which has placed France in the van in practical and scientific medicine, the clear thinker, the able clinician, the accurate and sagacious observer, the eloquent and unfailingly impressive orator. Our own colonies and the United States of America are well represented. We hail the rising sun of science, already high above the horizon which bounds the spreading sky of the great continent. We welcome our cousins from America, we welcome our brethren from Australia and from Canada, and if their name comes last in the toast it is perhaps because we feel them to be less strangers. They, although coming from afar can hardly fail to feel themselves here at home. I drink then, and I ask you to drink, to the health of "Our Guests", and with the toast I couple the names of Sir F. Grant, Professor Virchow, Dr. Noel Gueneau de Mussy, and Dr. Fordyce Barker of New York.

SIR FRANCIS GRANT: Since you have done me the honour to connect my name with the guests who are here to-night, I beg to say that if they have enjoyed this evening as much as I have done, they will have reason to be grateful to our generous hosts. Gentlemen, as President of the Royal Academy, I can only express my regret that this distinguished company had not assembled before the exhibition of the Royal Academy closed, because I feel sure the members of the body to which I belong would have had great pleasure in showing some testimony of the respect and admiration which they entertain for the medical profession. I beg to acknowledge the many friendly acts which we have received from time to time from the medical profession, and I believe our artistic body heartily reciprocate the friendly sentiments you have expressed towards us. [Applause.]

PROFESSOR VIRCHOW: Mr. Chairman and gentlemen, in availing myself of the privilege of thanking you in the names of my German colleagues for the kind and warm words that we have heard, I am sure that I rightly interpret the feelings of all my countrymen present, and perhaps I may say of those who are not present, if I say that the active and fertile manner in which British medicine develops itself in every direction makes the deepest impression upon our minds. For many generations our two nations have been united in warm sympathies on all questions touching the highest interests of the community, and each step in the path of progress, whether in politics or science, finds a hearty response in our nation. There is no country in the world where your mighty initiative in works of public health finds such admirers as in Germany. [Cheers.] Then, gentlemen, after all those beautiful, those grand and interesting things which you have given us an opportunity of admiring, that which affords us the greatest pleasure is the cordial reception we have met at your hands, and that which calls forth our greatest admiration is the harmony which unites all the members of the medical profession in your country, and the continuity of progress which for centuries has characterised the history of British medicine. [Loud cheers.]

DR. NOEL GUENEAU DE MUSSY: My lord and gentlemen, I want and claim your indulgence, speaking a language with which I am unhappily but very little acquainted. I hope that, if my expressions are not right, you may be certain that my feelings are not wrong. I speak in the name of all the French physicians here present. We are deeply moved and very honoured by your generous, genial, and

unmatched hospitality. We feel it more than I can express. Certainly science does not care to know the frontiers and the limits traced between men by political interests. Science, like the splendour of the firmament, speaks the language of all nations, and it calls together all its servants and lovers in one single army for the conquest of the truth. But it seems to us that in this very kind and very cordial reception of the French physicians, there is something else—a cosmopolite benevolence; and that our two nations, already connected by blood and by a common origin, are more closely united when the moral and material progress of the human kind is concerned. We thank very heartily the English physicians.

DR. PAGET: Mr. Chairman and gentlemen, I have been honoured by being asked to propose a toast. It is the last toast of the evening, but it is the most comprehensive. It includes—"The Reception Committee, the Officers of Sections, and the Local Secretaries." I am informed of our excellent rule, that the proposers of toasts are allowed five minutes, so that I have about two seconds for each gentleman. Let us then drink, at all events, worthily to the Reception Committee, for to them you owe more than to any others, the grand success of this meeting. You owe to them also, most of the great enjoyments of this meeting. And then come the Presidents and other officials of the Sections. It is they that have conducted the work of the meeting: Dr. Sibson, Mr. Hilton, Dr. Braxton Hicks, Dr. Lyon Playfair, Dr. Harrington Tuke, and Dr. Humphry. They have been doing the real work, which, after all, is the main business of this society, though one is not in a position just now to disparage the enjoyments of it. And then the local secretaries: I cannot spare unfortunately half a second for them, although every one of them, if he had his due, would have the whole five minutes of commendation. But I must associate some name or names with this toast, and from most of the gentlemen associated with it the Association has already derived advantage in the way of speeches, from all except the members of the Reception Committee. Now they have been put to inconveniences without end,—the Treasurer, Dr. Quain, the Local Secretaries, Dr. Stewart, Dr. Henry, Dr. Wilks, Mr. Callender, and Mr. Ernest Hart. I know, as a matter of fact, that these gentlemen have given, not merely the hours of day, but the hours of the night, to provide a suitable reception for the members from the country. The very success of their endeavours in making this meeting so attractive, has become to them an embarrassment. We all know, it is a matter of common observation, the embarrassment of riches—I mean as a matter of observation of our neighbours, but the embarrassment of success is a real embarrassment. Let us therefore drink to the healths of these gentlemen. They reckoned upon only about double the number of ordinary members attending this meeting; you must add a thousand to the number they reckoned, so as to make up the number that their attractive programme has brought here. I am at liberty to associate two names with this toast, and they are well chosen, for both of them are men who will stand as representatives for the kindly feeling of the whole of this Reception Committee. Both are men whom you regard and esteem, and for whom those who know them best have the highest esteem, and the warmest regard. I mean Dr. Quain and Dr. Stewart. [Cheers.]

DR. QUAIN: In thanking Dr. Paget and you, gentlemen, for the manner in which this toast has been proposed and received, I will not attempt to occupy your attention beyond a very few minutes. I have been requested, as President of the Metropolitan Counties Branch and as Treasurer of the Reception Fund, to undertake this duty, which, I feel convinced, would have been more efficiently performed by more than one of the many gentlemen present on this occasion. [No, no.] Compound, so to speak, as the toast is, I have to represent the scientific and the social elements provided for the instruction and for the comfort of our guests. Representing the scientific element, I have nothing for which to apologise. All have been pleased with the deeply thought out, the brilliant addresses to which they have each day listened, and with the variety and the excellence of the memoirs read in the several sections. [Cheers.] But, when I come to speak of the social element which I have to represent, I feel that the few minutes will not suffice for the apologies which I ought to offer. No one is more conscious than I am of the inconvenience which was felt by many of the visitors. But I must beg you to remember that, when, in private life, a host announces an "at home," he is enabled, by the answers he receives, to estimate the number of guests whom he may expect, and to prepare for them accordingly; but, when the metropolitan members issued their card of invitation, they received 800 or 900 welcome affirmative responses, and, behold, more than 2,000 guests followed. [Hear, hear.] It was impossible, under such circumstances, to provide adequately for all. Many times during the week I remembered the wish of the witty Irishman, who desired to be

a bird, that he might be in two places at once. [Laughter.] On this occasion, that was not our wish or our want; on the contrary, it was to be enabled to put half a dozen people in the same place at the same time, without inconvenience to any. I assure you that the Reception Committee have worked zealously and cordially, and without intermission, to secure the comfort of their guests; while the members of the Association in the metropolitan district have contributed to the reception fund with the most ready liberality. [Cheers.] I feel that, on the whole, the meeting has been a great success. Does not, then, a meeting like that of this evening make amends for some shortcomings? Assembled, as we are, in this noble hall, the use of which has been given us, almost without precedent, by the Benchers [Applause]; graced, as the entertainment is, by the presence of the head of Her Majesty's ministry, of one of the heads of the Church, of eminent lawyers, of distinguished foreigners, of those equally distinguished from various parts of our country, and last, not least, by the heads of colleges and corporations—[Cheers]—there are abundant reasons why the Association should be well pleased with the position which it has acquired, and must look thoughtfully now on the position which it has to maintain. For myself, I gratefully acknowledge the manner in which this toast has been received; and, as a very old member of the Association, I cordially acknowledge the courtesy which I have received from many members of the Association during the present meeting. Having suggested the idea of the first meeting held in the metropolis, and having taken an active part in the preparation for the second, I feel great interest in the result. I feel that, in spite of agreeable surprises, in spite of all difficulties, the meeting has been a great success. I feel that such a meeting must make an epoch, not only in the history of our Association, but of our profession; it must suggest ideas of unity and of power, alike beneficial to ourselves and to our race. In conclusion, I hope that those for whom I speak on this occasion may be all spared to bid again a welcome to their friends. [Cheers.]

EXCURSIONS.

ON Saturday, August 9th, parties of the members made excursions to Brighton, Windsor and Cliefden, and Hampton Court.

BRIGHTON EXCURSION.—The lovely weather of Saturday did not fail to draw a large number of the members of the Association to Brighton. It was a perfect Brighton day. It is difficult to estimate the number of members and their ladies who arrived from London, as many who had friends in Brighton did not join in the festivities of the day at the Grand or Ship Hotels. But they cannot have been much under two hundred. Amongst the number were Professor Bardeleben of Berlin, Professor Buoch of Bonn, Mr. Henry Dunant of Geneva, Professor Lazarewitch of Kharkoff, Dr. Wiener of Vienna, Dr. Larcher of Paris, Professor Gairdner and Dr. Wilson of Glasgow, Drs. Mapother, Roe, and Morgan of Dublin, Professor Sharpey of London, Dr. Nankivell of Torquay, Mr. West of Birmingham, Mr. Allen of Norwich, Dr. Whittle of Liverpool, Dr. Procter of York, etc. By the kindness of Mr. Scott, Curator of the Museum, Mr. Abbey, Chairman of the Directors of the Pavilion, and Sir John Cordy Burrows, one of the Directors, and Mr. Smith, the Manager of the Aquarium, special facilities were afforded to the members for visiting these buildings. The object of special attraction was doubtless the Aquarium, which presented a marked improvement on former days. Mr. Lee, the Naturalist, kindly explained many of the objects of interest in the tank. At three o'clock the members and ladies, to the number of about one hundred and fifty, adjourned to the Grand and Old Ship Hotels, where excellent dinners were provided by the liberality of the metropolitan members. At the Grand Hotel, the sole toast, that of "The Metropolitan Members," was proposed by Dr. Whittle of Liverpool, who expressed the warm thanks of the provincial members for the princely hospitality extended to every one who had come to London. Their kindness had crowned with success a meeting long to be remembered as one of the most brilliant scientific gatherings which had assembled in the metropolis, and perhaps the most brilliant in the history of the medical profession. Dr. John Murray of London, who occupied the chair as one of the secretaries of the Excursion Committee, responded, and expressed the satisfaction which the metropolitan members and the Committee had felt in being able to do something for the amusement and comfort of their provincial friends. The enormous and unprecedented influx of provincial and foreign members of the profession into London had somewhat disarranged the plans of the Committee; but they had done their best to meet the unlooked for pressure. He hoped, therefore, that those present would excuse any deficiencies or imperfections in their arrangements. At the Old Ship Hotel, the second party of ladies and gentlemen were served with an excellent dinner. On the motion of Mr. West of Birmingham, seconded by Dr. Thompson of Leamington, Dr. Aveling of London was voted to the chair; and under

his presidency everything passed off in a happy and satisfactory manner. No toasts were proposed at this repast. At the conclusion of the entertainments, the members dispersed—some to return at once to London, others to enjoy still further the invigorating breezes and the attractions of the pier and promenade. A third and unofficial party was entertained at dinner at the hospitable board of Sir John Cordy Burrows.

WINDSOR EXCURSION.—On Saturday, by special permission of Her Majesty the Queen, through the kindness of Sir John Cowell, about 250 members of the Association visited Windsor Castle. Mr. Holmes, the chief librarian, and Mr. Seabrook, together with an efficient staff of guides, conducted the visitors through the long corridor, the state and private apartments, the chapel, and showed the royal collection of gold plate, the kitchens, etc. Professor Virchow, of Berlin, and numerous other distinguished visitors were of the party. Dr. Fairbank, who had been instrumental in organising the excursion, very kindly acted as *cicerone* in conducting the visitors through the gardens and terraces, the dairy, the home-farm, and other places of interest in the grounds. After lunching at the Castle Hotel, the party proceeded by train to Taplow, and embarked in shallops and skiffs provided for their accommodation, traversing one of the most picturesque portions of the Thames, as far as Cliefden, the seat of the Marquis of Westminster, where, after enjoying the magnificent view from the terraces and grounds, the party returned to Maidenhead Bridge, and partook of dinner in a large marquée at Lewis's Hotel, to which Her Majesty the Queen contributed a buck from the forest at Windsor. Mr. Curling, President of the College of Surgeons, occupied the chair, and was supported by Dr. Denham of Dublin, Mr. Hey of Leeds, Dr. Falconer of Bath, Dr. A. P. Stewart of London, Mr. Tufnell of Dublin, Mr. Watkin Williams of Birmingham, Dr. Gibson of Newcastle, Dr. Thomson of Dalkeith, Dr. Matterson and Dr. Jepson of York, Dr. Leeson of Bradford, Mr. Marsack of Tunbridge Wells, Dr. Fairbank and Mr. Holmes of Windsor, Mr. Fowke, and numerous others. The toast of "Her Majesty the Queen," who had most kindly thrown open all parts of the Castle to the members of the Association, as well as that of "the Prince and Princess Christian," who had done much to facilitate the visit, was responded to in a most loyal and enthusiastic manner. The Chairman proposed "the health of Dr. Fairbank and Mr. Holmes," who had spared no pains to contribute to the day's enjoyment. The toast of Dr. Edis, the indefatigable Honorary Secretary of the Excursion Committee, to whose efforts the success of the day's excursion and the general management of the excursions has been mainly due, was received in a most enthusiastic manner. Dr. Edis briefly responded, thanking the members for the kind way in which they had expressed their appreciation of his efforts, and assuring them that he was more than repaid for any trouble he had taken by the handsome manner in which they had received the toast. After the health of "the Foreign Visitors" had been given and responded to by Dr. Sell, of New York, in a brief but humorous speech, and the health of "the Chairman," who had presided so efficiently on the occasion, had been given and acknowledged, the party broke up and returned to town by a special train provided for them.

LAMBETH PALACE LIBRARY.—The Archbishop of Canterbury having kindly permitted this rare library, with other parts of the palace, to be visited by members of the British Medical Association during their Congress in London, about eighty of the members availed themselves of this privilege. After having examined the Library, known as "Juxon's Hall," with its noble gothic roof, and containing nearly thirty thousand volumes, the courteous Librarian, Mr. S. W. Kershaw, M.A., explained the choice illuminated MSS., which in reality are the "art treasures" of the collection. The Librarian then conducted the members to the guard room, where the portraits of the archbishops, including those of the famous Laud by Vandyke, and of Warham by Holbein, were much appreciated. So interesting a series of distinguished prelates, each telling his own historical story, in bygone events, elicits a peculiar interest to be equalled in few art-collections. The private apartments overlooking the spacious grounds, from which are visible the historic towers of Westminster, and the modern structure of St. Thomas's Hospital, were next visited. The chapel, a beautiful specimen of early English architecture, deteriorated only by the ill-placed Renaissance screen erected by Archbishop Laud, was very much admired. Lastly, the visitors ascended the winding staircase to the Lollard's tower, where the prison in which these unhappy victims were confined was shown. This dungeon is as famous in religious history as many other more noted places, and is among the most remarkable of the group of buildings that surround the historical pile of Lambeth Palace. We wish to add that the Library is open to all students and literary men every Monday, Wednesday, and Friday, from 10 to 3 P.M.; and that, by the liberality of the Primate, permission to copy from illuminated MSS. and make extracts is freely given.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 16TH, 1873.

THE MEETING OF 1873.

THE fulness and extent of the reports which we present of the proceedings of the great meeting just concluded, and the widespread impression which that meeting has produced, seem to render comment less desirable than space to do justice to the proceedings. The meeting has been on so great a scale, it has so obviously and so largely advanced the prosperity of the Association, and it has produced an impression so profound on the public mind of the unity, the force, and the high aims of the medical profession, that it is unnecessary to attempt to deduce a moral which lies on the face of the facts. From this moment the Association proceeds on its onward march with a firmer step and a greater weight of professional and public influence than ever before. It has shown itself unrivalled amongst professional societies; and it has celebrated an anniversary which, in its magnitude, importance, and influence in elevating the profession in the public esteem, has no precedent in medical history. Thus its past government is justified, and the efforts of those who have striven in its behalf are rewarded beyond any possible anticipations.

THE OUTBREAK OF TYPHOID FEVER FROM THE DISTRIBUTION OF INFECTED MILK.

THE following are some of the more important details of the circumstances and cases which led up to the suspicion, and finally established the conclusion, that the severe outbreak of enteric fever which has recently fallen upon the medical regions of the Cavendish Square district and the more fashionable vicinity of Grosvenor and Portman Squares has been due to the distribution of infected milk from one dairy in St. Marylebone. The first inference which lighted up the inquiry was due to the sagacity of Dr. Murchison, and many hundreds are indebted to him for the ability, courage, and industry which he has shown in the matter. In Dr. Murchison's household three children were taken ill on July 22nd. The first impression was that they must have got the fever from some extramural source, inasmuch as the sanitary arrangements of the house had been most carefully supervised, as might be expected in the house of the late senior physician of the Fever Hospital, and one of the chief European authorities on continued fever. On the 25th July, the two eldest children and the baby left the house for Westmorland; but, on July 31st, two younger children took the fever, and then another, and an external cause had to be looked for. The milk-supply seemed exempt from suspicion in the first instance, because the younger children, who consumed most milk, were not the first to suffer. But, on inquiry, it turned out that there had been two parcels of milk supplied to the household from the same dairy, of which one was "nursery milk" in a sealed can, which was given to the baby and the younger children. On July 25th, when the baby left town, the nursery milk was stopped, and the younger children came upon the ordinary house-supply. Six days

after this, they began to sicken with typhoid fever. On discovering these facts, on August 4th, Dr. Murchison's suspicions were aroused, and he instituted inquiries among several of his medical friends in the neighbourhood in whose households it had come to his knowledge that there were cases of typhoid fever. The result was to ascertain that, in the ten cases investigated on that day, the milk-supply was found in every instance to be the same as that of his own household. Early in the day, he communicated with Dr. Whitmore, the medical officer of Marylebone, and stated to him the facts; and that gentleman at once put himself in communication with the managers of the dairy, and informed them of the suspicion attaching to their milk. Further inquiries, made without official assistance, led to the discovery of new cases, which, at this date, amount to about two hundred cases of typhoid fever, in sixty separate households, all of which are supplied with milk from the same source: in one of the cases only which have been reported has the milk been derived from a different source. Fresh cases are to-day reported from households which have withdrawn to country quarters, and we hear of fifteen cases in the Cripples' Home. It is indeed not possible at present to say how far the mischief has extended.

These cases are for the most part distributed over the parishes of St. Marylebone, St. John's Wood, and St. George's, Hanover Square, and include houses situated in the best parts in the finest squares of the parish; and, indeed, these cases, so reported, are almost exclusively in the houses of the better class. Inquiries at the different hospitals have supplied information of a similar character. For example: in the London Fever Hospital, on August 5th, there were only three cases of typhoid fever for the whole of London; of these, one came from Islington, and was a case unconnected with the suspected milk-supply. Of the other two, one was from Belsize Park and one from Portman Square, and both had consumed the suspected milk. In Middlesex Hospital, on August 13th, there were nine cases of typhoid fever; two were from distant localities; in a third the source of milk supply was unknown. The remaining six were from six different houses supplied from the suspected source. There are several cases at St. George's from the same source, but we have not yet the full particulars. It was, of course, by no means to be expected that all existing cases of typhoid in these three great parishes should be traced to this one source of poisoning; but, to the overwhelming numerical evidence, are to be added a number of pieces of corroborative testimony, some of which are of a very striking character. Thus, the case of a child attacked with typhoid fever in a house in Manchester Square, where the milk-supply is not from the suspected source, was, at first, considered to be one which told strongly in favour of the milk. On investigation, however, it proves to afford the strongest testimony against it. This child had been staying for two days with friends in one of the new streets off Portman Square, and drank at dinner a tumbler of milk from the suspected dairy, and at tea, a cup and a half of milk; no one else was ill in the house to which she returned, and where this milk was not taken, but within a week she sickened of the fever. Meantime, the family where she was visiting left town; their subsequent history has, however, since been ascertained by Dr. Fuller, and it is as follows. The family went home to Derbyshire, and within a week the son and four of the servants were down with fever, and a fifth servant, who remained in town, is lying ill with it. Another case, which is of a striking character, is that of a family in Grosvenor Square. The members of the family (ten in number) were supplied with milk from their own estate, the servants of the household drinking the milk from the suspected dairy. The family left London on August 4th. Two of the servants fell ill with typhoid before leaving; three others have sickened with it since going to the country. The family are exempt. A young lady resident at Gipsy Hill came to London at the beginning of July on a visit to Seymour Street, where she drank a large quantity of the suspected milk; she returned to Gipsy Hill on July 23rd, and was taken ill with typhoid fever on July 26th. There are, and have been, it is stated, no other cases in the

neighbourhood. Another case of a noteworthy character is one in Brook Street. In this family there are three children. The eldest has tea in the morning and orange wine and water at night. The two youngest children have bread and milk in the morning and cold milk at night, and both have typhoid fever; the eldest child, who takes no milk, has escaped. In a fourth case, a noble duke and a physician, living next door to each other, were both supplied with milk from the same suspected dairy, and even from the same can. In the household of the duke, there have been two severe cases of typhoid fever (one of which has already ended fatally), and the household of the physician has escaped, although there are children in the family; the difference being, that in the house of the physician the whole of the milk was boiled before being used. In yet another case, four servants were left in a house in the Bayswater district on board-wages: two used the suspected milk, and both are down with the fever; the other two used Swiss condensed milk, and they escaped. This is something in the nature of a vital experiment, such as physiologists would employ to test a case, only using for the purpose inferior animals. Again, two servants in the West Central district, living in a house not supplied with the suspected milk, during the hot weather, two or three weeks ago, took occasion to purchase some of the suspected milk; both were attacked soon afterwards, and are now suffering from typhoid fever. One of the cases in the Middlesex Hospital is that of a man, whose household has escaped, but who has himself been drinking the suspected milk at his employer's; and, finally, we have record of a case of a clerk of the suspected dairy, living at the house of his parents, who are free from the disease, and who had an independent milk-supply, but himself drinking the milk of his employers, and now lying ill with the typhoid fever.

There are other general considerations which should be mentioned. The proportion of children attacked has been excessive; and they are the chief consumers of milk. The adults who have been attacked have in a curiously large number of cases been persons who are drinkers of cold milk in quantities from the suspected dairy. Large water-drinkers have, on the contrary, escaped infection. Up to the date of this sudden and severe outbreak, there had been a remarkable immunity from typhoid fever in the west end of London.

These facts have been accumulating since August 4th, when the suspicion attaching to the milk was officially brought under the notice of the company by Dr. Whitmore as Medical Officer of Health of Marylebone; and the dairy company have during that interval been repeatedly summoned by Dr. Whitmore in the first instance, and by Dr. Murchison and Sir William Jenner in the second, to suspend the sale of the milk from their dairy. Unfortunately, they had not until Wednesday been able to satisfy themselves that this was their duty, and refused to do so unless compensation was guaranteed; and it is impossible yet to say how much damage has been done meantime. On Tuesday, however, the inquiry on the spot, which might easily have suggested itself at the outset, was entered upon. Dr. Whitmore had meantime appealed to Mr. John Simon, the Head of the Medical Department of the Local Government Board; and from that department was despatched—not a lay inspector who knew nothing of the subject, but, strange to say, and contrary to the rule of the higher authorities of the Board, Mr. J. Netten Radcliffe, a skilled medical inspector, who has experience in the matter. Mr. Radcliffe immediately arranged to inspect the sources of milk-supply at the farm; and, at the request of the company, Dr. Corfield and Mr. Chalmers Morton accompanied him. Dr. Whitmore was also of the party. The result was, that within a day facts were elicited which sufficed, in the opinion of all of them, to explain the source of infection, and that means were instantly taken to stop the supply of milk from the farm. The details will be found in the subjoined statement, furnished to us by Dr. Corfield on the part of the company. It will be seen that it was ascertained that, in one out of the eight farms with which the company contract for the supply of milk, typhoid fever was ascertained to have existed, causing death, at a date which well corresponds with the recent outbreak in London coinciding with the distribution of the milk; and that

another case of typhoid is believed to be in progress on the farm, while the sanitary arrangements are such as to render contamination of the milk not only probable but possible. We give great credit to Mr. Radcliffe for his promptitude and sagacity, and to Dr. Corfield also much credit is due for his promptitude and candour of action. Nor did the company, when the conviction had slowly reached them that their milk was justly suspected, hesitate for a moment to adopt the course of cutting off the inculpated source of supply. One moral of the story, out of many which may be drawn, is the necessity of adding a sanitary inspection of milk-farms to the testing of the milk-supply. Chemical or physical examination will, of course, tell nothing of the presence of deadly poisons, such as that of typhoid; the living test if afforded by the human body, and life is rather too precious to be freely expended on any such experimental investigation. In future, therefore, milk-companies which contract with private farmers must certainly feel it as necessary to satisfy themselves of the sanitary management of the farms, as of the capacity of the farmers to fulfil the other conditions of their contract.

ERNEST HART.

THE SOURCE OF INFECTION.

The following communication from Dr. Corfield describes the result of the inspection of the suspected farm.

It will have been by this time thoroughly made known from my letter inserted in *Times* of Thursday, that the result of the inspection by Mr. J. Netten Radcliffe, Dr. Whitmore, Mr. J. Chalmers Morton, and myself, of the farms supplying a certain dairy in London with milk, has been to confirm the opinion expressed by Dr. Murchison as the result of his observations, and to show, as far as the nature of the case permits, that the outbreak has arisen from the accidental contamination of the milk from one of the farms, and the distribution of this milk to certain districts in London.

The nature of the evidence resulting from the inspection is briefly as follows. Eight farms had to be examined; seven of them were found to present no probability, from their positions, the absence of fever in their neighbourhood, etc., of enteric contamination of the water used for dairy purposes, but to the eighth the most suspicious circumstances attached (the cattle on all the farms were stated to be quite healthy, and appeared to be so). In the first place, the neighbouring villages, especially two of them, from which the labourers come (for there are no cottages near the farm), are at present, and have been for some months, suffering from an epidemic of enteric fever; a considerable number of cases, and several deaths have occurred. The farmer himself, a strong man of 58 years of age, who had been accustomed to good living, and was believed by his medical attendant to be suffering from "a fatty heart", was taken ill in the second week of May with indefinite symptoms, was out of sorts, etc. He went on with his ordinary occupations more or less regularly, but, a suspicion crossing the minds of his two medical attendants that he might be suffering from fever, they suggested a consultation, and wished to call in the medical man whom they usually consulted; the patient, however, insisted on going himself with them, and did so on May 31st, when the gentleman consulted said, "this man ought to be in bed, you'll see it will turn out to be enteric fever, or words to that effect." They returned home, and on the next day, June 1st, one of them was summoned to the farm-house, and found that a very profuse discharge of blood and putrid matter from the bowels had taken place. He ordered that this should be buried in a field outside the immediate farm premises, which was done by the wife herself. During the next day or two, copious motions, containing putrid matter, continued to pass (no diarrhoea whatever having occurred before the discharge on June 1st), and then the bowels became confined, and the patient seemed much better. Towards the end of the week he was given a dose of castor-oil, the motions became quite healthy, he got up and walked about, and, in fact, appeared so well that his medical attendant told him he should only come, it being a troublesome place to get at, every two or three days. But on Sunday, June 8th, as he was being

lifted out of bed, he died. No medical man was present, and so, on account of the suddenness of the death, and the doubt attaching to the diagnosis of enteric fever, together with the fact that he seemed to have quite got over his recent illness, his medical attendant entered, as the cause of death in the certificate, "heart-disease", and the matter apparently ended. Death from collapse during convalescence from typhoid fever is, however, of not unfrequent occurrence, and the circumstance rather confirms than discredits the original diagnosis. No case of illness had, we were informed, occurred among the workmen; but a lad, one of the sons of the man who died, was at the time of our visit lying in bed by the orders of the medical attendant, who, from the *malaise*, and slight diarrhoea complained of, thought that it might turn out to be a case of enteric fever; this remains yet to be seen, and the interest attaching to the case is intense.

Now as to the farm buildings and dairy arrangements. The buildings are all close together on a small space of sloping ground; in front of the house is a small yard, along which runs a ditch, into which the yard itself, the privy if it should overflow, the pigsties, the dairy, and a manure-heap into which house-slops are thrown, drain. At a distance of eight feet from the ditch, and at the lowest part of the yard, is the well, lined with bricks (not set in cement), and therefore so situated as to drain the whole of the premises. This action of the well is further facilitated by the fact that a pipe has been laid from the well to the pump in the dairy, so that a trench has been dug more than half way up the yard towards the privy, which is at the upper part of the yard, and 56 feet 6 inches from the edge of the well. The pipe in question enters the well below the soakage line; and there can be no doubt that the trench in which it is laid, which is of course filled in, materially aids in draining the yard into the well. The soil is a sloppish clay; but this does not prevent soakage from taking place, especially as most, if not all, of the soil of the yard must have been moved, probably several times. The level of the water in the well was about twelve feet below the surface of the ground; this water comes by a drain from another well in a field at about a hundred yards' distance from the house, in which the water was at about five feet from the surface. Now this second well is covered over and enclosed, and there is no reason to suspect that the water is in any way contaminated; and yet the water obtained from the pump (*i.e.*, the water after it has been through the well in the yard) has been long condemned by the medical man as unfit to drink, and is, in fact, obviously impure both to eyes and to nose. The drinking-water for the house is, therefore, fetched from a well in a neighbouring field, but the water from the dairy-pump is used for cooking and making coffee, and also for washing out the milk-cans and churns; it is said, also, that the workmen sometimes drink it; they are, however, supplied with coffee, with or without milk, according to the quantity produced on the farm, and with small beer. The only privy on the premises is, as stated, at the upper part of the yard, and has the ordinary privy pit, which is, perhaps, as much as two or three feet above the level of the top of the well, and at the distance from it already named; it is emptied when it requires it, the contents being tolerably dry, and it is impossible not to believe that considerable soakage takes place from it.

Such, without entering into minor details, are the facts of the case; and supposing the poison of enteric fever upon the premises, there are several ways in which it might have got into the milk.

I should add, that from the facts that we had already visited six out of the eight farms, that the seventh was one with a contract only dating from August 1st, and that we had been apprised of the circumstances of the master's death at the only other one on the 8th of June, a time fitting so well with that of the London outbreak (and, moreover, from the further fact that all the "infants' milk" came from that particular farm, whereas it is children who have been so especially attacked in London), Mr. Morton and myself determined to telegraph at once to the proprietors of the dairy in London, advising the immediate cessation of the distribution of the milk from that farm, although we had not been there. This was done on Tuesday evening, and no more

milk from that farm was sent out—what remained being disinfected and thrown away—while a telegram was sent from the London dairy to the farm on Wednesday morning to stop the supply at once; so that the preventive measures were taken on suspicion, and before the premises had been inspected at all. The inspection, however, thoroughly justified the proceeding, and considerable time was saved by it; for which the especial credit must be given to Mr. Radcliffe.

It is only fair to state that the widow of the farmer, when she was informed of the facts of the case, at once volunteered to stop sending milk to London, and that the behaviour of the owners of the eight farms, without exception, was such as to make it apparent to all the inspectors that no intentional admixture with water took place at any of the farms, at any rate with the consent or knowledge of the farmers themselves.

The proprietors of the dairy in question have decided to have a regular sanitary inspection of all their farms; and it is to be hoped that the lamentable accident which has just occurred will tend in the end to the ensuring of much greater safety than at present exists in the matter of the milk-supply of the metropolis. It is impossible to say at present what dairy might not be the cause of a similar outbreak.

W. H. CORFIELD, M.A., M.D. (Oxon.)

Professor of Hygiene and Public Health at University College,
London; Medical Officer of Health for St. George's,
Hanover Square.

THE NAVAL MEDICAL SERVICE.

It will be remembered that, in answer to a question of Sir Dominic Corrigan on the 30th ult. in the House of Commons, Mr. Goschen stated that the Admiralty had the right to retain the services of surgeons; and that, after eighteen months' instruction, an application to resign would be refused. This amounts to this, that surgeons, on entering the navy, must be prepared to surrender to the Admiralty the privilege most dear to Englishmen—*viz.*, their liberty; for, should a young surgeon after entry find that the many discomforts of a ship-life are distasteful to him, or that better opportunities for improving his professional prospects offer themselves, he cannot resign, to shake off the one, or to embrace the other. What the law is which enables the Admiralty to take so firm a grip on the services of surgeons *when on the home station*, no one can yet clearly define, as surgeons enter into no engagement to serve for a specific time. Few would probably enter under such conditions, unless with the right to a small pension on completion of such term. We fully admit that when actually under orders for abroad, when abroad, or in case of war, such a right by the Admiralty may be exercised; but that to exercise it when the surgeon who applies to resign is not only at home, but also *not under orders*, is tantamount to sentencing the unfortunate officer to penal servitude.

Now to what does the instruction amount? Simply this: on entry into the navy, a surgeon, by an order in Council not yet altered, is entitled to pay at the rate of 11s. *per diem*; but the Admiralty compel him to go to Netley School for four months, and make him pay for it; for, during the time he is there, not only does he save the country expense by attending sick soldiers, but 6s. *per diem* are deducted from his pay, and at the expiration of the term he finds himself in debt. Then he is appointed to a flag-ship in a home port, for nominal duty in a naval hospital, to find that the remaining fourteen months' instruction consists in his being kicked about from ship to ship in the harbour in the most unceremonious manner and in a way unknown to any other branch of the service—perhaps appointed to a marine corps for two or three months' service, and have 30s. deducted from his pay for his commission thereto. The results of this period of instruction are, that his indebtedness is increased, and he is tired and disgusted with naval life.

Will any sensible man be surprised to learn that some surgeons, newly entered, have applied to resign, to better their prospects in life, but, for so doing, are threatened with trial by court martial, and in some instances have actually been tried and dismissed the service for this fearful crime? We trust that the Branches of our powerful Associa-

tion may discuss this matter, and so strengthen the hands of Sir D. Corrigan before next session of Parliament, who will doubtless then succeed in procuring a satisfactory solution of this question.

BOSTON SLUMS.

THE hub of the universe is, we find, most foully begrimed. In point of filth, over-crowding, and sanitary neglect, Boston can give long odds to any of the most neglected spots of this worn-out continent.

From the Fourth Annual Report of the State Board of Massachusetts, it would appear that the ravages of the small-pox have at last aroused the inhabitants to a sense of the importance of sanitary reform in the towns and villages throughout the Puritan State.

Often as we have been horrified and disgusted by the revelations which sanitary commissioners have made of the filth and squalor prevailing in many districts of Old England, our transatlantic cousins appear to have gone ahead of us even in this respect. In some cases high rents are paid for the privilege of living in tenements which, according to the official report, are dedicated principally to cloacal purposes, a man paying, for instance, 22 dollars 50 cents a month, or £50 *per annum*, for premises described as follows. The place is known as "Ponds Block," Shrewsbury and Worcester Streets. Externally the house appeared deserted, if window-casings without sashes, sashes without glass, broken and unhung blinds, and general decay, were significant. There was no latch to the door, and at night the rooms were secured by piling furniture against the entrance. The floor of the cellar was a mass of reeking mud; the sink-drain, which was suspended among the sleepers overhead, was broken and leaking. Throughout the house there was dirt. The water-pipes were out of repair, and the sink-drains were full. The floors of some rooms had been used as privies by occupants of the house and chance passers. The shanties originally intended for privies were too filthy to be entered, and their vaults were overflowing. Adjoining this building was another. In most respects it rivalled its neighbour in filthiness. The privy of the house was within eight feet of the back door, and was full and uncovered. The yard was foul with swill. The tenants stated that the landlord was very regular in his demand for rent, but scarcely ever heeded their complaints for repairs. "Pine Meadow" is also conspicuous for high rent and reeking foetor. Piggeries add to the general filth. At No. 57, East Worcester Street, a widower pays six dollars a month for a cellar tenement, two-thirds underground. In this tenement there was no sink; the slops were thrown on the ground near the door. There was no water-service to the house, all water being fetched from a distant well. In the vicinity of "Pine Meadow" is a cemetery, with its tombs broken open, and its memorial stones thrown down.

In the town of Lynn, with a population of 30,000, principally employed in the manufacture of shoes, things are much in the same condition, as shown by the state of a building in South Street, leading from one of the principal thoroughfares of the city. The location of the building was high and dry, and eligible for good drainage, yet an unmistakable stench pervaded the premises. The cause of this odour was readily found: for thirteen families, two privies, with open vaults, were provided. The vaults were full, and one was overflowing. A stream of nightsoil bubbled up from beneath the side of the privy, and trickled away towards the house, mingling in its course with sink-drainings which had been thrown on the ground by the tenants. The floors and seats of the privies were foul beyond description. The air which comes to this elevated spot in a state of comparative freshness and purity, goes away burdened with foulness.

Barker Court, in the same town, is at the lowest part of a basin, whose deficient drainage compels the stagnation of water almost the year round. In this region, typhoid fever, diarrhoea and dysentery, bronchitis and diphtheria, specially manifest themselves. The ground in the streets and in the yards was covered with green mould. In this court was a stable with a pig-stye, in which two large hogs were fattening. A pile of stable manure embellished the yard. Close to the

stable was the privy, its vault full and open, and its internal appearance extremely foul. "Buffums Block" almost defies description; it was inhabited by nine Irish families. The privies were so foul that "no decent woman could go near them," as stated by one of the inhabitants. Much complaint was made of a privy on the adjoining premises; the vault of this privy was not tight, and being on higher ground, its contents percolated through the soil, and entered the yard of "Buffums Block."

Salem is a city which has seen better days. The long avenue known as Derby Street, formerly the busiest street in the town, and where Salem merchants accumulated wealth, is now almost the poorest. No. 22, Tucker's Wharf, was filthy within and without, and had a pig-sty at the door. The slops thrown on the ground about the door, and all sorts of refuse littered the yard. In a single room under the roof, scarcely big enough to contain the two dingy beds, and lighted and ventilated by a small square sash at each end, six inmates of a family slept in promiscuous informality.

The town of Springfield is not superior to its neighbours. A number of abodes were found on a narrow belt of land along the crest of the river's bank, at the lower part of the city, and separated from the rest of the city by the tracks of the Newhaven railroad. "Trusk's Block", designed for twenty-four families, is a brick structure. The rear of the building is close on the line of railroad, and the front faces on the river's bank. On the steep slope in front, garbage and refuse had accumulated since the last rise of the river had washed away previous deposits. The house was greatly out of repair, windows broken, stairs dangerous, roof leaky. The privy arrangements were peculiar; at each end of the porch, or piazza, on which the front door opened, was a rough outbuilding. The two outhouses were designed to accommodate all the tenants, a design plainly evident to any one approaching the house. The vaults were brick receptacles entirely above ground, the steepness of the slope beneath the porch giving room for this method of building. One of the vaults had broken outward, and the abundant contents had settled away, a filthy mass of excrement gradually approaching the river's edge. During the summer months the filth and stench were intolerable. At "Hole in the Wall," the adjoining premises, the owner relies on the uncertain service of the stream below to wash away the accumulated nightsoil from the privy vaults whenever a flood makes the depth sufficient. At "Smith's Block," the yard was covered with swill, garbage, and filth, while the privy conveniences were still more elementary, and less tolerable than those already alluded to, consisting of the ordinary filthy dilapidated outhouses, over a perfectly open inclined plane of plank, freely exposed to view from the river. When the water rises, this plank is temporarily cleaned, at other times, surface-drainage, promoted by rainfalls, carries downward much of the loose excrement to the stream, where it mingles with the water habitually used for washing the clothes of the people who live in more aristocratic quarters. The mouth of one of the city main sewers is immediately adjacent to this spot; a simple swinging door is the only apparatus at the mouth of the pipe, and in the hot season the stench is very bad. Disease is of great frequency among these people; two-thirds of the cholera infantum occurred in these houses; and, while the general average of mortality from consumption in the city was less than formerly, in these districts it was greater.

ALCOHOL IN WORKHOUSES.

LAST session Sir Harcourt Johnston moved for, and obtained, a very interesting Parliamentary paper which has lately been published showing the total quantity and cost of ale, wine, and spirits, ordered by medical officers for paupers in each union or parish throughout England and Wales, during the year ended Michaelmas, 1871. The *Medical Temperance Journal*, of July, 1873, in analysing these returns, points out that unfortunately they do not give the population of the various unions, etc., nor number of paupers, and, worst of all, fail to supply the actual number of persons who were under treatment during

the year. We are, however, furnished with the numbers under treatment during the thirty-ninth week in 1871, which no doubt gives a fair average, but the tables would have been far more valuable if the actual number for whom liquor was ordered during the year had been given. This omission might easily be avoided, as each medical officer gives, half-yearly, the number of new cases attended by him, and, with a little additional trouble, the exact number who have been temporarily or continuously ordered liquor might be distinguished. More exact information on these points is extremely important, both in the interests of paupers and ratepayers. It will be shown presently that the quantities of liquor given by the medical officers of different unions afford remarkable contrasts. The total cost of the liquor ordered for paupers amounted to above £115,000 during 1871.

One of the striking features in this return is seen in the very different quantities of liquor which pauper patients receive in different places. For example, Berkshire and Cumberland are pretty much alike in population; we find, according to the returns, that whilst during the year ended Michaelmas, 1871, the sick paupers of Cumberland were ordered liquors which cost £327 : 4 : 9, the same class in Berkshire cost £3,490. Or we may contrast Cornwall and Sussex, both naturally salubrious districts, Cornwall containing the larger population by some thousands. The cost of stimulants for sick paupers in Cornwall during the period named amounted to £404 : 12 : 10; whilst in Sussex it amounted to £5,081 : 15 : 2, an increase of over 1,200 per cent. As has been said, the returns do not give the exact numbers of sick during the twelve months, but they are given for the thirty-ninth week, and they may be accepted as an average for the year, of indoor and outdoor cases, receiving some form of alcoholic liquor, by medical order. The numbers stand thus:—

Berkshire	...	...	...	1,730
Cumberland	...	...	...	632

These figures show that the cases in which liquors are ordered by medical prescription, in the Berkshire Union, are about two and a half times greater than they are in Cumberland.

If we contrast Cornwall and Suffolk, we find even this disparity exceeded.

Number of indoor and outdoor cases on medical officers' books, for whom liquor was ordered during thirty-ninth week, 1871:—

Sussex	...	...	...	3,246
Cornwall	...	...	...	1,096

But, perhaps, the most curious return relates to the numbers of paupers on the medical lists who were allowed ale, wine, or spirits during the last three months of the year ending Michaelmas, 1871. These are as follows:—

Berkshire :	Ale 377 ;	Wine 75 ;	Spirits 131
Cumberland :	„ 2 ;	„ 35 ;	„ 15

The following abstract will show that the contrast between the two other counties we have noticed, the population being nearly equal, is similarly striking.

Numbers of cases on union medical officers' books allowed liquor continuously during the thirteen weeks ending Michaelmas, 1871:—

Sussex :	Ale 656 ;	Wine 96 ;	Spirits 234
Cornwall :	„ 39 ;	„ 14 ;	„ 16

By selecting some of the individual unions, still more special contrasts might be found, but the aggregates are sufficiently instructive.

The cases now cited show very clearly two things:—First, that the number of sick paupers is immensely greater in Berks and Sussex, than in Cornwall and Cumberland; and, second, that in the two former counties the medical administration of liquors to paupers is much more common than in the latter.

The *Temperance Journal* thinks it desirable that attention should be called to another curious contrast presented by the counties selected for comment and illustration.

It appears that whilst the Berks workhouse officials were allowed 42,659 pints of beer during the twelve months, no liquor whatever was allowed to the Cumberland officials. In the Sussex workhouses the officials consumed 73,048 pints of ale, and 75½ pints of spirits. In only

one of the Cornish workhouses was any liquor allowed, and the whole amount consumed only amounted to 16 pints of ale. We are informed in a footnote that at St. Austell all the officers are total abstainers. There is no mention, as in some other instances, that money is allowed instead of beer.

THE medical department of the navy has been transferred from Somerset House to No. 9, New Street, Spring Gardens, where all the naval departments are now located.

AT the conclusion of an inquest held lately at Poplar, several of the jurors complained of the condition of the dead-house to which the bodies had been taken. Dr. Newton also stated that frequent complaints had been made on the subject. It was eventually decided that the authorities should be communicated with.

A NEW medical warrant for the Indian medical service is, according to the *Pioneer*, shortly to issue. It is anticipated that its provisions will go no further than to assimilate our titles to those of the sister service.

WE are glad to learn that the Government of New Zealand have suggested to the Agent-General the desirability of chartering a better class of vessels, and establishing a more liberal and wholesome scale of diet, placing hospitals on the upper deck, and generally increasing the comfort and accommodation of immigrant ships.

IMPURE WATER AND CHOLERA IN INDIA.

DR. F. MACNAMARA publishes, in the *Indian Medical Gazette*, a very interesting report on the water supplied from the Calcutta hydrants during 1872. A column added to this report shows the number of deaths from cholera throughout the year. So long as the water remained pure, the death rate from this disease continued low; but immediately the water supplied by the Calcutta municipal works became very impure, that is to say, from the end of September until the termination of the year, the death-rate from cholera ran up to a figure corresponding to what it used to be, when many of the inhabitants consumed badly filtered river and tank water. The truth appears to be that, from the middle of September, 1872, up to within a very recent date, the drinking water contained a dangerous amount of organic matter, which found its way into the water after the stream had passed through the Pulta filtering works.

THE CHOLERA IN EUROPE.

THE *Wiener Medizinische Wochenschrift*, of August 9th, states that the reports from Galicia and Hungary indicate a marked increase of this disease in these countries. In Galicia, on June 15th, there were 88 cases remaining under treatment. From that date to July 15th, 3,751 new cases occurred. Of the total 3,839, 1,018 recovered, and 1,000 died. In Hungary, from July 15th to August 1st, there were 41,673 cases, of which 18,139 recovered, and 15,855 died. In Pesth, on August 2nd, there were 88 new cases, making, with those already under treatment, a total of 307, of whom 55 recovered, and 36 died. On the 3rd, there were, including 87 new cases, 303 cases under treatment; among these there were 35 recoveries and 37 deaths. Three medical men, Drs. Ligetby, Munkacsy, and Maurer, have lately fallen victims to the disease in Hungary. Two cases of cholera are reported on August 6th, to have occurred in Stettin. The first case of this disease occurred in Königsberg, on July 6th; from that day to the 22nd, there were 6 cases; after that, the disease spread rapidly, so that up to August 5th, 164 cases were officially reported, with 85 deaths. At the latter date from 20 to 25 new cases, and 10 or 12 deaths, were occurring daily; and the disease did not appear to have reached its greatest intensity. In Dantzic, on August 4th, there were in the town 33 cases, with 24 deaths. Several cases had also occurred in the surrounding country districts. At the mouth of the Vistula, there were 105 cases, with 38 deaths. Among the Polish raftsmen there had been 76 cases,

with 37 recoveries and 55 deaths. In Braunsberg, up to August 4th, there were 174 cases, with 67 deaths. From July 2nd to 26th, there were 13 cases in the district of Gumbinnen, with 9 deaths. The disease has appeared in the neighbourhood of the Memel. In Dresden, from May 19th to August 5th, there were 82 cases, of which 56 were reported as having occurred after July 31. The number of deaths was 46, and of recoveries 12. In Munich, from July 30 to August 5, there were 13 cases and 8 deaths. In Würzburg, on August 3rd, there were 3 deaths, and 13 patients remained under treatment. Two new cases occurred during the day. In Venice, on August 5th, the daily number of cases during a week had fallen from 26 to 11. A few cases had occurred in Turin, and in Treviso and Friuli; but the disease did not (on August 5) appear to be spreading.

THE GROUSE DISEASE.

AT a very opportune moment, a pamphlet is being issued from the office of the *Field* on this much vexed question. According to Dr. Cobbold, who is the author of the *brochure*, the grouse disease is immediately due to intestinal irritation set up by the presence of parasites. Of these entozoa there are two kinds; namely, tapeworms found in the small intestines, and threadworms discovered by the author in the *cæca* (*Tenia calva* and *Strongylus pergracilis*). Without either accepting or denying the truth of the conclusions arrived at by Dr. Cobbold, we have the pleasure to observe that his statements and views are put forth as the result of a long and painstaking inquiry, upwards of forty dead grouse from the Nairnshire moors having been examined for the purpose. He does not propose any remedy for the epidemic at present; but, if we understand the concluding paragraph correctly, a more general acceptance of the view he advocates as to the cause of the disease would lead him to further inquiries in reference to the best methods of checking the disorder.

THE HASTINGS PRIZE ESSAY.

IT will be seen that the Hastings medal has been awarded to Mr. Lawson Tait of Birmingham for an essay on ovariectomy. This prize essay will be published in the *JOURNAL*; it is, we believe, in the opinion of Mr. Spencer Wells (one of the adjudicators, and certainly a high authority on the subject), an essay of very great merit. It may be mentioned now, without breach of any confidence, that the essay which was second, and was so near the first in point of merit, that had it been possible a special award would have been made to it, was also from the pen of a Birmingham surgeon, Mr. Malins, the partner of Mr. T. H. Bartleet.

THE NEW CONVALESCENT HOSPITAL AT LIVERPOOL AND MR. GLADSTONE.

ON Saturday the Mayor of Liverpool presided at the opening of a new convalescent hospital at Woolton, one of the hilliest and pleasantest suburbs in the neighbourhood of that town. Mr. Gladstone has handed over to the committee the sum of £1,400, which was presented to him by the working men of England in the year 1868. In commemoration of this gift it has been resolved to call the finest chamber in the building the "Gladstone Hall," and a large brass plate has been placed in the hall bearing the following inscription:—"The Gladstone Hall, erected in 1873; a testimonial fund in honour of the Right Hon. William Ewart Gladstone, Prime Minister of England."

HOSPITAL SUNDAY AT WARRINGTON.

ON August 6th a public meeting was held in the Town-Hall, Warrington, for the purpose of fixing upon a Sunday when simultaneous collections should be made in the various churches and chapels in the town and neighbourhood in aid of the Dispensary and Hutton's Charity. The Mayor, who presided, said the object of the simultaneous collections was to raise funds to support the dispensary, to provide a proper residence for the house-surgeon, and, if possible, to obtain a separate building for Hutton's Charity, which at the present time

cramped the accommodation required for dispensary patients. The meeting, which was chiefly composed of clergymen and ministers, decided upon the second Sunday in January, when the collections should be made; and a resolution was also passed to the effect that collecting boxes should be sent round to all the manufactories in the town on the Saturday before Hospital Sunday, so that the working classes might also contribute.

SMALL-POX IN BOLTON.

THE *Bolton Evening News* reports more favourably as to the small-pox epidemic in the town. Many of those who have been attacked with the disease have regained convalescence, and during the last four or five days only one fresh case has been reported.

PRECAUTIONS AGAINST CHOLERA.

THE authorities of the Tyne have taken very complete measures to meet the danger which is threatened of an importation of cholera by shipping from the Baltic into our Northern coal ports. The municipalities or Local Boards connected with the towns or large manufacturing villages on the banks of the Tyne, more than twelve months ago, formed a committee and made a levy, with a view of carrying out a complete arrangement to protect the public health from the danger of infectious diseases being imported by shipping. The committee fitted out a floating hospital, for the reception of sick seamen, which is moored away from the general shipping; and, to further protect the public health, there is an establishment at the mouth of the harbour. Medical officers of health are on duty there night and day, and they board every ship which comes from abroad and examine the crews. Any one suffering from an infectious disease is immediately removed to hospital. There is a hospital also on the sea-shore at South Shields, and another one situated in a healthy situation, swept by the sea breezes, at North Shields. Each of them is at the disposal of the authorities for shipping cases. At North Shields, the seamen's lodging-houses are under the inspection of the police, and salt water has been brought into the town from the sea by pipes, the streets and sewers are flushed with it, and private persons may have a supply of salt water in their houses at the rate of 5s. per quarter. The death-return now shows that North Shields is among the healthiest seaport towns in the kingdom.

SCOTLAND.

THE new infirmary at Lanark, containing thirty beds, has just been opened. The medical officers are Alexander M. Adams, L.R.C.P.Ed.; James Ewing, M.D., and Alexander H. Gray, M.D.

THE LATE PROFESSOR MILLER OF EDINBURGH.

WE have much pleasure in making known the following special appeal, which has been issued by the "Miller Memorial Committee."

Miller Memorial Home.—Shortly after the death of Professor James Miller, a few friends raised, by private subscriptions, about £1,600 as a memorial to him. Knowing the late Professor's long connection with, and deep interest in Medical Missions, this sum was given towards the purchase of 56, George Square, as a "Home" for the students while being trained by the Edinburgh Medical Missionary Society as Medical Missionaries. This sum, however, was short of the purchase money by £700. Since getting the house, the directors have had to spend more than £300 additional, in necessary improvements and repairs. They now appeal, therefore, to the public for £1,000 to enable them to clear off all debt upon the house, and to establish it as really the "Miller Memorial Home." Should more than the thousand pounds be received, it is proposed to place a suitable portrait or bust of the late Professor Miller in the "Home." Subscriptions may be remitted to Dr. A. G. Miller, 15, Shandwick Place, or to the Rev. John Lowe, F.R.C.S., 56, George Square.

IRELAND.

A SANITARY ASSOCIATION has been formed in Cork, supported by a large and influential number of the citizens in that town.

PROPOSED CHOLERA SITE AT THE PIGEON HOUSE, DUBLIN.

We are happy to say that, in consequence of the objections made by the military authorities and the citizens generally, this proposition has been rendered impossible, owing to the refusal of the owner of the property in question to grant the ground for the purpose required. The guardians of the Dublin Union have, therefore, been instructed to apply to the Admiralty for a vessel to be used as a cholera hospital for patients that may arrive in Dublin Bay or Harbour.

FORMATION OF A NEW MEDICAL SOCIETY IN DROGHEDA.

ON Saturday, August 2nd, a meeting was held in the Whitworth Hall, Drogheda, which the majority of the physicians and surgeons of Drogheda attended, to form a society amongst the medical practitioners of that town and its neighbourhood to discuss professional matters, read papers on medical subjects, and promote a spirit of harmonious combination among them. Dr. Delahoyde, the senior medical man of the town, took the chair at 3 o'clock. He was unanimously appointed President, and Dr. Clarke was nominated Secretary and Treasurer. It was also unanimously agreed that meetings be held fortnightly.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Paris, July 28th, 1873.

Ambulances.—Close of the Summer Session.—Pellagra.—Lady-Students.—M. Littré.

AMONG the lessons to be learned from the late Franco-German war may be mentioned the utility of ambulances as temporary hospitals. Ambulances in general have been decried by some as encouraging the propensity for war, or are looked upon as refuges for cowards in health, the argument being that, if people will fight, they must suffer the consequences, however terrible, to the end. Be this as it may, the service rendered by ambulances on the battle-field is beyond all question; and if some of these would-be philanthropists had ever been the victims of war, they would have learned better to appreciate the utility of these benevolent institutions.

When Paris was threatened to be besieged, it was foreseen that the ordinary hospitals would be far from sufficient to meet the requirements of the sick and wounded. Ambulances were found necessary, and as the Intendance and Board of Public Assistance were unequal to the task, many of these were established by private enterprise at different points of the capital. Among the latter may be mentioned "Les Ambulances de la Presse annexes du Ministère de la Guerre pendant le siège et sous la Commune," which is also the title of a book of which I have just got possession; and although it may be somewhat late in the day to refer to their work, yet it is never too late to speak of those who had contributed so much towards the mitigation of the poor sufferers. The "ambulances de la presse" were got up by the editors of the leading Paris journals, under the direction of the illustrious Ricord, who, aided by his friend and former pupil the celebrated Demarquay, organised a staff fully equal to the exigencies of the position; and in order to give an idea of the amount of work done by these ambulances, I may mention that they were first got up for the Prussian siege, but as the Communist insurrection broke out before these were dispensed with, they continued their philanthropic work to the last, and afforded aid, without any distinction of race or creed, during the two sieges, to nearly 25,000 sick or wounded, and this under circumstances unparalleled in history. The report under notice is published for the benefit of the funds of the "Société de Secours aux Blessés," and I would recommend the volume to notice not only on account of its charitable object, but for the amount of useful information one might glean from its pages concerning such establishments. There is a beautiful map at the end, showing the position of the ambulances; and the work is interspersed with plates, from which army and civil surgeons might take a hint or two not only as regards the internal administration of these institutions,

but about surgical appliances, warming, and ventilation, and all questions touching the hygienic treatment of the sick, which, by the way, is so little attended to in the regular hospitals of Paris. In fine, a perusal of the work may serve them in good time, for there is no knowing what may happen.

The Summer Session of the Paris School of Medicine ends on August 15th, when there will be a recess until October 15th. The clinical lectures are, however, brought to a close, and Professor Béhier of the Hôtel Dieu occupied, with his usual eloquence, two lectures, which were his last for the session, on that most mysterious affection termed pellagra or Italian leprosy. He selected this subject as a case had just presented itself in his wards. The disease manifests itself by three groups of symptoms, which consist of intestinal and nervous disorders, and a peculiar affection of the skin. It is endemo-epidemic in certain parts of the south of France; in the Asturias, and in Lombardy, where the disease is ascribed to the use of diseased maize or Indian corn. The disease has been observed in the sporadic form in the north of France, and in countries where the maize is unknown; and in 1869, M. Béhier had already met with a case in Paris in a man who had never been out of the capital. It generally manifests itself in spring, and disappears in winter, and the eruption makes its appearance on the parts most exposed to the sun's rays. Several authors have tried to make out that pellagra was a specific disease—a morbid entity due to a special action of the ergoted maize; but M. Béhier strenuously refutes the assertion, and points out there is nothing either in the etiology, semiology, or pathology of the affection, that would warrant such an opinion. As regards its etiology, the learned professor proved that the disease has been observed where the maize is not the staple food, as in the champagne provinces, in Paris, in lunatic asylums, where the grain is never used. On the other hand, in Greece and Naples and Transylvania, where the grain is largely consumed, the disease is unknown. Moreover, where the maize constitutes the principal food of the inhabitants, the poorer classes are affected with pellagra, whereas the rich generally enjoy a perfect immunity from the disease. It will, therefore, be seen that pellagra is not due to a poisoning of the system by a sort of ergotism as supposed by some, for the ergot of rye produces certain effects which cannot be confounded with the lesions found in pellagra. The ergoted maize acts, therefore, not as the ergot of rye does, but the grain, whether sound or deteriorated, is, when used exclusively, insufficient as a nutriment. The true etiology, continued the worthy professor, consists in misery, privations of every kind, bad and insufficient food, excessive work, defective hygiene, etc.

The symptoms generally assume a cachectic character, and, as regards the erythema, that occurs in pellagrous subjects, it may be explained thus: The skin, badly nourished and weakened like the rest of the body, is more liable to external influences; and the sun's rays, which in a healthy individual produces no cutaneous lesion, would, in weakened subjects, cause erythema and phlyctene, which proves that the erythema does not bear the same relation to the general condition of the system as does the eruption in certain general specific affections, such as syphilides, the eruption of exanthematous fevers, but that it is an erythema due to traumatism, the cause in this case being the sun's rays. Besides which, the seat of the lesion, always existing in the parts most exposed, would be another argument in favour of local traumatism. The recurrence of diarrhoea, and the disorders of the digestive tube, require no other explanation than what takes place with other people, when large quantities of liquid are imbibed to satisfy urgent thirst, particularly if the subjects are already debilitated by previous disease. As for the nervous phenomena, as manifested by langour, indifference, hypochondriacism, and even dementia, etc., these form the usual *cortège* of symptoms, resulting from misery, privations, and prolonged anxiety. These phenomena are aggravated in spring, when, for reasons which need not be explained, the sun's influence is more deeply felt; and the same may be remarked in all asylums where mental affections are treated.

Unfortunately, morbid anatomy does not throw much light as to the nature of the malady, as every form of lesion may be found, and that more or less, in every organ, but none can be looked upon as specific or characteristic, as has been proved at the autopsy of the patient referred to above, who died three days after his admission into hospital. The following *post mortem* appearances, for which I am indebted to the kindness of Dr. Straus, Professor Béhier's chef de clinique, were observed in the subject in question. The lesions, on opening the abdomen, were numerous, and sufficient to account for the extreme cachectic condition of the patient. The intestines were studded with tuberculous ulcerations; the mesenteric glands hypertrophied and filled with caseous matter; the lungs adherent, emphysematous in different parts, and infiltrated with tubercular granulations. The brain was the seat of several old apoplectic lesions, and, in the right anterior lobe, was found a small

portion of recent softening with consecutive hæmorrhage, which was evidently the immediate cause of death. The back of the hands, and that part of the feet which were constantly exposed (as the man, who was a beggar, wore only slippers without any socks), were the seat of erythematous swelling, and in some places denuded of the epidermis, as if removed by phlyctenæ, and the Malpighian layer was entirely exposed. The other parts of the body which are constantly exposed, such as the face and neck, also bore evident marks of the local action off the sun and air.

The treatment consists of removing the causes, and placing the patient in as favourable a condition as possible, administering at the same time good wine, tonics, and proper substantial food. Pharmaceutical agents are of little use in these cases, but prophylactic measures are invaluable, particularly where the disease is endemic, and where, for want of a just appreciation of its nature, thousands of human beings are carried off annually. These measures, however, M. Béhier declares are not in the province of medical men, they belong more to governments; and to that science which, up till now, has proved of so little use, and to which they have given the name of "political economy." But, continued M. Béhier, if medical men cannot of themselves improve the social condition of their fellow creatures, it is, nevertheless, their duty to fearlessly point out to those in power what is due to the people under their rule; and, if the rulers would only try to meet the wants of the masses, it would reflect more to their credit and bring them more glory than that achieved by arms. M. Béhier then added that, should the medical men fail in their philanthropic efforts, they should, with the authority due to their special knowledge, persevere in their good work; and the accomplishment of their exalted duties ought to make them more and more love their profession, which is unquestionably the noblest of all human callings. Be proud, he concluded, of such a profession, and if you would only cultivate it with dignity and honour, you may hold up your heads with any potentate, as you will have rendered as much, if not greater service, to the cause of humanity.

Among the English and other foreign ladies prosecuting their studies for the medical profession in Paris, there is a Mrs. Lawson, an English lady, who has just successfully passed her first preliminary examination, for the doctorship, in company with a French lady, named Madame Danel. Mrs. Lawson, it will be remembered, obtained only a short time ago the degree of Bachelor of Sciences, which is one of the requisites for the candidature of a M.D.

M. Littré, you will be glad to hear, is much better.

OBITUARY.

ROBERT PENTLAND, Esq., F.R.C.S.I.

On the 17th of June, passed away one of the best operators and most successful practitioners among Irish provincial surgeons, in the person of Robert Pentland, Esq., of Drogheda. Apprenticed to the late celebrated Abraham Collis, he passed the examination for the Letters Testimonial of the Royal College of Surgeons in Ireland, and became a Licentiate of that body in the year 1818, having been for six years resident pupil in Stevens' Hospital, under the supervision of his distinguished master and most of the other greatest surgeons of the Irish metropolis then alive, all men of celebrity and attainments. Within a short period after obtaining his qualification, he was elected surgeon to the County Infirmary at Drogheda, which post he continued to hold until death removed him from office, in the fifty-sixth year subsequent to his appointment. Throughout this long period of official life he commanded an extensive practice, attending all the leading families of the Counties of Meath and Louth, carrying with him the unceasing and heartfelt esteem of all classes of the community. Beloved by the poor, the welcome guest at all times of the rich, and respected by all for untiring professional zeal, urbanity, and kindness in every relation of life and unbounded hospitality, to his brother practitioners he exhibited that unselfishness and cordial feeling, which rendered him a favourite among them all. As a surgeon, he displayed great manipulative dexterity, and combined the talents of a sound surgical opinion and a successful operator. At the completion of his fiftieth year of office, as surgeon to the infirmary, the governors presented him with a handsome address, and purse of six hundred sovereigns, in appreciation of his long and arduous services. He obtained the Fellowship of the College of Surgeons in Ireland, in the year 1826, and for many years had a seat on its Council. He was also surgeon to the County Louth Militia. By the removal of Robert Pentland, Irish provincial surgery has lost an accomplished ornament and a kind and generous friend.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen was admitted as a member of the College on July 31st.
Curnow, John, M.D., Mitre Court Chambers.

The following gentlemen were admitted licentiates of the College on July 31st.

Barnard, Edward Charles, Tamworth Road, Croydon.
Bedford, Robert, Hereford Road.
Romford, Gerald, King's College Hospital.
Curtis, Arthur, Alton, Hampshire.
Davis, Harry, Callington, Cornwall.
Deakin, Charles W., Kingston Grange, Hereford.
Dodd, Alexander R., Westbourne Terrace Road.
Drake, Arthur, Stratford.
Dyer, John, Guildford Street.
Eskell, Maurice, Grosvenor Street.
Fowler, Breame, Castle Street East.
Gillingham, Alfred, Guy's Hospital.
Godrich, Alfred, Fulham Road.
Goodchild, John, Heathfield House, Ealing.
Gray, Frederick A., Charrington Street.
Green, James, Landport, Portsmouth.
Haig, Percy de Haga, Giltstone Road.
Harvey, Charles W., University Hospital.
Hartridge, Gustavus, Shrewsbury.
Keetley, Charles R. B., St. Bartholomew's Hospital.
Kitchen, Charles F. H., Ogilvie Street, Manchester.
Lawrence, George E., Claverton Street, Bath.
Lindsay, William B., Camden Road.
Millar, William, Cathcart Road.
Morris, Sydney, Hayes, Kent.
Murphy, John F., Ardavinia, St. John's Hill, Wandsworth.
Osler, William, Stanhope Street.
Reid, Alexander, Towlaw, Darlington.
Risdon, George O., Charlwood Street.
Sobey, Arthur L., West London Hospital.
Symons, John, Manor Villas, Hackney.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 7th August, 1873.

Clift, Martin Luther, Central Street.
Godrich, Alfred, Fulham Road.
Risdon, George Owen, Charlwood Street, Pimlico.

The following gentleman also on the same day passed his primary professional examination.

Little, Henry Selby, St. Bartholomew's Hospital.

NAVAL MEDICAL SERVICE.—The following candidates were successful at the competitive examinations held at London in February, and at Netley in August, 1873, after having passed through a course at the Army Medical School, Netley, and will receive commissions as surgeons in Her Majesty's Navy.

Order of Merit	Names	Studied at	Number of marks gained; max. 6000.
1.	Wellings, B. W.	Glasgow	4485
2.	White, R. D.	Dublin	4350
3.	Leech, J. R.	Belfast	4335
4.	Wilson J.	Belfast	4185
5.	Madders, H. J.	Cork	4180
6.	Lucas, E. A.	Dublin	3675
7.	Sproule, R.	Dublin	3521
8.	Goddard, C. C.	London	3355
9.	Browne, S.	Belfast	3137
10.	Flood, A.	Dublin	2795
11.	Harrison, H. B.	London	2770
12.	Fitzgerald, M.	Dublin	2730
13.	Hamilton, S. F.	Do.	2413
14.	Magrane, C. W.	Do.	2402

MEDICAL VACANCIES.

The following vacancies are announced:—

ALCESTER UNION, Warwickshire—Medical Officer for the Bidford District: £55 per annum.
ASTON UNION, Warwickshire—Medical Officer for the Deritend District: £60 per annum.
AUCHTERGAVEN, Perthshire—Parochial Medical Officer: £32 per annum. Applications to Thomas Wyllie, Chairman.
BIRKENHEAD URBAN SANITARY DISTRICT—Medical Officer of Health, £250 per annum, without private practice. Applications, 19th inst., to Ambrose Wain, Clerk to Improvement Commissioners.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon: £100 per annum, furnished apartments, etc. Applications, August 28th, to the President, care of J. G. Douglas, M.B.
BROMYARD, HEREFORD, LEDBURY, LEOMINSTER, AND WEOLBY RURAL SANITARY DISTRICTS—Medical Officer of Health: £500 per annum for three years, without private practice. Applications, 19th inst., to T. Llanwarne, Esq., Hereford.

DROITWICH UNION, Worcestershire—Medical Officer and Public Vaccinator for the Ombersley District: £90 per annum and vaccination fees only. Applications, 26th inst.

EAST SUFFOLK HOSPITAL, Ipswich—House-Surgeon and Secretary: £100 per annum, board, furnished apartments, etc. Applications, 2nd September, to George T. Elliston, Secretary.

ESSEX AND COLCHESTER HOSPITAL—House-Surgeon and Apothecary: £80 per annum, board, and lodging. Applications, 21st inst., to John Lay, Esq., Secretary.

EVESHAM UNION, Worcestershire—Medical Officer for District No. 5: £12 per annum.

GENERAL HOSPITAL, Birmingham—Resident Registrar and Pathologist: £100 per annum, with board and residence.

JOINT COUNTIES LUNATIC ASYLUM, Carmarthen—Assistant Medical Officer: £100 per annum to commence, furnished apartments, etc. Applications, 27th instant, to the Medical Superintendent.

LIVERPOOL EYE AND EAR INFIRMARY—House-Surgeon: £80 per annum, residence, and maintenance. Applications, 20th inst., to Henry H. Hornby, Esq.

LODDON and CLAVERING UNION, Norfolk—Medical Officer for the Workhouse and District No. 2: £40 and £55 per annum.

MANCHESTER ROYAL INFIRMARY, etc.—Honorary Assistant-Physician. Applications, 30th inst., to Benjamin Brown, Secretary.

NEWTON ABBOT RURAL, and DAWLISH AND WOLBOROUGH URBAN, SANITARY DISTRICTS, combined—Medical Officer of Health: £400 per annum for two years, without private practice. Applications, 16th inst., to John Alsop, Esq.

RIPON DISPENSARY AND HOUSE OF RECOVERY—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 30th inst.

ROYAL INFIRMARY, Glasgow—Physician.

TENDRING UNION, Essex—Medical Officer for District No. 7: £50 per ann.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—House-Surgeon. Applications, 8th September, to A. Boodle, Secretary.

ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications to the Treasurer.

WEST SUSSEX, EAST HANTS, and CHICHESTER GENERAL INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £20 per ann., board, lodging, and washing. Applications. 23rd inst., to P. A. Murdoch, M.B., House-Surgeon and Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

***WAHLTUCH**, Adolphe, M.D., appointed Honorary Physician to the Hulme Dispensary, Manchester.

WEBB, William, M.D., appointed Certifying Surgeon under the Factories Act for the Mills at Wirksworth, Cromford, Matlock Bath, Lea, and Bonshall, in the County of Derby, *vice* *William Cantrell, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication

BIRTHS.

BINGHAM.—On August 6th, at Church Street, Alfreton, the wife of *John J. Bingham, L.R.C.P., M.R.C.S., of a son.

CLARKE.—On August 4th, at Laurence Street, Drogheda, the wife of *Francis E. Clarke, M.A., M.D. Dub., of a son.

WHITELAW.—At Wellington Place, Kirkintilloch, on August 13th, the wife of *W. Whitelaw, M.D., of a son.

MARRIAGE.

LANG-SMITH.—On August 13th, at St. Patrick's Church, Waterford, by the Rev. Denis Hanan, M.A., cousin of the bride, assisted by the Rev. W. H. Kerr, B.A., Thomas B. Lang, M.D., of Goombridge, Sussex, to Emily, second daughter of Thomas D. Smith, Esq., of Waterford.

DEATHS.

RODWELL.—On August 5th, at Loddon, Norfolk, George Rodwell, Esq., formerly of the ship *Edinborough*, East India Company's Service, aged 54.

SINCLAIR, Donald, M.D., of Peckham, aged 58, on July 23rd.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. A. P. Stewart, London; Mr. J. T. Clover, London; Dr. Noel Gueneau de Mussy, London; Dr. Hughlings Jackson, London; Dr. Swaby Smith, Liverpool; Dr. Allen Glenan, Ireland; Mr. Lawson Tait, Birmingham; Dr. Francis Clark, Drogheda; Mr. W. Summerhayes, Norwich; Mr. A. W. Jordan, Sheffield; Mr. T. Leeds, Sheffield; Mr. W. T. Colby, Malton; Dr. Aveling, London; Dr. Burdon Sanderson, London; Professor Virchow, Berlin; Mr. Cuffe, London; Mr. H. Arnott, London; Dr. Marey, Paris; Dr. Rumsey, Cheltenham; Dr. Kidd, Dublin; Dr. Edis, London; Dr. Carr, Blackheath; Dr. Ord, London; Dr. McKendrick, Edinburgh; Mr. Waren Tay, London; Dr. Dieulafoy, Paris; Dr. Pappenheim, Berlin; Dr. Grabham, Madeira; Dr. Steele, Liverpool; Mr. Adams, Bungay; Dr. Harrington Tuke, London; Mr. Pennefather, London; Dr. Bell Taylor, London; Dr. Cobbold, London; Dr. Moriarty, Woolwich; Dr. Morell Mackenzie, London; Dr. T. Ballard, London; Mr. Fielding, Alfreton; Dr. Webb, Wirksworth; Mr. G. W. Hastings, Malvern; Dr. Miller, Dundee; Mr. Manby, East Reedham; Mr. W. Smith, Edinburgh; Mr. C. Greig, Clifton; Our Paris Correspondent; etc.

* Several hundred communications were received during the last week, and of these we are able to acknowledge only those which relate to MSS.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

SIR,—For the information of your correspondent, Dr. Corben of Guernsey, I beg to offer an explanation of the terms "Chrisoms" and "Headmouldshot". "Chrisom" applies to the "death of a child within a month after its birth, so called from the chrisom cloth, or linen anointed with holy oil, which was formerly laid over a child's face when it was baptised". "Headmouldshot" is a disease in children, in which the sutures of the skull, usually the coronal, have their edges shot over one another".

If you could find a place for the above explanation, it may enlighten many who never before heard of such "queer names" for "ills" that "flesh was heir to" in the early part of the last century. I am, etc., E. DES FORGES,

Member of the British Medical Association.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Manchester Guardian, July 16th; The Aberdeen Daily Free Press, July 12th; The Bath Express, July 12th; The Birmingham Daily Post, July 16th; The Herts and Essex Observer; The Roscommon Journal; The Hull Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Sussex Daily News; The City Press; The Birmingham Daily Mail; The Kendal Mercury; The Daily Review; The Western Mail; The Wrexham Guardian; The Lincolnshire Chronicle; The Inquirer; The Lincoln Gazette; The Redruth Times, July 12th; The Liverpool Albion; etc.

BOOKS, ETC., RECEIVED.

The Harveian Oration, 1873. By George Rolleston, M.D., F.R.S. London: Macmillan and Co. 1873.

Evolution of Life. By Henry C. Chapman, M.D. Second Edition. Philadelphia: 1873.

CLINICAL LECTURE

ON

A CASE OF ILEO-COLIC INTUSSUSCEPTION.

By J. D. HEATON, M.D., F.R.C.P.,

Senior Physician to the Leeds General Infirmary.

JOHN MCNEIL, a stonemason, aged 40, of full stature and good physique, but somewhat emaciated, and having a haggard countenance, had been working in a country village, from which he came to the Leeds Infirmary on January 8th. He had good health till the latter part of November last, six weeks before admission, when he had an attack of much pain in the body, and thought he had taken cold in the bowels. He was better and worse for some weeks, till the 21st December, when he was seized with violent pain and vomiting, the bowels being very costive. Hot fomentations and castor-oil gave relief; but now food could not stay on his stomach, nor brandy, but he could take port wine. There is no history of his having passed any blood from the bowels. He continued to have much pain and frequent vomiting, and diarrhoea succeeded to the previous constipation. The case was not understood; there was some suspicion of fever; and, to avoid risk, he was sent to Leeds.

At the time of admission, the symptoms were pain in the abdomen, varying in severity; occasional vomiting; anorexia; tendency to diarrhoea; tongue furred, and rather red on the margins; abdomen full, rather hard, tender especially on the right side. In the right iliac region, and along the course of the ascending colon (which was the principal seat of pain and tenderness), an induration could be felt and pretty clearly defined, having a dull stroke-sound. The liver was not enlarged; and between the inferior margin of the ribs and the induration below there was a space of two or three inches, which was soft and resonant, showing that the painful induration had no connection with the liver.

During his life in the Infirmary, the chief symptoms were pain, pretty continuous, but variable in degree; frequent vomiting, sometimes of ingesta, sometimes of dark, greenish fluid, of offensive smell, but not distinctly stercoraceous; diarrhoea, occasionally alternating with constipation; tongue red and furred, but not dry. Fulness and induration in the right abdomen were always present, but variable in degree; sometimes forming a distinctly perceptible elevation, which would afterwards subside. He gradually emaciated and became more haggard. Diarrhoea was the prevailing condition of the bowels; vomiting became more constant. His last days were passed in much pain. He died on the 8th March, three months and a half after the commencement of the symptoms.

It was evident that the disease, of whatever nature, lay in the ascending colon, where it occasioned both irritation and partial obstruction. I had suspected thickening and partial contractions of the walls of the bowel, probably with ulceration of the mucous membrane, and probably malignant. This hypothesis would account for all the phenomena, except, perhaps, the rapid progress of the case. The variable size of the tumour was clearly due to variable amounts of intestinal matter accumulated in the affected portion of intestine.

The palliative and symptomatic treatment adopted was all that could have been available from the time of the man's admission, had the exact nature of the case been diagnosed. Bismuth, alkalies, taraxacum, and other remedies, to restrain vomiting and correct abdominal secretions; turpentine epithems, occasional blisters, and other means of counter-irritation, when local pain and tenderness were aggravated. Once only, when vomiting had been unusually obstinate, in connexion with constipation of the bowels for some days, two grains of calomel were given, followed by a black draught, which produced the desired effect both upon the bowels and in quieting the gastric irritability, and were the occasion of no bad effects. But I certainly should not advise my class to administer active purgatives in a recognised case of intussusception as a general practice. The greatest amount of benefit was obtained by the use of opiates, both by internal and by hypodermic administration, for the relief of pain during the progress of the case, and for the attainment of such a degree of euthanasia as was possible at its close.

On the *post mortem* table the body was seen to be much emaciated, but the abdomen somewhat prominent. On opening the abdomen, a considerable amount of fluid appeared—serous, but yellowish and opalescent, as from some purulent intermixture. The superficial appearance of the viscera presented nothing remarkable, save that the stomach and transverse colon were much distended with flatus; but on turning away the small intestine from the right side, the ascending colon was seen distended, not with gas, but with some substance, so that when handled it felt hard and resisting as a solid cylinder.

On laying this open by a longitudinal incision, an elongated cylindrical tumour was seen to distend the greater part of the ascending colon; attached towards the cæcum, but otherwise lying free, and terminating upwards in an obliquely rounded extremity. It was surrounded by some purulent fluid, chiefly towards its base. The colour of this body was chiefly dark red, but mottled with patches of a slaty purple, and towards its free extremity it was of a dirty olive colour, as though shagellated. This tumour felt firm and solid; but, as it was manipulated, some fluid exuded from its free extremity, and it somewhat shrunk, both in length and thickness. Further examination showed that this apparently solid body was an invagination of the lower part of the ileum, and of the cæcum into the ascending colon. A bougie would pass through its centre from the ileum, emerging at one side of its free extremity, where any aperture was scarcely perceptible, except as dilated by the passage of the instrument. Through this narrow canal, the transmission of all intestinal contents, which had been voided during the latter part of the patient's life, had been maintained. The mucous membrane lining the central canal (which was formed of the invaginated ileum) appeared healthy, as was also that lining the portion of colon which enclosed the tumour. Between the intermediate opposed serous surfaces considerable adhesions existed, so that the handle of a scalpel could be only partially introduced. The appendix vermiformis lay free between these surfaces. Other portions of intestine presented nothing unnatural. The liver was not large; the gall-bladder was much distended with dark bile. The left kidney was very small, not above half its natural size, but otherwise normal, maintaining the due proportion between cortical and medullary structure, and being neither indurated nor granular. In the right kidney, which was of natural size, was a small well-defined abscess containing matter.

The invagination commenced, most probably, with the patient's first experience of pain in the bowels, by a small portion of the ileum being drawn into the cæcum. The peristaltic action—propelling this involved portion of bowel, as it would any other continued matter, subsequently involved additional bowel, both above and below the ileo-cæcal ring; so that the cæcum itself, as well as a greater length of ileum, was drawn into the ascending colon. When once the opposed serous surfaces of the involved bowel have become adherent, it is evident that more bowel can be drawn in only by thus involving fresh portions both above and below the original seat of the displacement; as these serous surfaces will then no longer admit of that gliding upon each other, which must necessarily take place when an intussusception is increased only by additional portion of the upper, or anterior, intestine being involved. The junction of the ileum and cæcum is a common seat of this accident.

When intussusception occurs, it is the anterior portion of bowel which is drawn into the posterior, so that the natural propulsive action has a tendency continually to increase the extent of the mischief. On the contrary, were it ever the case that a posterior portion of intestine could drop into the anterior, the spontaneous action of the bowels would speedily reduce the displacement.

It is not often that an intussusception is unfolded; and when once adhesions have been effected between the opposed serous surfaces—which probably soon occurs—it is evidently impossible that this satisfactory result can be obtained. Intestinal obstruction is commonly the immediate result of this accident. The central canal is surrounded and compressed by two other concentric tubes; this compression is increased by the congestion of the strangulated vessels; and, in the case of the small intestine, the contortion occasioned by the mesenteric attachment still further obstructs the central passage. Thus it is that sudden severe pain, followed by intestinal obstruction and the combination of symptoms constituting *ileus*, usually characterises this accident. That any absolute obstruction did not occur in this case, was due to the large capacity of the colon which had received the smaller tube of the ileum.

The obscure nature of the early symptoms seems to have entirely resisted diagnosis at the commencement of the case; and the peculiarities of the previous history; and the prevalence of diarrhoea whilst the case was under observation in the infirmary, still left the diagnosis uncertain, until the disclosures of the *post mortem* examination.

I think that the anomalies in the progress of the complaint and its protracted duration are worthy of record.

As to treatment, when the case came under our care it had already passed beyond the possibility of anything but palliative symptomatic remedies, which would have been little modified had its real nature been certainly ascertained. After six weeks, the invaginated bowel must have contracted adhesions, rendering it incapable of reduction. Mild aperients and copious injections of warm water, slowly administered, with the object of unfolding the intestine, are the means specially adapted to the commencement of an intussusception; and throughout its course opiates or other sedatives must be given, to quiet undue peristaltic action and to relieve pain.

ON THE CHANNELS THROUGH WHICH CHOLERA IS COMMUNICABLE.*

By JOHN MURRAY, M.D., Inspector-General of Hospitals.

AMONG the greatest obstacles to the study of cholera are the dissimilarity of the symptoms in the various stages of the disease, and the difficulty of connecting the mild symptoms at its commencement, with those that are so excruciating and virulent in its later stages. The recognition of this connection is of recent date, and until it was established our knowledge of the nature of the poison progressed slowly. The acknowledgment of this fact has materially assisted our investigations, as an early diagnosis of the presence of cholera is of the utmost importance. When this connection is allowed, it gives valuable aid in effecting measures for restraining the dissemination of the disease. In its milder stages, treatment can be employed which will prevent its advance to those later stages in which medicine is often powerless, and sometimes injurious; and in thus checking a simple case, the spread of the cholera poison is most effectually opposed. I consider cholera the most important medical question of the day, and it is to promote its elucidation, and in the hope of benefiting by the experience of the many celebrated and justly honoured members of our profession now assembled, that I submit my opinion on one branch of the inquiry, viz., the channels through which the disease can be communicated. I have selected this point as one of the greatest practical importance, leaving others for future investigation and more able observers.

The history of the views of the medical profession on the contagious nature of cholera is very interesting. I find in the accounts of the disease in India previously to 1817, that it was supposed to arise from a vitiated state of the humours and from putrid bile which had to be purged off. When the epidemic in 1817 commenced, it was considered an aggravated attack of an ordinary seasonable disease, which, like ague, prevailed during the rainy season in Bengal. The progress of the disease in the Upper Provinces, the severe attack in Lord Hastings's camp in Bundelcund in November, and its subsequent history when it attacked the troops on service in Central India and in Madras and Bombay in 1818-19, led some of the officers to consider it contagious. The official reports drawn up by the Medical Boards of Calcutta and Madras, in 1818, concluded that cholera was not contagious, though there were some dissentient voices to this view. The Medical Board in Bombay, on the other hand, considered that it was contagious. In Paris, where I first saw the disease, in 1832 it was declared by the leading physicians to be non-contagious. The same opinion prevailed in England in 1848 and 1854. There were always individual exceptions, but officially and by the profession generally cholera was considered non-contagious. The first departure from this view in any official report, occurs in one published in India in 1856, when the contagious nature of the disease was assigned as a reason for incurring the expense of removing the prisoners from the jail at Agra during a very severe epidemic. Again, in 1860, 61, 62, and 63, the same reason was assigned for incurring the expense of removing the European troops into camp during severe epidemics in those years. Similar views were supported by the Sanitary Commission in 1862, and they have since that time guided the measures adopted by the Government of India in regulating the precautionary treatment of the disease.

The non-contagious nature of the disease was the prevailing opinion of the profession in Europe until the year 1865, when the severe epidemic which desolated many countries attracted general attention, and was followed by the International Sanitary Commission at Constantinople. Since then the change of opinion has been very decided.

There are few now who do not consider the disease transmissible, either directly or indirectly, from a cholera patient to a healthy subject; and this is one of the recognised definitions of a contagious disease. The objections to the contagious view of the question are now reduced to the remark that cholera is not so contagious as some other diseases; or that it is not communicated in the same manner, but through some special channels as the air, subsoil-water, etc. That the course of the disease is influenced by the state of the various media through which the poison passes is evident; but that any one of these in a normal state is essential to the transmission of the disease is not proved, and the existence of an abnormal state has no further foundation than conjecture required to supply a deficiency in some theory.

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873. The discussion on this and the following two papers on cholera is given at page 238.

It is thought by some, whose opinions have great weight, that the locality in which the disease occurs offers the most important channel of communication. This is the popular belief of the natives of many parts of India, as they will sometimes desert their villages when the disease breaks out, and take refuge in the surrounding jungles, thus showing their idea that there is danger in the locality.

With these preliminary remarks, I will now proceed to my subject, the channels of communication; and in the first place will trace the course of the poison from the diseased body of a cholera patient, through external agents, or media, to the healthy person in whom it excites the characteristic symptoms of the disease. I take it for granted that the symptoms of cholera are caused by the presence of a poison in the system, and that it is only when that is removed that health is restored. The restoration of health implies the elimination of the poison, either in an active or an inactive form. The ordinary channels of elimination are the lungs, the skin, and the bowels, and through one or more of these it may be inferred that the poison leaves the body. As these are the channels through which foreign bodies find entrance, it may be presumed that through one or more of them the poison enters the system. That the bowels form one channel for exit, is evident from the characteristic profuse discharge from them; and for entrance also, from the fact of the disease having been induced in a healthy person by swallowing the evacuations from a cholera-patient when mixed with drinking water or food. The opinion that the cholera poison exists in a most dangerous state in the evacuations has gained ground rapidly since the remarkable case of the Broad Street pump, recorded by Dr. Snow in 1854, and it is now universally accepted by the profession. Some authors of note suppose that the bowels are the only channel of elimination, and that, by disinfecting the evacuations, they can arrest the communication and dissemination of the disease.

That the skin forms another channel of exit appears probable from the profuse cold perspiration, which is a symptom of the disease, and which has the peculiar or characteristic odour. Many instances are on record of the disease being communicated to healthy people who have worn, handled, or washed the clothes belonging to cholera patients. It is probable that in these cases the poison also entered by the skin; but it is possible that it may be of so light or volatile a nature that it may rise into the air and be breathed, thus entering through the lungs; or it may even adhere to the saliva in the fauces and be swallowed, and so pass into the bowels.

That the lungs are a channel of entrance for the poison is rendered probable by the fact of the disease following attendance on patients suffering from the disease, as well as exposure to currents of air from places polluted by cholera evacuations, to peculiar fogs or miasms or foetid sewage-gases. There are numerous illustrations of all these cases.

Having thus briefly alluded to the different channels through which the poison, or germ of cholera, may leave and enter the body, I will now consider the various channels or media through which it passes while outside the body.

In ancient times, it was considered that plagues and pestilences of all sorts depended on an *epidemic or abnormal state of the air*, and not on contagion; otherwise the earth would have been depopulated by the extension of these diseases. This theory of an epidemic atmosphere has been thought especially applicable to cholera, as it differs from other contagious diseases, as small-pox, etc., in the fact that recovery from one attack affords no immunity from a second. It would also explain the limited duration of these epidemics, and these simultaneously appearing or disappearing over a wide extent of country. But it has been satisfactorily proved by recent investigation that atmospheric influence alone will not account for the appearance of the disease. It is a curious coincidence, that in India almost the only believers in this atmospheric theory at present are the two statistical officers in Calcutta—Dr. Brydon, Statistical Officer to the Supreme Government, whose Tables of the Diseases of India are most valuable; and Dr. Smith, Statistical Officer to the British Medical Service, who has lately written a book to prove that ague, cholera, and sun-stroke are modifications of the same disease. Dr. Brydon's theory is, that cholera originates in Bengal, where it is endemic; that it is carried over the world by winds; and that it has a period of existence limited to three years, after which it disappears, and will not return without a fresh irruption from Bengal. The objection to this theory is, that the disease progresses against the wind as readily as with it, on the different lines of commerce. The observations recorded at the time of the Hurdwar epidemic show that the disease spread simultaneously with the returning pilgrims in all directions of the compass, progressing at the rate at which they travelled, whether on foot, on horseback, or by rail; and thus could in no way have depended on the wind. Again: the disease has in many cases accompanied steamers across the ocean, and appeared in the new countries simultaneously with their arrival. In reference to

the supposed triennial character of the disease, this is not supported by the fact that, since it reached Persia in 1820, it has appeared there every year with very few exceptions. In Russia since 1830, and in Germany and America since 1832, I believe it has never been absent from some part of the country.

The season of the year has a very decided influence upon the disease in India. I have compiled tables showing the result of a careful examination of the statistical returns of the sickness and mortality among the European troops in the Bengal Presidency, from the year 1814 up to the present date. The influence of season on cholera is here clearly demonstrated; and it cannot be considered accidental, as it includes a period of fifty-eight years, and a total strength of 1,095,549. The second line in the table shows the returns from the native troops since 1826, on a total strength of 3,930,546. The third line shows the returns from the native prisoners since 1854, on a total strength of 980,546; the fourth, the returns from the native population since 1867, on a total of 221,042,902. It will be observed that the season favourable to the spread of the disease differs with the locality. In Bengal, and on the coast, the season is March, April, and May; whilst in the North-West Provinces and the Punjab it is July, August, and September. The influence of season is marked also in Madras and Bombay; the period coincides more with the season in Lower Bengal than with that of the Upper Provinces. The vicinity of the sea may exert some influence. These separate divisions of the country show variations in the season; but season has merely a modifying influence on the atmospheric channel. These tables are valuable, as showing its extent; but they also indicate that there are other powerful influences bearing on the diffusion of the disease, as some of the most severe epidemics in the Upper Provinces have occurred at the seasons which these tables indicate as almost exempt from cholera—viz., the great epidemics at Hurdwar in 1782 and 1867, which both broke out in April; and the attack in Lord Hastings's camp in Bundelcund, which commenced in November in 1817. I have also seen some sharp local attacks, and had reports of many others, during the cold season in the Upper Provinces—a time when these tables show an almost total absence of the disease. July, August, and September are the months in which cholera has raged most severely in London; but the attacks over the country are not so prescribed. As a general rule, the season for the disease in England and all temperate climates appears to be autumn, though instances of its spreading at other times are numerous. It is very probable that pure air has a disinfecting or purifying property. At any rate, articles that have been excluded from the air have retained their infecting power for weeks or months. This has been shown when people were attacked after examining boxes containing the clothes of those who had suffered from cholera some time before. The influence of certain impurities mixed with the air in increasing the multiplication and facilitating the dissemination of the poison is very marked, whilst others are supposed to restrain its action or destroy the poison. The admixture with the air of the gases produced by animal and vegetable decomposition, evidently favours the development of cholera as much as plague, typhus fever, and other epidemic diseases. Some even suppose that defective sanitary arrangements may induce cholera; but there is no proof of this, and I do not believe in the spontaneous production of specific disease. This is a point of great practical importance, as it shows the value of those precautionary means which may be employed to intercept the communication of the disease through those channels which we are now considering. It is supposed by some that even discussing the contagious nature of cholera, far more authoritatively sanctioning such a view, would act injuriously on the public; that the sick would be deserted, and panic increased. But this is far from my experience. Concealing the truth does no good; and it is already the popular idea that the disease comes from the sick person, and that there is danger in his vicinity. It creates confidence to be assured that, though the poison may be, and most likely is, imbibed from contact with the sick, its effects may be rendered very harmless by early attention. In some cases, nature alone casts it out; while, if the *malaise* from the poison proceed to diarrhoea, this can easily be checked in its earliest stage by simple remedies. I have on more than one occasion seen a regiment in a state of extreme excitement when it was loudly asserted that the disease was not contagious; and I have seen confidence restored by measures carried out avowedly for the purpose of avoiding contagion.

That very impure air will not alone cause the disease, is evident from the fact that cholera has only of late years become known in Europe; and defective sanitary arrangements are certainly not more general now than in former years, though they may attract more attention. As in a richly manured field a luxuriant crop of wheat or barley is produced if wheat or barley be sown, so in a very contaminated air will the crop of disease be abundant if the germs of cholera be introduced. The

most striking illustration of this that I have met with occurred at Chilly, a station in Assam, in 1869. The disease had been prevailing in a mild form for some weeks in the surrounding country; but the station remained free until, for sanitary purposes, it was resolved to clean out a dirty hollow which formed a natural cesspool near the jail. Clearing out the soil caused a most disagreeable smell, and was immediately followed by a severe outbreak of cholera amongst the prisoners employed in the work and the inhabitants of the vicinity. In this instance, the poison, being present, seems to have found a suitable soil in the disturbance of the cesspool, in which it multiplied excessively, and without which it might have disappeared. The laudable intention of the sanitary officers proved injurious, from being carried out at a wrong time.

There is no point on which the concurrence of professional opinion is more decided than on the danger of impure air. It is founded on observation of the fact that in cities where the air is most vitiated, the disease prevails to the most fatal extent. As there is generally a combination of other non-sanitary effects, in sewerage, drainage, and bad water, it is difficult to discriminate the individual share of each agent. Impure air has probably been the channel of communication in instances on record where an individual walking out in the open air has been sensible of a disagreeable smell previously to the commencement of symptoms of cholera; also when the disease has appeared in part of a range of barracks or buildings situated to leeward of the place where the body of a cholera patient lay, or of cesspools or privies used when cholera was raging. One side of a ward has sometimes been affected when the occupants of the opposite side have not suffered. I have records of numerous instances illustrating these points; but in no case did the range traversed by the poison extend beyond a few yards.

In the investigation of the various channels by which the poison may be transmitted from the diseased to the healthy, the first object that occurs for consideration is the body itself in which cholera has manifested its presence. When this has run its fatal course, may it be transmitted from the dead body? This point has been argued with much ability and plausibility by the best medical authorities since the appearance of the disease in 1817. With many, it is still an open question. The argument that the dead body is not a source of contagion, rests on the negative evidence that many or most of those who have performed *post mortem* examinations have not been attacked by the disease. Negative evidence of this nature is to be found without limit; and it is a fact, though not so universal as many suppose who limit their acquaintance with the disease to the stage of collapse. For example, Dr. Jameson, one of the most influential non-contagionist writers in India, relates that the body of a surgeon who had died of cholera was examined by three medical officers, who all remarked a peculiar smell, and all suffered for the next two or three days from sickness and diarrhoea. With our present knowledge of the symptoms of the earlier stages of the disease, we should say they had imbibed the cholera-poison; and this would be an illustration of its being contracted from the dead body. There are many instances related of women employed in washing and dressing dead bodies being attacked on the following day. I may mention the case of a sepoy who in 1818 died of cholera at Goruckpore, and was carried to the grave by five of his companions. They all took the disease that night, and died. Dr. Townsend, Sanitary Commissioner Central Provinces, reports in 1869 that on May 25th three men were summoned by the police from the village of Dumwahi to bury the body of a man who had died of cholera near the police-station. The cholera broke out at Dumwahi on the next day, and lasted fifteen days. These three men died, and sixteen more, out of a population of 106. The policemen were not affected; they probably did not touch the body. I have read several reports of cholera having broken out among parties of coolies employed in road-making, after opening graves where cholera subjects had been buried some years previously. In America, where it is a common practice to transport the dead from a distance to their native towns for burial, instances of the disease having appeared after the arrival of the bodies of cholera cases are reported in the *Army Medical Reports* for 1869. The presumptive evidence from these cases is, that the dead body is a source of danger.

The living body is considered by nearly the whole profession, in the present day, to be the channel through which the poison of cholera is received, multiplied, and transmitted; and from the living body the evacuations are one of the chief channels of communication. On this point there is little divergence of opinion. It is in accordance with the history of the disease to infer that the human body has been the means by which it has been spread over the world, through the ordinary channels of commercial communication, the poison having probably been disseminated in the evacuations. The number of those who question the power of the poison to multiply when in the body is very limited.

I think Professor Pettenkofer stands alone in considering the subsoil-water essential to the reproduction of the poison in a state of activity. There is every probability that the poison is capable of passing through the various stages of its existence outside the body, in a watery medium; but it is clear that it may pass directly from the body of the sick, or from the evacuations which proceed from the body, to a healthy body, and there induce the disease without the intervention of any subsidiary aid, beyond the mechanical transmission by air or by water. In impure water the poison probably multiplies, but this is not essential to its activity. In the cases just alluded to, of infection from dead bodies, there is no indication of any intermediate state of development in the poison, in its passage to those who received it. Instances of healthy people being affected by the disease after intercourse with cholera patients, are beyond number. I may give in illustration a few instances from my own experience, as they materially influenced my opinions of the disease. In 1856, during an epidemic attack at Agra, I visited the Jail Hospital, where the disease was very severe, with Dr. F. On leaving the hospital, he complained of feeling sick, but we drove to the Thomason Hospital, where I had several good surgical operations, at which he assisted. The excitement appeared to keep the attack in check till the operations were finished, but immediately afterwards he was seized with watery vomiting, and other symptoms of cholera. On another occasion, during the same epidemic in 1856, while passing through the cholera wards of the Jail Hospital, I visited the dead house, where I saw some fifteen bodies. On returning to the cholera wards, where the peculiar odour was very oppressive, I felt a shock in the precordium, followed by a cold, deadly feeling, which gradually extended over the body. I immediately concluded that I was attacked by the disease, but thought, if I made it known, it might create panic amongst the attendants. I asked the native doctor if he had a good stock of quinine in store; he said he had, and I desired him to let me see it, and continued my progress through the hospital, the cold, dead feeling now extending to the extremities. On arriving at the hospital door, the native doctor brought the quinine on a paper to show me. I put a large pinch into my mouth, jumped into the carriage, and told the coachman to drive home. At first the quinine had no taste; but, as I chewed and swallowed it, I became warm, and it tasted bitter. On reaching home, I took two cholera pills, lay down and fell asleep. I awoke well. For two or three days there was want of appetite, and the bowels were torpid, but there were no active symptoms. A few days afterwards, an American missionary, to whom I had related this case, had a similar shock about two hours after attending a child who was suffering from cholera. About two hours after the shock, diarrhoea commenced; after the second or third motion, he recollected my treatment with quinine, and commenced taking it; the diarrhoea continued till morning, but collapse did not supervene. At Agra, in the epidemic of 1861, a clergyman, Mr. E., was attacked with watery vomiting while attending the bed side of a cholera patient in the Artillery Hospital; he had that morning officiated at the funeral of a gunner who had died of cholera. The captain and three men of the funeral party were attacked the same day. The captain and, I think, one man died; the clergyman, from the use of timely remedies, recovered. On that same morning, on visiting the hospital of the European Regiment, I found the officer on duty vomiting in the verandah, which was the commencement of the disease; he died two days afterwards.

There is a remarkable case noted by Staff Surgeon Connell in Madras, in 1818, of the wife of a conductor, living in the Artillery Lines, being attacked with cholera. Her friend, Mrs. Gray, attended her for a couple of hours; she was seized with the complaint, and died the next morning. Her son, a boy six years old, living in the same house, was attacked the day after the death of his mother.

It is also reported by Dr. Cardew, Deputy Inspector-General of Hospitals, that the first case of cholera that occurred at Lucknow in 1864, before the epidemic appeared in the city, was in an officer of the Royal Artillery, followed, within twenty-four hours, by the attack of two other officers who were residing in different parts of cantonments; but both these officers had been in constant attendance on the first patient till he died.

I consider these illustrations of the direct communication from the sick to the healthy, by means of the air certainly, but to a limited extent, and not requiring a specific or epidemic state of the atmosphere, which shall extend continuously thousands of miles, as implied in Dr. Brydon's aerial theory.

We now come to the consideration of the solid or earthy media, to which the poison may become attached, and so be made a source of danger. The dead body comes under this denomination, but it has already been discussed. The clothes and bedding used by the sick come next under notice, and that they are dangerous is very generally believed; and, if so, this goes far to establish the contagious nature of the

disease. In India, in 1869, under the orders of Government, I collected the opinions of the medical officers in that country on the chief points in the history of cholera. The result is a valuable table, showing the views of 505 members of our profession, who have all had experience of the disease. By 492 of these, the clothes and bedding were recommended to be burnt, while only three opposed this view. That danger arises from merely washing these articles, is shown in many instances. It was reported from Besabat, in 1867, that the inhabitants were attacked by cholera two days after the clothes of some pilgrims had been, contrary to orders, washed in the village tank. It may have been from the clothes of the pilgrims that the inhabitants of Jough Kelan were infected the same year; but the sick pilgrim remained on the banks of the tank during the day, and he most probably bathed and used the water for other purposes. At Constantinople, in 1865, an instance occurred which proves that these articles become contaminated. The clothes and mattresses of the sick were washed in a fountain, and, the water-pipe being unfortunately broken, the foul water communicated with the clean. In a single day sixty people died in the suburb which is supplied by the affected stream. It is a common practice in India to wear the clothes of the deceased, and this may be one of the causes of the widespread mortality. There they wash their own clothes; but, in Europe, there are special people employed for the purpose. The Report of the College of Physicians in England, in 1849, shows many instances in which washerwomen were attacked, and it was amongst them that the disease first appeared in 1854, after the clothes of a cholera subject had been washed. In America, many similar cases are recorded. Instances are numerous of people being attacked by the disease after unpacking and handling clothes that have been worn by cholera patients. One of the most remarkable anecdotes I have met with, illustrating this, is related by Dr. Simpson, who states that a young lady, in 1832, was attacked with cholera after wearing a cap which had been worn by her aunt, who had died of cholera nearly a year before. The cap had been set aside in a drawer, which was not opened until that day. Similar cases are mentioned as occurring in England and in Germany, by Professor Pettenkofer, of Munich, 1854, by Dr. Sibert, of Frankfort, 1856, and Dr. Flauvel, in France, 1868.

That the cholera poison becomes attached to places, and, remaining there, must be a source of danger, is the next point for consideration. On this the opinion of the medical officers in India, given at the time to which I have alluded, is less decided than on some other points, though it is very clearly defined. Of 505 officers, 432 think the disease communicable from the place, whilst 19 say that it is not; but, as only 4 of these object to removal from the place as a desirable remedy, their practice does not agree with their theory. That the ground may become affected is proved by instances of troops or travellers being attacked after encamping on ground recently vacated by parties suffering from cholera. The period during which the open ground, exposed to the influence of the sun and air, may remain dangerous, is uncertain. I have seen no injurious effects arise from ground which had been occupied by cholera camps a year previously, when troops have again moved on to it. But I had reason to suppose that old buildings, in the vicinity of Agra, which had been occupied by cholera patients the year before, were injurious to the new comers, as attacks in them were more numerous than they had been in the previous year, or than they were in the open camps in the neighbourhood. I may here allude to the danger which arises from latrines. I have noticed that they are a fertile source of the dissemination of the disease, particularly in the European barracks and native jails. The accompanying table, which I bring forward to show the influence of season, also demonstrates the effect of the use of latrines. There is a marked difference in the extent to which the European soldiers and native prisoners suffered, as compared with the native soldiers and civil population. The military duties of the European and native soldier are the same, and the native soldiers and civil population are of the same race as the native prisoners. The sanitary arrangements for the troops and prisoners are equally efficient, while those of the towns are known to be very defective. There must, therefore, be some powerful channel of communication in force, with the English troops and native prisoners, which is wanting with the native troops and civil population, and this, when discovered, should be guarded against in all countries. The circumstances common to the English troops and native prisoners are, that they reside in large rooms or barracks, and that they use public latrines, whilst the native troops and civil population live in separate houses, and have no common latrines.

In the Indian reports which have come under my notice, instances are innumerable of a first case of a severe epidemic appearing in a village in some resident who had returned from a visit to a distant town, or to another village, where the disease was raging. Similar cases are common also in European and American reports. I have myself observed attacks

to follow visiting buildings, or other places, to which the poison may have been attached; living patients were also present, and from them the poison may have been transmitted, and not from the building.

The question whether there was danger in admitting cholera patients into general hospitals was much discussed in India when the disease appeared in 1817. It was decided that there was not, and this opinion prevailed till very recently. It was promulgated in official reports in France, Russia, Germany, and England, and acted on up to 1865, since which time these views have generally changed. There are, however, a few who maintain that there is little or no risk, and such cases are still admitted into general hospitals in many of the cities of Europe wherever especial cholera hospitals are not yet established. If the contagious nature of cholera were once authoritatively admitted, this would not be permitted. Even when there are special cholera wards, the danger is brought very close to the other sick in any hospital. Large wards for the treatment of cholera patients are very unfavourable. In no case is it more important to keep up the spirits of the sick, and the depressing effect is very great of seeing their companions in agony sinking and dying rapidly around them. Small tents, or huts, form, in my opinion, the best cholera hospitals. They should be erected on open ground in the vicinity of trees, if practicable; the sites for these hospitals should be selected, and all subsidiary arrangements settled, before the disease breaks out. By this means time is gained, confusion obviated, and panic averted, by the public seeing that the authorities have foreseen the danger, and know how to meet it. The arguments in favour of the non-contagionist views were very strong. It was reasoned that if the disease were contagious, the physicians, hospital attendants, and other patients present must suffer—indeed, could scarcely escape attack; but that in many instances these people did not suffer more than others. Some went so far as to say that, from habit, being in the hospital created an immunity from attack. Many old Indians will assert that the disease cannot be contagious, because they have attended friends suffering from cholera without contracting it themselves.

My own experience furnishes many instances illustrating immunity from attack. The native hospital attendants rarely suffered. The class of *shampoos*—natives employed to rub or “shampoo” cramped European sufferers—were in no instance affected during four epidemic attacks at Agra, where seven hundred were employed. The reports from the General Hospital, Calcutta, show that none of the subordinates, or native attendants, and few of the sick, have been attacked in the hospital; and similar reports are numerous in reference to other European hospitals in India. I see no reason to doubt the accuracy of these reports. But, on the other hand, as a general rule, the number of patients in hospital, and orderlies attending on their comrades when in hospital, when attacked, is above the average of the rest of the corps.

Dr. Brown, the present Inspector-General in Bengal, reported that, of the cases in the hospital of Her Majesty's 89th Regiment at Umballa in 1861, one-fourth occurred in patients in hospital for other diseases, and one-sixth in the orderly attendants. Dr. Poole, Civil Assistant-Surgeon, notes in a report in 1859 that it is worthy of record that every one of the regular attendants on the sick were severally attacked, and he considers that the further progress of the disease in the hospital was only checked by daily doses of quinine, taken by himself, and ordered for the native doctor and all the other attendants. Dr. Wilkie, Deputy Inspector-General, Meerut Circle, in his report of 1861, remarks that in the European hospital at Meerut, twenty-seven men and three women patients were attacked, and six orderlies and attendants. Surgeon J. MacGregor, of Her Majesty's 39th Regiment at Bellary, in the Madras Presidency, writes in 1839 that there were a great many attacks in the hospital, both in men who had been long under treatment, and in men recently admitted for fever, in whom blood-letting had been practised. In this weak state cholera invaded twelve patients, and proved fatal to eleven. The Cholera Commission in India in 1862 reported that the sick and attendants in hospital were attacked above the average proportion. This is the conclusion at which I myself have arrived after thirty-eight years of careful observation of the disease. That it is the decided opinion of the profession in India, is shown by the table I have before quoted. The adverse opinions on the four leading questions bearing on this point—viz., removal from the locality, isolation of the infected, special hospitals, special attendants—only amount to sixteen; whilst the opinions in favour of these measures amount to 1,943, which is a proportion of more than 99 per cent. I do not deny, on the contrary, I am of opinion that the body gets accustomed to, and from habit tolerant of, the poison; somewhat as it gets accustomed to the use of alcohol, opium, or arsenic, of which an *habitué* can with pleasure take a dose which would render insensible, or kill, one not accustomed to their use. This view is strengthened by the fact that visitors to an infected locality are peculiarly liable to attack, and suffer in a greater

proportion than the residents. I and others have observed this in the Upper Provinces, and it is peculiarly remarked in Calcutta.

It follows as a natural inference, from the facts here stated, that removal from an infected locality is one of the best means of avoiding danger from the disease. In military life this is practicable, and in India has been carried into effect with the greatest advantage, by removing the troops into tents on the first appearance of the disease in an epidemic form. This is not feasible with a civil population or a crowded city in the same efficient manner; but those who have the means of leaving the place should do so, as their departure would not only benefit themselves, but be of advantage to those who must remain.

On board ships at sea, the disease appears to be influenced by similar causes as in houses or barracks on land. There have been numerous instances of cholera appearing in emigrant ships and proving very fatal some days after sailing from England. I may mention two instances. The steamer *England* sailed from the Mersey on the 26th May, 1866, with 807 emigrants on board. Five days subsequently cholera appeared; there were 500 attacked, of whom 250 died. The *Virginian* sailed from the same port six days after, and on the eighth day cholera broke out, and there were 105 deaths. The disease was not prevalent in the Mersey when these vessels sailed, but some of the emigrants had lately come to England from foreign ports where cholera was raging. There have been many attacks on board the ships in Calcutta clearly traced to using river-water, especially when cholera was prevalent in the city. Those vessels lying opposite the public sewers were particularly liable to attack; but this anchorage has now been forbidden. In some instances the disease has appeared in the emigrant ships some days after leaving Calcutta, and caused considerable mortality among the coolie emigrants.

Water, as a channel of communication, was not alluded to in the numerous reports which I have perused written on the first appearance of the epidemic among the European troops in 1817-18; nor was it suspected as such in Paris, in 1832. In the report of the Board of Health in England, in 1848-49, water is not alluded to; it is there stated that the disease is not, in the common acceptance of the term, contagious, but spreads by atmospheric influence. Attention was drawn to water as a means of communication in 1854, and its agency was forcibly shown by Dr. Snow, in his remarkable account of the Broad Street well, when it was found that nearly all the persons who had the malady during the first few days of the outbreak drank of the water from this pump, and that very few who drank of it escaped the disease.

It is not now questioned, in the profession, that water is one channel through which the poison may be transmitted; some even go so far as to consider water as the only medium. Instances are very numerous which illustrate the communication of the disease through this channel. None are more convincing than those reported to me during the Hurdwar epidemic in 1867, two of which I will relate. Mr. Blyth, Deputy Commissioner Bengal Civil Service, reports that a pilgrim was taken ill of cholera at noon on the 28th April, 1867, at a well in the village of Jooga Kullian, and he died next day. His soiled clothes were washed in an adjoining pond. Other parties, who afterwards visited the well and the pond for water and ablution, caught the infection. The disease broke out two days after, on the 30th, and up to the 15th May 53 were attacked, of whom 27 died. There had been no cholera in this village for twenty years before. Assistant-Surgeon Gardner reports that, at the village of Besabat, two men, who had returned from the Hurdwar Fair, died of cholera on the 30th April, 1867, and their clothes were not burned, according to orders given, but were washed in a pond which was inside the village, the water of which was used for domestic purposes. On the 1st and 2nd of May, sixteen attacks occurred in this village. There is an analogous instance in a report on the subject by Mr. Anthony of Madras. The part of the tank at Ramnad which is nearest the chuttee, and where the clothes of the first patient must have been washed, is the part from which nearly fifteen-sixteenths of the cholera patients had taken their drinking water. That there is a popular belief in water as a channel of communication, is shown by the disturbances which took place in America (in the South) from the rumour that Government had poisoned the rivers. In Europe, there have been some political demonstrations, under the idea that the wells had been poisoned during cholera epidemics. In India, the suspicions of the people have only been directed to the medicines issued by Government, which they thought were mixed with substances which would destroy their caste.

The influence of the admixture of animal or vegetable matter to water, in facilitating or retarding the propagation of the poison, is a point of great practical importance. It is generally supposed that the poison multiplies more readily in water which contains animal or vege-

table matter; but water, in all states of impurity, has been used without inducing cholera, whilst pure water, in any way contaminated by the admixture of cholera evacuations, will almost surely induce the disease. This is proved beyond doubt by the case given by Dr. Macnamara, when water in a drinking jar was so infected, and imparted the disease to those who drank it, as well as by Dr. Snow's observations. A small quantity of cholera poison in ordinary drinking water, may soon render it capable of widely disseminating the disease in a most fatal manner. There is no evidence that this poison can be removed by filtration, or by the addition of any disinfectant which will leave the water fit for use; it is, therefore, of vital importance to prevent the poison gaining access to the water. The military cantonments which have suffered most severely from cholera in the Punjab are supplied with water from open canals. That this was the channel of communication in Peshawur, in 1867, is highly probable, as a large party of Hurdwar pilgrims passed through Peshawur, on the 19th of May, on their way to Cabool. Their road, for some miles, lay near the canal. The disease broke out all over the military cantonment on the 20th, and in the city on the 22nd and 23rd. That the station of Peshawur was attacked on the 20th is a fact, and there is strong probability that the cause was through the canal water, as on no other occasion has the disease appeared at this season. This view is strengthened by the result of the removal of the troops. One-half of the 42nd Regiment was moved into camp on the 20th, and the remainder during the three following days. The whole regiment changed ground on the 24th, and moved on to Cheraat. Out of a strength of 674 men, 105 had been attacked up to the 25th, of whom 54 died; 23 were attacked in the five following days, and, on the 31st, the last case occurred, making a total of 129 cases, of which 72 died. The 77th Regiment was attacked on the 21st. On the 23rd, four companies were moved into camp, and the rest of the regiment were also sent into tents in the vicinity of the station, as soon as carriage could be procured. The last case in this regiment occurred on the 24th June; the disease, therefore, existed in it three weeks after it had ceased in the 42nd Regiment.

The subsoil water may often be connected with the diffusion of the disease, but it is in no way essential to it, as supposed by Professor Pettenkofer. This is clearly shown by the progress of the disease bearing no relation to the rise and fall of the subsoil level in India, more especially in the Central Provinces, where it has been carefully observed by Dr. Townsend, and by the continuous course of the disease, which accompanied the stream of pilgrims from the Hurdwar Fair, in 1867. There can be no influence from subsoil water in cases where the disease appears in ships some days after sailing from a port, in which cholera did not rage, and amongst emigrants who had never even seen the country where it did prevail, and from which it must have been brought by those fellow-emigrants who had lately left it. That the dampness of the soil in connection with chemical or vital action on the surface may influence the course of the disease, is very probable. There are many instances of epidemics breaking out after sudden storms or heavy falls of rain. The Hurdwar epidemic of 1867 was preceded by a heavy fall of rain. Instances are not uncommon of epidemics subsiding after severe storms. The disease has occasionally been preceded by severe dust storms, as at Kurrachee in 1845. The influence of the season, which is so clearly shown in the tables I have referred to, I attribute to the natural action of the elements on the surface of the soil. I do not think there is anything specific in the atmosphere when the disease is spreading, but merely that the state of the air and water at that period is well suited to the growth and development of the poison which causes the disease. The tenacity of life of the poison under all circumstances, and its excessive fecundity in some, indicate the difficulties of restraining the course of the disease. The development of the poison outside the body may be checked by the use of certain agents, called disinfectants. The nearer to the focus of the disease, the more effectually can they be applied. The evacuations from the body being the greatest source of danger, every possible means should be employed to disinfect them, and prevent their entering the public sewers, or getting near the sources of water supply; everything soiled by them is a source of danger. Every energy should be directed to the effort of restraining the multiplication and dissemination of the poison when it has appeared; but our first care should be to ward off its entrance. There are difficulties in excluding so subtle an enemy, and the means are vexatious and expensive, but not always useless. When we witness the great mortality radiating from a single point, and when we see how one focus may be contaminated by the casual visit of a sick man, and consider that the exclusion of that individual would have averted the explosion that followed his arrival as surely as the explosion of a magazine follows the admission of a single spark of fire, we cannot but wish that that exclusion had been enforced.

Great benefit has arisen in all countries, and at all times, from atten-

tion to sanitation. It is a means of saving life from all epidemic disease, and in none is its aid more valuable than in cholera; but it would not be safe to neglect other precautionary measures, and rely solely on this. In India, I have seen some of the most fatal attacks take place in cantonments and jails, where all practicable sanitary rules were in full force and most zealously carried out. The foul air from drains, cesspools, and dirt of all kinds, is the nurse, not the mother of cholera.

In Europe sanitation has received the most careful attention, and is most thoroughly studied, but the origin and source of cholera has not been so perseveringly investigated as in India, where the Government has enforced many valuable regulations for restraining the dissemination of the disease, and averting danger from its attacks by early treatment and precautionary measures. Our knowledge that the poison passes through certain channels and is transported by human intercourse indicates the possibility of restricting its course, and experience has shown that by quarantine regulations many cantonments and jails in India have escaped when the disease raged in the surrounding country. The disease has been arrested in the quarantine station at Staten Island, in America, in nine out of thirteen instances in which cholera subjects were landed from ships. In England, during the last two years, there have been about twenty instances where the disease, having appeared in the crews of vessels which had left infected ports in the Baltic, has been prevented from spreading by quarantine regulations in English ports. Sanitary arrangements unquestionably form a valuable auxiliary and are the groundwork on which plans for the restriction and cure of the disease must be founded, and without which neither quarantine nor medical treatment could be successful, but they will neither prevent the transmission of the disease over the world, nor cure it when present. The subtlety of the enemy, and the rapidity with which he multiplies, indicate the difficulty of restraining his action, but that he should be occasionally arrested is a position gained, saving, perhaps, a wide-spread mortality. Whilst his occasionally eluding this arrest is matter for regret, and is occasioned only by the imperfection of the measures used, or neglect in carrying them into execution.

THE INFLUENCE OF IMPURE WATER IN THE DIFFUSION OF CHOLERA.*

By H. HEYGATE PHILLIPS, M.B., M.R.C.S., etc.,

Late Assistant-Surgeon, 44th Regiment.

At a time like the present, when Asiatic cholera is prevailing in Russia, Germany, and various parts of the continent of Europe, and is liable at any time to be imported into this country, and perhaps to spread as an epidemic amongst us, it cannot, I think, be out of place to direct our attention briefly to some of the most usual channels of communication of the disease when once it has been imported into a community, and especially to the one which I have chosen to bring before you on the present occasion, namely, its spread by means of impure drinking water.

The subject is, no doubt, familiar to most of us, and I do not presume to think that I can throw any new light on it, after the many and elaborate researches of so many eminent men, but, to quote the words of Sir John Coleridge—"It does not always follow, that what is true and familiar is so practically accepted and acted on, as to render insistence on it needless."

It is generally admitted that there are several special means of communication of cholera, of which human intercourse, air, water, and soil, are apparently the chief; and the importance of each of these has in its turn been specially urged by various observers.

1. The effect of human intercourse in the spread of cholera has been especially insisted on by Dr. Jameson, Sir James Simpson, Dr. Baly, the London College of Physicians in 1854, and a host of others.

2. The influence of impure air has been specially noticed by Mr. Orton, Dr. Greenhow, Dr. Milroy, Dr. Bryden, etc.

3. Impure water has been shown to exercise considerable influence by the researches of Dr. Snow, Dr. William Budd, Dr. Acland, Dr. Parkes, Mr. Simon, and others.

4. Professor Pettenkofer, Dr. Gunther, and the German school deny altogether that impure water has any effect in the spread of the disease, and consider that the soil is the chief, or, in fact, the *only* medium of communication.

It is with the third of these, namely water, that we are more especially concerned on the present occasion; and I wish briefly to trace a few of the leading facts bearing upon this important subject, which have

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

been brought out in the course of the various epidemics which have from time to time occurred in this and other countries.

Curiously enough, the first mention of the subject of choleraic water-poisoning comes to us from India (where, at the present day, many medical officers are sceptical as to the influence of water in spreading the disease), for, on turning to Dr. Jameson's Report on Cholera in Bengal in 1820, we find the following expression: "Bad water, no doubt, sometimes immediately induces the disorder, but we must not suppose it is the sole cause of it." It is, however, chiefly to the observations and experience of Dr. Snow, Dr. William Budd, Dr. Acland, Mr. Simon, and Dr. Parkes, that we are indebted for the vast amount of evidence which has been brought forward, to show that, in the epidemics which have visited this country at least, impure water has played an important part in determining the intensity of cholera outbreaks, and in promoting their spread, and, although it would not by any means appear that water is the only, or even the chief one, there is strong evidence to show that it is one of the special means of its communication.

"It is characteristic of cholera," as is well observed by Mr. Simon in his Memorandum lately issued, "that all matters which the patient discharges from his stomach and bowels are infective. Probably, under ordinary circumstances, the patient has no power of infecting other persons except by means of these discharges; nor any power of infecting, even by them, except in so far as particles of them are enabled to taint the food, water, or air, which people consume."

Further on, he continues: "If, by leakage or soakage from cess-pools or drains, or through reckless casting out of wash-water, any taint (however small) of the infective materials gets access to wells or other sources of drinking-water, it imparts to enormous volumes of water the power of propagating the disease."

From this, and from the researches of Drs. Budd, Alison, Thiersch, and others, we gather that it is through the medium of the discharges that the propagation of cholera is really effected, and this being so, let us in the next place consider in what ways these are likely to find their way into drinking-water.

Sewage matter (and with it cholera evacuations) may find its way into water, either by fecal matters on the surface being washed directly into wells, streams, or tanks by rains or floods, as is common in India, or else the leakage of drains or cesspools permits its passage into the water, or it may find its way by percolation through a porous soil. Another and a common way is by the absorption of sewer-gases into cisterns from the sewers, as when the overflow pipe of a cistern opens directly into a sewer, and thus the gas is constantly liable to be sucked up from the sewer into the drinking-water—such an arrangement should never be permitted, but the overflow pipe from the cistern should be made to open aboveground, over a grating, into a properly trapped sewer. Another and more exceptional method is said to be common in Russia and other northern countries, where the poorer classes of people frequently use for drinking purposes melted snow taken from the immediate vicinity of their houses; and thus fecal matters, and especially cholera evacuations (which have but little taste or smell), may unconsciously be imbibed with the drinking-water, and act as a fertile source of diffusion of disease.

Lastly, the washing of infected clothing in tanks or running streams (as is a common practice in India) may also taint the water by introducing into it the evacuations of cholera, typhoid fever, and other similar diseases.

From the researches of Professor Pettenkofer and Dr. Thiersch of Munich, it would appear that cholera evacuations, when fresh, are comparatively harmless, and that it is only when they pass into a state of decomposition that they become dangerous and capable of propagating the disease. This would, in some measure, account for the negative results afforded by the cases of M. Foy and others, who actually tasted the rice-water evacuations, without any very serious results.

Few, I think, in the present day will be found to maintain that true cholera (in this country, at least) has any spontaneous origin in putrefying sewage, *per se*, or that water, however impure, will generate the disease; and it appears to be the universal belief that cholera is a specific disease, due to a specific poison, without the introduction of which it cannot be developed. However, whatever view we may take of its mode of origin, it is sufficient for our present purpose if it can be shown that water contaminated with the intestinal discharges, is one of the chief means of propagation from person to person.

Dr. Snow, in 1849, first drew particular attention to the fact that outbreaks can frequently be traced to the contamination of the drinking-water with cholera evacuations; and, since then, numerous well authenticated instances have occurred, which tend strongly to confirm his opinions. In his first paper of August 29th, 1849, he stated his belief that the disease must be caused by something which passes from the alimentary canal of one patient to that of another, which it can only do

by being swallowed; that the morbid poison multiplies and reproduces itself in the alimentary canal, and passes out with the cholera evacuations, and, from want of cleanliness, particles of these attach themselves to food, or in various ways gain access to drinking-water, and thus communicate the disease to others. The instances which he brought forward on this occasion, were some localised outbreaks occurring at Wandsworth and Horsleydown. In 1855, Dr. Snow brought further evidence to corroborate his former cases, the principal example being the outbreak in certain parts of South London, in 1853, which were supplied simultaneously by two water companies, of which one distributed pure water, the other impure. Both companies supplied the same class of people, living in the same class of houses, and under exactly similar conditions of life, with the exception of the difference in the quality of their supplies of drinking-water. The result was this; that the population drinking the dirty water appears to have suffered three and a half times as much mortality as the population drinking the other. (*Vide* Mr. Simon's report.) The second example was that of the outbreak in Broad Street, in 1854, which was clearly shown to have been caused by the evacuations of a child who had died of cholera, having been emptied into a cesspool, which was only three feet from the pump-well in the street; the sides of the cesspool were decayed, the bricks being loose, and allowing the contents to percolate freely into the ground around the well.

Almost every individual who drank of the water was attacked with cholera; and, to make the case more striking and conclusive, a fatal attack of cholera occurred in the person of a lady, who, although living at Hampstead, was so fond of this water that she had a bottle of it brought to her every day. Both these instances afford striking evidence of the effect of impure water in spreading the disease; in the one case, the polluted water being distributed by a company; and, in the other, being derived from a well which was obviously exposed to contamination from cholera.

In further illustration of the soundness of the views held by Dr. Snow, several well-marked cases of choleraic water poisoning occurred in the last epidemic which visited this country in 1865-66; for example, the localised outbreak at Theydon Bois, in 1865, well and ably reported on by Mr. Netten Radcliffe; and the sudden and more wide-spread outburst of the disease in East London, in 1866—the latter outbreak being limited to a certain definite area, which was found to coincide very closely with the district supplied by the pipes of the East London Water company, which were afterwards found to have temporarily circulated tainted water.

Any one who has had much experience of the system of water supply in India, or who has taken the trouble to read the graphic description of it, given by Mr. De Renzy in his paper read before the Association last year, cannot fail to be struck with the importance of the subject in connection with the prevalence and spread of epidemic diseases, especially of cholera; but whether it is that sufficient attention has not been given to the subject, or that in India—the birth-place of cholera—so many other potent influences are so constantly in operation that this one is comparatively lost sight of, certain it is that, contrary to what we might expect, recorded instances of choleraic water-poisoning are not by any means abundant. Repeated attacks at Secunderabad, Colaba, Meeran Meer, Murree, Peshawar, and various other places, have no doubt been attributed by some to excrement-tainted water; and the history of the great outbreak among the pilgrims at Hurdwar, in 1867, leaves no doubt in the mind of Dr. Parkes of its being a case of water-poisoning on a gigantic scale; but still it must be confessed that the evidence connected with the subject of choleraic water-poisoning in India, is not as full, or as convincing, as it is in other parts of the world; and we find many medical officers either ignoring the subject altogether in connection with cholera outbreaks, or else expressing their opinion that water has not had any part whatever in their origin or spread.

In most parts of India we have these three conditions co-existing, viz., 1. Porous soil; 2. Water derived from shallow open wells; 3. Defective drainage; and therefore, in a country where the specific poison of cholera is constantly liable to be introduced into a locality, we have all the necessary factors present for producing general and widely spread contamination of drinking-water with the cholera evacuations.

Besides this, the methods of water-carriage in India, and the universal practice amongst natives, upon recovery from illness, of washing their bodies and clothing by the nearest well or running stream, are circumstances well calculated to favour the introduction of the specific virus of cholera into drinking-water.

Is it then a fact that choleraic water-poisoning in India does not exist to the same extent as it does in other countries? or why should the connection between impure water and cholera, which has been clearly made out in European countries, be less strongly marked in

India, where so many circumstances combine to favour its occurrence? The answer to this question I must leave to others who have had larger Indian experience than myself; and we must only hope that, now that more attention is being shown to the analysis of drinking-water in India, under the auspices of Dr. Macnamara and others, and that special inquiries as to the nature and spread of cholera are being systematically carried out by Dr. Cunningham, more light will be thrown upon the subject, and many of the doubts, which now surround it, effectually cleared up and set at rest.

PROPHYLAXIS OF ASIATIC CHOLERA.*

By HENRY MAC CORMAC, M.D.,

Consulting Physician to the General Hospital, Belfast.

I HAVE had a good deal of experience of Asiatic cholera. In the year of its outbreak, I was physician to the Cholera Hospital in Belfast, and for some months was day and night in the midst of the malady. I do not recollect the exact statistics, but two or three thousand cases passed at that time through my hands. There is considerable resemblance between English cholera in the stage of collapse and Asiatic cholera. In English cholera—I speak of the period of collapse—the pulse ceases at the wrist, the skin becomes deadly cold, and the features shrink, but the patient does not display the blue black skin which we witness in Asiatic cholera. There is not the stench which attends the latter; and, more especially, the *zumbé* or leaven which causes Asiatic cholera to be a communicable malady does not exist in English cholera.

Many, I know, do not look upon Asiatic cholera as communicable. I do not share this conviction. Within certain limits, I consider Asiatic cholera a highly communicable malady; and I have no hesitation in proclaiming, speaking of my own conclusions, that every case without exception, occurring in Europe, is, was, and will be the result of infection. All the assistants and all the servants who had not had the malady before, myself expected, contracted the disease; some of them, indeed, twice or thrice when they came to reside within the hospital boundaries. Two, if not three, gate-keepers died rapidly in succession. Out of hospital, the instances which, as I believe, I could trace to infection, were very frequent, and the negative evidence of cases where infection could not be traced, or at least was not traced, did not, at least as I most firmly believe, invalidate the direct evidence of infection. The number of those in indigent circumstances who contracted Asiatic cholera were out of all proportion greater than of those in opulent life. Wherever crowding was excessive, exposure to the malady great, and sanitary laws were otherwise violated, there cholera was at once frequent and destructive. The disease, when epidemic, followed, indeed, precisely the same law as to prevalence which plague and fever always do. The ancient motto is inverted. The rich are spared while the poor are decimated. It was, indeed, *parcere superbis, debellare subjectos*. The rich, indeed, were not all exempt, but they were very much less frequently assaulted than the poor.

It becomes then vastly desirable under these circumstances, first, if possible, or at least as much as possible, to stay the advances of Asiatic cholera altogether; and next, until that be done, or even if that cannot be done, to realise as much security as is practicable in the event of the actual invasion of the malady. No disease more strikingly attests the exceeding efficacy of early treatment than does Asiatic cholera. The evidence afforded in Glasgow, to mention no other locality, is quite conclusive on this point. Persons went daily, if not twice daily, from house to house, and wherever they found any one labouring under premonitory diarrhoea, as it was termed, they instantly administered a dose of cholera mixture, and, I believe, left other doses to be used in case of any return of the diarrhoea. The result was, that in every 1400 cases of diarrhoea thus met, there was but one death; whereas, if it had been left alone, the half of those attacked probably would have perished. It would be difficult, I think, to adduce any stronger evidence of the efficacy of remedial measures zealously, timely, and effectively administered than this. Nevertheless, numbers died in Glasgow; and the ravages of cholera, since its first introduction into Europe, have been very great indeed.

Under these circumstances, it occurred to me that it would be excessively desirable, so far as it was possible, to anticipate even the premonitory diarrhoea. For, if only we can succeed in averting the disease, were it in its mildest form, we also avert the dangers and the mortality, which more or less attend the developed malady. In 1854-5, some repairs going on, and a communication having been opened with the infected town, forty of the inmates of the District Asylum for the

Insane, to which I was visiting physician, were assailed with Asiatic cholera, and seventeen almost immediately perished. I instantly caused to be prepared a large admixture of what might be termed sulphuric acid lemonade, in the proportion of half a drachm of the dilute acid to each dose, and, zealously aided by the resident physician and my son, had this administered daily to every one of the four hundred inmates of the establishment. The twenty-three residuary cases of the forty who were attacked remained, of course, under treatment, and made good recoveries; but not a single other fresh case ensued, and the malady then and there, in fact, disappeared. In the event of the apprehended invasion of Asiatic cholera, and, *à fortiori*, when it had actually occurred, I would urge the administration, once or twice daily, to every adult member of the community, of half-drachm doses of dilute sulphuric acid, as the most generally available, in any convenient vehicle. Drinking-water, previously filtered, should invariably be raised to the boiling-point; and, while hot, flavoured with a pinch of tea or coffee, a chip of cinnamon, quassia, gentian, dried orange-peel (any of them), or else a small fragment of highly toasted bread. In China and Japan, the water, before drinking, is almost invariably cooked and flavoured with a little tea. I ascribe, indeed, much of the immunity enjoyed by the people of these countries from the ravages of Asiatic cholera to the prevalence of this most beneficial practice. To children, half or less of the above amount might be given. Of course, *il va sans dire*, that every reasonable sanitary precaution, such as burnt earth-closets and cooked drinking-water, should in addition be taken. I have been at considerable pains to make these views generally known; and, assuming that I have established the prophylactic efficacy of dilute sulphuric acid, and my experience has not been confined to the instance which I narrate, the profession, if they will only take the matter up, have it, I believe, in their power to abate the ravages of cholera, and bring the malady effectively within human control.

ON SOME RECENT RESULTS IN PATHOLOGICAL HISTOLOGY; AND ON SCIENTIFIC THERAPEUTICS.*

By EDWARD LONG FOX, M.D.,

Physician to the Royal Infirmary, Bristol.

WHILST the age of our immediate predecessors—of Brodie, of Bright, of Addison—was essentially an age of pathological anatomy in its broadest sense, the last fifteen years may be said to have been more particularly a period for the study of pathological histology. Doubtless the first effect of such study has been to split up various subjects into subdivisions so minute as to be scarcely practical in clinical medicine. But work that is real must always lead onward to truth, and succeeding generations will recognise with thankfulness the energy of the microscopists; and whilst, on the one hand, the very minuteness of the distinctions drawn may seem impractical, on the other hand, an accurate knowledge of the primary tissues involved in disease allow grand generalisations in pathology of which hitherto we had not dreamed. Thus we find the same morbid condition in precisely the same tissue in various organs causing cirrhosis of liver, small granular kidney, fibroid degeneration of lung, sclerosis of the nervous centres, and one form at least of mamillation of the gastric mucous membrane. We recognise that symptomatic phenomena of the most varied description, differing as far as gangrene of a limb and chorea, may depend upon embolism of the smallest arteries; whilst aneurismal dilatations so minute as only to be recognised by the microscope, and so multiple as to give the idea of an aneurismal diathesis, but causing symptoms, according to locality, that have hitherto given names to a vast number of diseases, are now capable of being classified under one pathological category.

It would be tedious to multiply such examples; but this very year has been the era in England of one such generalisation, so important that it cannot be passed over in silence. The teaching of Laennec and of Louis had during the past few years received a rude shock from the dogmatic assertions of Niemeyer and his followers; and many English physicians, with that confidence in German pathology that seems sometimes to lead into error, began to puzzle their brains in the endeavour to bring their own experience into unison with the new doctrines. Without entering upon the question as to whether tubercle itself is a product of inflammation or no, there is no doubt, as Dr. Addison long ago pointed out, that many pathological conditions of the lungs were called tuberculous that were in reality the resu

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

* From President's Address, delivered at the Annual Meeting of the Bath and Bristol Branch.

tion. But it is a very different matter when we are asked to believe that tubercle is only found when the organ has been infected from a spot of inflamed tissue that has undergone caseous degeneration. It is difficult, indeed, to believe that such infection can take place independently of some blood-predisposition—in fact, of the consumptive diathesis. The magnificent discussion during this spring at the Pathological Society has arranged these points on their true basis. Caseation is rare, compared with the extreme frequency of tubercle; and, as Dr. Wilson Fox has well said, “the evidence of caseous glands serving as a source of this infection is only evidence of a secondary infection from a primary tuberculous change. You may get a tuberculous gland secondary to any common irritation in a predisposed subject; that is, a carious tooth or a cutaneous disease of the head may give rise to a change of a tuberculous nature in the nearest gland. And I believe,” he says, “that what we thus see externally takes place in the lung. Any irritation of the tissue may, in the presence of local or constitutional predisposition, give rise to secondary growths, diffused or circumscribed, which constitute tubercle, and which may be the source of further infection, and that with or without antecedent caseation, though this stage and that of softening are most favourable to the change.” Dr. Moxon asserts that the general anatomical characters of phthisis form a sufficient basis for its separation from all other kinds of lung-disease, and its union into one single kind. I should be inclined myself to go a step further still, and say that clinical phenomena, with few exceptions, prove the close affinity of the various forms of phthisis. The height and the irregularity of the temperature, the general aspect, the sweating, the pulse, the gastric and abdominal symptoms, the urine, and the nerve-phenomena, are much the same in acute miliary tuberculosis and in those exacerbations of chronic phthisis that we so often witness and relieve; in both cases showing, except in the thermometric diagrams, a close approximation to the fevers, although the evidence of contagion is yet too slight to build upon.

But, whilst this generalisation is the chief feature of the year, we owe to a comparatively recent period many other important facts in pathology. It is to the elders of the present generation that we owe the differential diagnosis of fevers—a diagnosis founded in great measure upon *post mortem* observations. It is to an observer of the present day that we are indebted for so much of our knowledge of diseases of the heart, and especially fatty degeneration. We now know, too, that diseases of the heart producing congestion of internal organs may set up increased growth in the connective tissue of these organs, and all the evils resulting from it, as surely as the imbibition of spirituous drinks will cause cirrhosis of the liver. It is from a controversy of the present hour that we gain an intimate knowledge of the morbid conditions of the small arteries in some forms of renal disease; one set of observers believing in a degenerative change, a hyaline fibrosis of the arterial coats; others, in an hypertrophy of these tissues; the fact being, as is so often seen, that both are right, but neither universally. And, before we leave the kidney, I cannot help pointing out how later research has utilised Dr. Bright's great generalisation, and, by dividing the various morbid affections, has shown how much more curable some are than others, and how various they are clinically, pathologically, and therapeutically.

Much might be said, in this relation, on abdominal tumours, on true and false chlorosis, on that obscure disease of the glandular system named by a late author “adenia,” resembling in some of its external appearances scrofulous adenitis, and yet so dissimilar pathologically and in its relation to remedies; whilst the whole range of pigmental disease is full of interest, especially that morbid affection named after Dr. Addison, and proved by him to have some connexion with disease of the suprarenal capsules, or rather, as shown by later observers, with one special degenerative change in them.

All thoughtful members of our profession will heartily second me in saying that, of all the various branches of our noble science, the duties of an alienist physician are at once the grandest and the most difficult. He must be a physiologist of no mean order, an observer of men and manners in no common degree, a physician trained more than any of us in the knowledge of all morbid action, and especially, if I may so say, of reflex disease—that is, of the influence of the abnormal condition of one part on the functions of distant organs; and, above all this, he must have considerable experience in mental phenomena, healthy and unhealthy. It is, I feel sure, a satisfaction to the Branch that this department is so worthily represented here, both in public and private institutions; and, whilst we admire the varied attainments and accomplishments necessary to the successful prosecution of this important branch of science, it is pleasant to note that in our day the idea of functional disease is gradually vanishing from our text-books. Not so many years ago, although the treatment of mental disease had made enormous progress, its pathology was supposed in large measure to

consist in a greater or less supply of blood to the brain, with some inflammatory processes. The minute pathological anatomy of the brain was absolutely unknown; and the records of autopsies, such as are met with in Esquirol's great work, are meagre and unsatisfactory. Now, however, how changed is all this! Although we may not always be able to say with accuracy during life the precise lesion that will be found in mania, general paralysis, etc., yet we know that a lesion exists; and Morel in France, Griesinger in Germany, and Hammond in America, to say nothing of numerous workers of still higher note in our own country, are year by year making the pathological anatomy of this branch of disease more certain and more easily recognised. It is on this common ground of pathology that we, working in hospitals and in private practice, can be of some assistance to them, as also much of their work illustrates and merges into ours.

It is with this view that I venture to detain you for a few moments, whilst we pass in rapid review some of the pathological details, the knowledge of which is either wholly new during the last twenty or twenty-five years, or has been largely added to within that period. Such are congenital abnormalities of the nervous centres; incompleteness of some of the parts of the encephalon; abnormalities of the vascular system, including variations in the amount of blood in the brain; diseases of cerebral vessels; embolism; thrombosis; atheroma; aneurisms, large and miliary, of the vessels of the pia mater and the brain; inflammations of the cranial and spinal contents, including cerebro-spinal meningitis; and cerebritis with or without meningitis, with or without abscess; degeneration embracing atrophy, with compensating increase of cerebro-spinal fluid; softening, from causes non-inflammatory, such as embolism of the nutrient arteries, or gradual disease and narrowed calibre of the same, and that important pathological condition met with mainly in the spinal cord, but often enough also in the brain—thickening of the connective tissue—the so-called sclerosis, whilst in connection either with the membranes, the vessels, or the neurolytic itself, we may meet with almost every kind of morbid growth. And lastly, we owe to Brown-Séquard, Lockhart Clarke, and others, the fact that many of us have had wholly to unlearn what we were taught as to the physiology of the spinal cord. The transverse division of the posterior columns producing not motor or sensory paralysis, but loss of co-ordinating power; the fact that the anterior columns are not only closely connected with motion, but to some extent also with sensation; the decussation of the conductors of sensation in the cord itself, are all points that have been recognised by experiment and by pathological observations in the course of the last twenty years; whilst the observations of Professor Ferrier are just now being given to the world, causing a revolution in much of the commonly received physiology of the brain, and seeming also to prove that the cerebellum has nothing to do either with the generative faculty or with co-ordination in general, but that it is the co-ordinating centre for the muscles of the eyeball, and that each separate lobule in rabbits is a distinct centre for special alterations of the optic axes.

It would, indeed, be bold to say that a knowledge of these more minute details in the physiology and pathology of the nervous centres, enables the most accurate observer of mental phenomena to speak with absolute certainty of the relations between definite symptoms and recognisable lesion; but, granted only the spirit of research that for some years past has animated many minds in England and other countries on these subjects, the time cannot be far distant when we shall pass out of the region of doubt and uncertainty into the brighter light of exact science.

But our special aim is not only after truth for its own sake, but after truth in its practical utility in curing our patients. Many of us may be physicians, students of nature, but we are all *medici*. Our very name, as also the means we use—“Remedies,” show us to be professors of the *Ars Medendi*. Pathology is good, diagnosis is good, but, with it all, we fail in our purpose if we do not cure. It is the great boast of the English school of medicine, of the tone of medical thought in England, that the wellbeing of the patient is the ultimate object of all our efforts; and, therefore, it is that the question of scientific therapeutics is becoming with us of paramount importance.

It is nonsense to say that our treatment now is universally empirical; it is worse than nonsense to throw any obstacle in the way of men who are trying to add to our knowledge, by chemistry, by electricity, by the application of cold, by carefully observing the action of each drug by itself on the temperature, pulse, respiration, and excretions of the patient.

A book has been put into my hands by a well-known member of this Branch, Mr. Alfred Smith, of Brunswick Square. It is entitled, “*The Royal Pharmacopœia, Galenical and Chymical, according to the practice of the most eminent and learned Physicians of France, by Mons. Charras, and faithfully Englished, 1678*,” and one of the medical admirers of its author says that it is “so exact a collection of all that the antients and

moderns have afforded profitable or curious in reference to Physick, that they who shall read this may spare themselves the pains of reading any other." With much, of course, that is laughable to us in our day, there are the elements of truths, and, above all, the idea of progress. "There are," he says, "three sorts of virtues attributed to Medicaments. The first sort, which by the antients were esteemed elementary, and only ought to be attributed to the principles whereof it is composed; that is, that it heats, cools, moistens, and dries. The second qualities are the products of the first; for the property of heat is to open, rarefie, attenuate, attract and so on. The third qualities are hidden, and we can only find them out by experience, as when a Jasper apply'd to a wound stops the blood; when a Toad dry'd, being held in the hand, stays bleeding at the nose, and assuages the tooth ache, which is also performed by the bone in the foreleg of the same Toad; when a stick of Ash boyled under a certain constellation, stops all losses of blood; when a Hazel-stick, gathered in its proper season, heals all contusions; when the Eagle-stone, hung about the neck, hinders abortion, and hastens and facilitates birth, being ty'd to the thigh, . . . and several other effects of the same nature, of which Philosophers labour to give the natural reason."

The philosophers probably had some difficulty in explaining the advantage of the oil of scorpions, made by plunging into boiling oil sixty of the fairest and most vigorous live scorpions that can be got, though it was said to have the power of dissolving renal or vesical calculi; or of the lozenges of vipers, used in malignant fevers; or of the forty-eight ingredients in the Mithridate of Democritus for procuring rest; or of the sixty-three ingredients in the treacle of Andromachus the elder; or even of the shavings of man's skull, which formed an important element in the composition of an anti-epileptic water. Such illustrations of the therapeutics of a bygone day serve only to raise a smile. But the principle of reasoning should be, and is, the same for us as for our queer old writer of two centuries ago: first, the observations of experience; and secondly, the labour of the philosophers—the deduction from the experimental data. And not thus only. Although Bacon has stigmatised the doctrine of final causes as "barren like a virgin consecrated to God that can bear no fruit," yet Harvey avowedly owed his great discovery to that very doctrine, and much of Sir Charles Bell's best work was done in enthusiastic admiration of the same principle.

Much of what seems unscientific in our practice depends upon the very anxiety for our patient's life. In fever, for example, one may think the poison itself the all-important element, and in treatment may favour elimination; another may fear lest the high temperature may destroy life, and use all his energy towards its reduction; another may watch the patient's strength, and do little but feed or stimulate. In all the result may be good. In all, paradoxical as it may sound, a real step forward has been made towards scientific therapeutics. But when in ague we see the pyrexia, the splenic enlargement, and the absence of urea in the urine—and by quinine treatment the subsidence of all pyrexia, the diminution in the volume of the spleen, and the reappearance of urea, it is impossible to deny that here our therapeutics are scientific. Nay, more! by means of our therapeutics, we are nearer an accurate understanding of the morbid phenomena.

The same may be said of other diseases, of the pathological anatomy of which we know little or nothing. We can often treat with success affections such as epilepsy, chorea, delirium tremens, spinal irritation, and that strange spinal jar with which we are now so conversant as the result of railway accidents. It is not too much to say that the therapeutics of these affections have shed some light on the nature of the affections themselves. Such examples might be multiplied.

The action of diaphoretics, of many diuretics, and of most of the purgatives, the *modus operandi* of the alkalies on the urine, of ammonia in the treatment of arterial clot, of the bromides, of strychnia, and of ergot, are all illustrations of advance in our knowledge of scientific therapeutics; whilst at least as much may be said as to the mode of action of several of the sedatives and narcotics.

Experience itself is a scientific factor, on the ground that the same phenomena always occurring under similar conditions form a law. As to what is beyond and above that law, human reasoning will scarcely carry us. But it is incompatible with common sense not to be sure that laws so grand in conception, so minute in detail, necessarily imply the existence of a law-giver. And it seems to me impossible that any physiologist in the highest sense, or any worker in pathology, which is only physiology under different conditions, can be so blind to the plainest teachings of his own science, as to deny the existence of a first cause. Such men are not numerous in our profession; and we shall all agree in some noble words of Lecky, in his *History of Rationalism*, with which I shall close this address

"Even scientific men sometimes forget that the discovery of law is not an adequate solution of the problem of causes. When all the mo-

tions of the heavenly bodies have been reduced to the dominion of gravitation, gravitation itself still remains an insoluble problem. Why it is that matter attracts matter, we do not know; we perhaps never shall know. Science can throw much light on the laws that preside over the development of life; but what life is, and what is its ultimate cause, we are utterly unable to say. The mind of man, which can track the course of the comet, and measure the velocity of light, has hitherto proved incapable of explaining the existence of the minutest insect, or the growth of the most humble plant. In grouping phenomena, in ascertaining their sequences and their analogies, its achievements have been marvellous; in discovering ultimate causes it has absolutely failed. The first principle, the dynamic force, the vivifying power, the efficient causes of those successions, which we term natural laws, elude the utmost efforts of our research. We know nothing, or next to nothing, of the relations of mind to matter, either in our own persons or in the world that is around us; and to suppose that the progress of natural science eliminates the conception of a first cause from creation by supplying natural explanations, is completely to ignore the sphere and limits to which it is confined."

OBSERVATIONS ON ALBINISM.*

By C. S. JEAFFRESON, Esq.,

Surgeon to the Children's Hospital and Eye Infirmary, Newcastle-on-Tyne.

THE condition of the human body which is characterised by the total absence of pigment from the structures in which it is naturally deposited, and which we term albinism, did not escape the observation of some of the most ancient scientific writers and observers. Thus we find this peculiar condition mentioned by Pliny and Herodotus. Its occurrence was first called attention to amongst the negro races. This is not surprising, when we consider the striking contrast of colour to which in their case it gives rise; and we have adopted the common name of albino from the Portuguese, who first employed it to indicate a white Moor. It was commonly imagined that these white Africans formed a distinct race; but the more extended observations of recent years have shown that albinos are common to all countries and all races. Pickering mentions their being found in Java, Sumatra, the Fiji Islands, the Isthmus of Darien, and many other places. But, wherever they are found, they conform in all their external appearances except colour to the race from which they sprang; and thus, among the Africans, they have the thick lips and curly hair peculiar to this people. Although albinos do not constitute a special race of mankind, there can be little question that their condition is liable to descend hereditarily to their offspring. This is especially the case when both parents present the same peculiarity; and thus, in countries where albinos are common, families of them may occasionally be seen, the result of marriages between two persons in the same condition. Albino children are so rare in Europe as to render such a combination of circumstances unlikely to occur; and I can find no record of an albino family amongst any of the more civilised countries of our own quarter of the globe.

Although the albino state was recognised at such an early period, it did not attract particular attention till the end of the last century, when it was noticed by Buffon. Blumenbach made it the subject of special study, and pointed out its proximate cause—viz, the deficiency of pigment in the rete mucosum of the skin and other structures in which it is normally present. His observations were followed by some interesting papers by Dr. Buzzi of Milan, who had the opportunity of dissecting an albino. He confirmed Blumenbach's views, and further pointed out that in these subjects the rete mucosum was entirely absent. In this, however, he must have been in error; for it is impossible that the skin could live and grow without the layer of soft and rapidly increasing cells which constitute this membrane, and which provide for the proper reproduction of those parts of the skin which are being daily destroyed as the result of the wear and tear of every-day life.

From this date, the peculiar condition of albinos was looked upon as a disease whose proximate cause was the absence of pigment in the tissues. It is not common to human beings alone, but is found among all the different varieties of warm-blooded animals. Familiar instances of it exist among rats, mice, rabbits, cats, dogs, and birds of all kinds. Although the proximate cause of albinism has been fully recognised and dwelt upon, its remote cause is still a matter of conjecture. Buffon supposed that it indicated a tendency of the human body to revert to what he considered the natural colour; and Buzzi observed in two cases that the mother, during the time of conception, had an inordinate desire for milk, which she frequently gratified. Shock during the period of gestation, peculiarities in the seminal fluid of

* Read before the Northumberland and Durham Medical Society.

the parents, and many other conditions, have been alleged as causes; but most of these hypotheses have been advanced without sufficient groundwork of observation and facts, so that we are now as far from recognising the real cause of this condition as we were a century ago. We know that pigment first makes its appearance in the structures of the fœtus about the sixth or seventh week of conception, where it may be found in the membranes which later form the choroid coat of the eye; subsequently, it is deposited in the rete mucosum; but it is not fully developed in that membrane till after the sixth month. The most probable manner in which light may be thrown upon this interesting question is by the study of the varying conditions which influence the deposition of pigment in the structures of the adult and in many of the lower animals. As yet, our knowledge of the difference of pigmental colouring in the human body amounts to this: that, of the five different races, each has its peculiar tint, which, within a certain extent, is liable to slight variations in each race; that, in those who are most intensely coloured, variations in degree are uncommon, but total absence of colour is not uncommon; that the lighter coloured races present greater features of variation, but within well marked limits—for instance, there is no record of an European ever being born with the same dark tint as the African.

With regard to our special knowledge of pigment, it may be summed up in the following facts. It consists of a fine molecular matter, secreted by certain cells called pigment-cells, which are found in various situations—notably the choroid coat of the eye, the rete mucosum of the skin, certain portions of the nerves and their ganglia, and the dura mater, the roots of the hair, and other situations. In its chemical constitution, pigment consists of melanine, a highly carbonaceous material, closely allied to the fatty compounds. It contains a notable quantity of iron. In intensity of colour, it varies much in the different races of mankind, thus giving rise to one of the most striking and permanent characteristics. In man, and especially in the fairer races, its development is influenced by certain exterior conditions, chiefly consisting of variations of light, heat, and certain internal conditions, such as the pregnant state. In some rare cases, violent emotion and other nervous influences materially affect its development. We further know that in some forms of tumours it makes its appearance in large quantities, and that in disease of the suprarenal capsules the quantity in the skin becomes considerably augmented. From these data, I think we may with fairness infer that pigment, or some material from which the cells are capable of manufacturing it, circulates with the blood; and the large quantity of iron which it contains would lead us to indicate hæmatin as the probable material. Our knowledge of the processes by which the blood is elaborated is as yet so surrounded with mystery, that it is impossible to indicate the part played by the various glands engaged in the process; but it is not improbable that the suprarenal capsules may play a prominent part, either actually by secretion of pigment, or by allowing it to accumulate in the blood. This theory will not, however, solve the intricacies of the question; for the appearance of pigment in the fœtus, under ordinary circumstances, at the age of six or seven weeks, and before any organ can have attained to a sufficiently advanced stage of development to exert any material influence, must make us look for some more antecedent condition.

The case stands thus. We find both father and mother deeply pigmented; and the fœtus, which is deriving its support from the blood of the mother, destitute of pigment. What inference can we deduce from this fact? Why this—either that the placental vessels, from some disease or other cause, will not permit of the transudation of pigmental materials; or that the cells destined in the fetal structure to take up the materials, are unable to do so. Careful observation may some day illuminate this intricate question. The process of pigmental secretion does not probably differ much from the secretion of fat, and people are dark or fair for the same reason that they are fat or lean; in the one case the pigment, in the other the fat-cells, being in excess; although doubtless one secretion is of much greater importance in the economy than the other.

Whether this condition was to be looked upon as a disease or a natural phenomenon giving rise to a variety of the human race, was at one time the subject of active controversy. In coming to a conclusion upon this point, every one will be guided by the meaning which he places upon the terms natural and morbid. If we look upon the congenital absence of the iris, the lens, or any other organ, as a disease, we must take the same view with regard to the absence of pigment or the cells which secrete it, although it may not be productive of an equal amount of inconvenience. Every circumstance that mars the form or function of the human frame, I consider, may be accounted as a disease; and the fact that its reproduction is certain, as the result of the connexion of two individuals affected with the same peculiarity, does not put it beyond the bounds of such a classification.

When we consider the many structures in which pigment is invariably present, we cannot but consider that its absence must be attended with a certain amount of deterioration in the function of those structures. Thus it enters to a considerable extent into the formation of nerves, and especially their ganglia; and most unequivocally these organs suffer in the albino. Although not deficient in intellect, they rarely equal in this respect their more fortunate fellows. In physical strength or nerve-powers, they are decidedly deficient. One curious point, which should not be overlooked, is the constant oscillation of the eyes; and, when we consider that the third nerve, which presides over their movements, takes its origin in the locus niger of the crus cerebri (normally the most deeply pigmented portion of the nervous system), this symptom, which is rarely absent, becomes of peculiar interest.

J. and A., aged respectively 3 and 5 years, were born and live in Newcastle-upon-Tyne.* They belong to a family of nine children, eight of whom are alive. The places they occupy in the family are those of fifth and seventh child. Their mother has dark-brown hair and dark-brown irides. Their father is also a dark man. Their grandparents on the mother's side exhibited no unusual appearances, being both moderately dark on the father's. Beyond this, their pedigree cannot be traced; but there is no reason to suspect albinism in any of their ancestors. Both these children possess extremely fair skins, milk-white hair, and most peculiar reddish deflexion from the fundus of the eye, etc.—characteristic of their condition. They are well-grown children, with fair muscular development, and by no means deficient in intelligence, although not equal in this respect to their brothers. In temperament, their mother says, there is nothing peculiar to them, except, perhaps, that they are more greedy than the other children, and require usually a larger quantity of aliment. It has been stated that albinos are unusually active during the night; hence they are called nocturnal men. But in the present instance there seems no such tendency, and the children sleep as well as their fellows. During the day, they run about and play like their companions; but their sight is evidently defective; one of them (the younger) always closes one eye in regarding objects. Both of them are troubled by a bright sunshine, and try to avoid it; and they have a constant oscillation of the globes, such as we frequently see in congenital cataract. The elder boy goes to school, and has acquired a knowledge of letters, which enabled me to test accurately his power of vision. At a distance of twenty feet, he can make nothing out of the largest test-type. Glasses do not improve his vision; nor does a stenopœic apparatus.

For distance, $V = \frac{10}{C.C.}$

For near, $V = \frac{1}{21\frac{1}{2}}$.

He cannot distinctly see any smaller type. When reading, he generally holds the book very close, contracting the eyelids like a person who is myopic.

It is generally supposed that albinos possess unusual powers of vision in obscure light. I do not find this to be the case with these children, but rather the contrary; for, although a strong light dazzles and irritates them, their vision in the deeper shades of darkness was not so acute as my own. This I verified on several occasions; and one of them expressed of his own accord that he could see infinitely better with the blind up in the room than when it was down.

This total absence of pigment from the structure of the eye gives a most remarkable appearance to the fundus. It prevents the margins of the disc from being visible, and brings into relief as strongly the vessels of the choroid as those of the retina. Hence the appearance is that of a beautiful white ground, intersected by myriads of small vessels; the retinal arteries and veins being only distinguished by their increased size and their direction.

When looking at the part of the fundus which occupies the neighbourhood of the macula, the appearance is that of a perfect blaze of scarlet, in which no outline of vessels is completely made out; and this increased area of vascularity is tolerably abruptly limited. Jäger, in his *Atlas of Ophthalmoscopy*, gives the drawing of the fundus of an albino which in no way corresponds to the appearance in this case. I cannot help thinking that the subject from whom it was taken was not a perfect albino.

The observations recorded above show, I think, that the absence of pigment in the choroid interferes less than has been supposed with the optical purposes of the eye; for if the amblyopia was to any extent dependent upon this, we should expect material improvement with the use of stenopœic spectacles, and I am inclined to attribute the deterioration of sight chiefly to impairment of the nervous centres through want of pigment.

* Since this paper was written, another albino child has been born of the same mother.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASES IN THE OUT-PATIENT DEPARTMENT.

(Under the care of Dr. DUCKWORTH.)

Two Cases, in which Gout and Phthisis were associated.—The connection between gout and rheumatism (arthritic diathesis) and phthisis has at various times excited attention. The subject is naturally obscure, and would require for its elucidation data drawn from a large number of well authenticated instances. Dr. J. Edward Pollock, in his admirable clinical work, *Elements of Prognosis in Consumption*, mentions that gouty fits retard the progress of pulmonary phthisis, and states that the chest-symptoms are mitigated for a time. He further alleges that the pulmonary affection is chronic in these cases. The following examples occurred lately in the out-patient department of the hospital.

CASE I.—H. G., aged 42, applied for relief for diarrhoea. He had a pallid (waxy) complexion, with dilated capillaries upon the malar integuments. Both legs were somewhat cedematous. There were signs of softening at both pulmonary apices. The urine contained a decided trace of albumen. This man had suffered from attacks of gout for some years. He had lived in Canada, and had been addicted to whiskey-drinking. In six weeks he was worse, and the amount of albumen in the urine increased. This patient ceased to attend subsequently.

CASE II.—W. H. H., aged 54, a bricklayer, was a poorly nourished dark-haired man. His tongue was pale, with ragged ulceration at the tip and edges. This had been progressing for two months past. The pupils were small. He had tophi all over the fingers and ears. He was an out-patient six months ago at this hospital. He suffered now from a troublesome cough. The percussion-note over both sides was "drumming" in front and behind. Coarse breathing, with rhonchus and sibilus, were heard generally in the front on the right side; posteriorly, and in the left lateral region, crepitation of coarse character was audible, with bronchial breathing. Air entered feebly at the left base. The sputa were muco-purulent. He had never had hæmoptysis. He had tenderness at the epigastrium and gastrodynia. Appetite good; bowels regular. The urine was not examined. He had been losing flesh for some months past. His father had gout, he stated. This man was admitted to Radcliffe Ward. Quinine and good diet were ordered for him. Diarrhoea came on subsequently, and in eleven days he died. No post mortem examination was permitted.

In both of these cases the pulmonary symptoms supervened upon established gout; in both the general health was broken down, and hence these instances do not throw any light upon the question as to the inhibiting power of true gout upon phthisis. The exact nature of the pulmonary changes in these cases has yet to be worked out, for there can be no doubt that they differ in various respects from those met with in other forms of phthisis.

Acute Anæmia due to Fright.—M. A. G., aged 20, presented the typical aspect of an extremely anæmic young woman. There were no blowing murmurs in the neck or at the base of the heart. She stated that ten weeks ago she was in perfect health, had a good colour, and menstruated regularly. At that time a fire broke out in an adjoining house to that in which she lived, and she was exceedingly alarmed for her own safety upon the occasion. Since that time she assumed her present pallid and bleached appearance, and had not menstruated. She was treated with iron and aloetic medicines, and, like many of the most interesting cases amongst out-patients, ceased to attend subsequently; hence her further history is unknown.

This case recalls several which are described by Trousseau, in which young women became suddenly anæmic after fright or severe mental emotion; and much interest attaches to instances of this kind. There is manifestly some kind of alliance between such a case as is described above, and the sudden induction of chorea from a similar exciting cause, and the nervous system is unquestionably the medium. In one of the cases mentioned by Trousseau, there had been two previous attacks of chorea. Again, there is an affinity between such a case and one of Graves' disease, which not unfrequently originates in nervous shock.

There can be no doubt that anæmia is too frequently regarded and treated as the result of a constant blood-defect, as a coarse disease, and as the consequence of a chemically altered circulating fluid; and it is by startling cases, such as that just recorded, that attention is forcibly

directed to a deeper and more significant pathogeny for some forms of anæmia—viz., to an altered condition of the nervous system. We must therefore admit, with Laycock and others, the existence of a "neurose chlorosis".

Aneurism of the Thoracic Aorta benefited by large doses of Iodide of Potassium.—T. H., aged 47, a clerk, having served twenty-two years in the army, and twenty years of his time in India, applied in October 1872 for relief from an aortic aneurism. He was first seen by Dr. Lauder Brunton. The patient was a stout well-built man, of florid complexion, with dark-brown hair; height, five feet six inches. There was no history of intemperance or syphilis, or of bodily strain. Three years ago he first began to complain of pain across his chest, and had advice. He alleged that at that time there was a pulsating tumour, of the size of an egg, above and towards the left side of the sternum. It used to be visible to bystanders as moving his clothes. For six months he was under treatment, and the tumour reduced in size. He was able to resume his work, and has continued it since, with the exception of a few days. No further advice was sought, and no treatment employed, till October 1872. At that time there were fulness and pulsation over the upper and left sternal region, with an area of dulness to percussion of one and a half by one and a half inches. There was a prolonged first sound over the cardiac region, no *bruit* being audible over the fulness. Pulsation was very feeble in the left carotid and brachial arteries. The left pupil was smaller than the right; the voice was hoarse. The treatment consisted of quinine till Christmas 1872. At that time the cardiac sounds were more loudly heard over the tumour than over the præcordia, and there was a prolonged rough systolic blowing. The left pulse was much smaller than the right. The patient was able to act as a clerk, but suffered a good deal of pain in his chest and back, especially at night. At this time he was ordered ten grains of iodide of potassium three times a day, and morphia and chloral in a draught at bed-time each night. In January, the quantity of iodide was increased to fifteen grains for a dose. Under this treatment, there was gradual improvement in all the symptoms. In April, he was able to sleep without the anodyne, and he could take a fair amount of exercise daily. In May, he reported that his voice was at times natural, and that occasionally his pulse was fuller in the left wrist. He had no pain in the chest, slept well, and was doing duty as a storekeeper. The left pupil remained small; the pulse was hardly felt in the left radial artery; there was dulness on percussion for about two inches square in the region of the tumour to the left of the manubrium, and under the left clavicle. There was slight heaving pulsation over the area of the tumour; a very faint distant murmur, systolic, and of low pitch, was audible over the dull region; no dulness and no murmur was detected posteriorly. The patient continues to take iodide of potassium regularly.

REMARKS BY DR. DYCE DUCKWORTH.—The points of interest in this case are the following. The first is, the occurrence of aneurism in a soldier who had served long in India, and had, therefore, been subjected to the strain placed upon his circulatory system by improper clothing in that climate. (Thanks to the labours of Parkes and others, this is no longer the case in the British army.) The case is one of a class in which the course of the aneurism is very chronic. The aneurism illustrates a point which is not unfrequently to be observed, but which is rarely commented upon—viz., the tendency of sacculated aneurisms to change their relation to surrounding parts. In the history of some of these tumours, it is found that certain portions are more prominent at one period than at another. This is especially to be observed in such thoracic aneurisms as point through the chest-wall; hence the pressure-signs may vary from time to time. These changes are probably due to the peculiar depositions of fibrin upon the walls of the tumour. When this patient was first seen, there was no prominent pulsating swelling, such as he described to have existed about three years previously.

The marked benefit resulting from the iodide of potassium, when compared with the treatment by quinine, could escape the attention neither of patient nor of physician; and this case illustrates the good results of that plan of therapeutics, which was first recommended by Dr. Chuckerbutty of Calcutta and Dr. G. W. Balfour of Edinburgh. In the case above described, no special precautions were enjoined, either as to diet or the maintenance of recumbent posture; and Dr. Balfour's system of treatment includes a restricted allowance of food and rest. We have no knowledge as to the nature of the changes wrought in such a case by the iodide of potassium. It is not known to induce coagulation of fibrin; indeed, one would naturally regard the drug as one likely to diminish any tendency to hyperinosis. Dr. Arthur Gamgee has suggested that the good results are due to an action exerted upon the vaso-motor nervous system; and he believes that the present condition of blood-chemistry throws no light upon the subject.

REPORT OF THE JOINT COMMITTEE ON STATE MEDICINE.

SINCE the passing of "The Public Health Act, 1872," your Committee have contented themselves with watching its working. This has been very uncertain, presenting totally different features in different parts of the country, making it a difficult matter to ascertain the present, and still more to forecast the future, condition of sanitary organisation.

This uncertainty has arisen from the absence of unanimity of counsel or action in the central authority, and in the various sanitary authorities, urban and rural, under its control and direction. The remarkable and perplexing spectacle has been presented to the public and the medical profession, of the official representatives of one and the same central Board, in circumstances precisely similar, giving instructions and recommending lines of policy, not only inconsistent with, but directly opposed to each other.

Some of the Inspectors appointed by the Local Government Board have strongly advocated and urged the adoption of large areas for sanitary measures, under the direction and control of specially trained and highly qualified health officers; others, with equal earnestness have advised small areas, with the ordinary Poor-law medical officer as the only guardian and director of sanitary effort and improvement.

It is hardly to be wondered at that, under these circumstances, sanitary authorities should have shown such apathy and indifference, waiting for some unequivocal indication from head-quarters of the course they ought to pursue.

Very generally the offer of part-payment of the salaries of officers of health out of the public funds has been declined, as any such partnership with the central authority implied, as a necessary consequence, control as to the duties, duration of office, and salary of the medical officer. Although the appointment of this officer is by the Act compulsory, yet authorities, having entire control of the salary and duties, have been enabled, at their option, to minimise both, so as to do as little as possible in work entailing expenditure out of local rates. They have therefore kept the control of medical officers of health in their own hands, and thus are enabled to continue that obstructive policy which your Committee frequently pointed out to the Government would be the necessary result of the provisions of the Public Health Act. Experience has amply proved that to entrust powers of such vital importance, requiring great knowledge, experience, and tact, to persons in no way qualified either for organisation or execution, possessing no special aptitude or training, and aided by no intelligent and consistent guidance in carrying on the sanitary work of the country, must, of necessity, entail failure; and shows the propriety of the strong dissent expressed by your Committee, in the memorial to the President of the Local Government Board (April 1872) "from the suggestion that medical officers of health should be subject, in the discharge of their proper functions, to the direction and control of non-medical inspectors."

The past Session has shown that the President of the Local Government Board is at last becoming aware of the reasonableness of the views so persistently urged upon him by your Committee—that some body of higher authority, and presiding over an area of greater extent than that of a Town Council or Board of Guardians, was required to control and direct local action, and that a supervision and correction of boundaries of districts was an essential to the initiation and completion of sanitary measures.

The great question of the best means for the ultimate disposal of sewage has remained in abeyance during the past year. Little or nothing has been done; and the difficulties attending the best mode to be adopted, and the means to be provided for acquiring the necessary land for irrigation, filtration, or other means of deodorisation and defecation, remain untouched and unsolved. There is a general impression in the mind of sanitary authorities that some Government measure will be passed removing all obstacles which now make this matter so onerous and complicated. But it cannot be too often or too strongly impressed on all local bodies that, whatever may be the mode which experience may eventually determine as the best for the disposal of sewage, each individual case must be judged on its merits, where it is sought to obtain land compulsorily for public purposes; and that no general measure can be framed by the legislature, which will give local boards or rural authorities a roving commission to take and enter upon private property without having first shown to a competent tribunal the public necessity for forcible interference with private rights.

Signed in the name and by the appointment of the Joint Committee.

W. H. MICHAEL,
A. P. STEWART, M.D.,
Honorary Secretaries.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 23RD, 1873.

OUR ANNUAL CRITICS.

PUBLIC bodies, like public men, must expect criticism when they make their great appearances on the stage. That of the leading papers on the recent annual meeting of the British Medical Association is satisfactory enough. In three successive leaders in which the *Times* discussed the topics of the meeting, it congratulated the Association on the important step which it had made in public estimation, the power which it had gathered in the State, and the influence which the meeting exerted in elevating and strengthening the position of the profession as a whole, apart from the merely personal position of its leading men; two things which are sometimes distinct, as one or two took occasion to show by their absence. The general tone of the whole of the daily and weekly press was indeed warmly and generously appreciative of the Association and of its work. The *Times* pointed it out that, by its special constitution, it is fitted to bring to a final solution the questions of medical reform still pending, and of state medicine, of which the solution is incomplete. So long does it take for any power to grow in public recognition, that some important writers seemed to hear of the Association now for the first time, and discussed with mingled admiration and respect this great spectacle of an united profession, associating through all its ranks on an equal footing, combining for public purposes in an organisation which is purely representative, and pursuing a course self-reliant and influential for good. "When shall we see bishops, deans, and curates of the three kingdoms, not split up into convocations, and high-class and low-class societies, castes, and orders, but uniting in a great brotherly society, represented in every town, and yet acting as a great unity for all common purposes?" When shall we see judges, barristers, and solicitors assembled in their own hall, as consulting surgeons and general practitioners were on Thursday last, without jealousies or differences, and combining to make their strength useful, themselves respected, and to cultivate a common spirit of fraternity?"

It is, of course, to our medical contemporaries that we must turn for the dark side of the picture. They had an excellent opportunity of throwing in their favourite shadow against the broad light which illuminates the picture. The writer in the *Lancet* admits the great success which has been attained, and the great influence which can no longer be ignored; although he intimates that it is recent and newly attained. The union, the strength, the cordiality, the great scientific gathering, are facts; but they should in his view represent, if possible, mere dead accumulations of unused force. The Association is strong, but it should not use its strength; earnest for great ends, but it

should abate its high purposes. The Association has achieved great things for medical reform years since, with the parliamentary help of Mr. Headlam; but it should beware of making any further effort. It has procured one warrant ten years since for the amelioration of the pay and relative rank of officers of the army and navy, and is busy in obtaining the amendment of another; it has obtained a Royal Sanitary Commission; it has now important public business in hand with the War Office and the Local Government Board, but this had better be stopped. These are politics; and this profound adviser recommends the Association to eschew politics. This advice might have seemed so enigmatical as to be suggestive of deep thought, if he had not been so unwise as to give his reason. The Association numbers now more than five thousand members, and it is impossible that they should be unanimous! Five thousand men who are not unanimous must, he suggests, do nothing. In other words, the more numerous our Association becomes, the more wholly it is condemned to inactivity; and by the time that it includes the whole profession, it must consider its power of action reduced to nothing. Politics should be left to the staff of the *Lancet*, in whom anonymity takes the place of unanimity. The deputation of half-a-dozen gentlemen from Bedford Street, who represented the medical profession, to Mr. Forster, on the subject of medical reform, might be unanimous on that day and on that subject; but the pages on which they alternately write for and against every conceivable view and institution, as the wind happens to blow, sufficiently show that even among five choice spirits unanimity is almost as difficult of attainment as among five thousand.

The rest of the advice is of the old crusted character—stand out of our way. Experience has taught the proprietors of the medical journals that they cannot publish a respectable journal with any profit to themselves for less than an annual subscription of from twenty-six to thirty shillings a year. The Association has been able to attain all the other results which they admit to be so great as to deserve the highest applause and admiration—and, indeed, to be alone worthy of applause and admiration; and it has managed to furnish the members with a JOURNAL which ranks, we hope worthily, with those which they publish, and yet to maintain itself by an annual subscription of a guinea. This is a great offence; it is an error; it is “not even a commercial success.” It would be much better for each subscriber to pay a guinea to the Association, and, besides this, twenty-six shillings to the proprietor of the *Medical Times and Gazette*, or thirty shillings to the *Lancet*—say an annual subscription of £2:7 or £2:11—than a paltry subscription of a guinea; and then the Association could make handsome grants for the purposes of experimental science, or even found an observatory like that at Kew, or give away sums in charity. We have a great admiration of the observatory at Kew, a great desire to see physiological laboratories multiply in number and receive large endowments; but it may be very much doubted whether these disinterested suggestions point to the best means of attaining such ends; or whether, while the rich corporations are in existence, the summons to support such institutions should be addressed solely to an Association such as this. But, so far as the appeal to the Association to make grants for scientific pur-

poses is well founded—and, within limits, we have supported it—that end can be attained by means less costly and less unjust. If the proprietors of these papers were asked whether their medical papers “have done anything to advance medical science”, they would probably be unwilling to give a negative answer; and they would probably say that no small part of the income which they draw from the profession (which, if *argumenti gratia*, we state their united subscription-lists to be equal to that of the Association, amounts to our total subscription and one-half more) has been spent in promoting medical science by publishing scientific papers. We may refer with some satisfaction to tributes such as that paid to the contents of this JOURNAL by Professor Humphry in his address, as testimony, if any were needed, that the publication of the Association has done no less; while the Association itself has, by its annual and Branch meetings, done much more by eliciting and debating, as well as publishing, important contributions to science, attracting public and professional attention to them, and diffusing them widely. If the subscription-list of the Association is about £6,000, which are spent in maintaining this great organisation, and in eliciting and diffusing scientific, sanitary, and professional information, that of these journals must be £8,500, spent only in the latter part of the work.

It is not to be expected that, with a sole subscription of a guinea a member, in return for which the whole executive and establishment expenses are paid, the Association is maintained as a great power in the State, and a weekly publication is presented to each member, any large surplus can ever be available for additional purposes. That some surplus may shortly be expected, we believe; and we regard it as a great triumph of energy, skill, and good management, and a very striking commercial success, which is to be added to the great social, political, and professional successes which the Association has attained; seeing that the subscription is only two-thirds of the minimum sum for which the proprietors of the *Lancet* can manage to present a journal only. We have already expressed the hope that a portion of this surplus may be devoted to the purposes of scientific grants, such as those which have been made on one or two former occasions; and we may mention, indeed, that a grant of £50 was voted by the Committee of Council two months ago to the Edinburgh Committee—part of a grant towards the investigation of the antagonism of poisons. But, if there be any large number of members desirous of bestowing funds upon these purposes, it will not be necessary, as our contemporaries suggest, to raise the subscription to £2:10 annually, of which thirty shillings a year should be handed over to them. A half-crown annually, added to the annual subscription to the Association, as a contribution to a scientific fund, would give an annual income of £500 for the purpose, which would certainly be enough to begin with. Possibly the scientifically minded proprietors of these journals would, out of the excess of their subscription over that of the Association, be willing to contribute as much, and then we should have a fund of £1,500 a year for the purpose. We feel sure that any such offer on their part would meet with a prompt and cordial response; and possibly the Colleges and Corporations might join in the generous rivalry.

THE RELATION OF PHYSIOLOGY TO MEDICINE.

In the admirable address read before the British Medical Association, which appeared in the *JOURNAL* of August 9th, Dr. Burdon Sanderson has defined with great clearness the relation of physiology to medicine. Clinical medicine analyses the facts of disease, separates them from one another, and ascertains the characteristics of each form of it. Thus it finds a hot dry skin, furred tongue, thirst, loss of appetite, and scanty urine, in numerous cases; but closer observation notes that these are accompanied in some instances by condensation of the lung, in others by running at the nose, and in yet others by an affection of the respiratory organs readily communicated from one person to another. The cases which all agreed in presenting the symptoms of feverishness, are thus separated into pneumonia, catarrh, and influenza. But the clinician cannot say in what the feverish state actually consists, or why it should accompany inflammation of the lungs or nasal mucous membrane on the one hand, or the presence of a specific poison in the blood on the other. Here the physiologist steps in, and, taking up the question where the clinician left it, seeks experimentally to discover why the skin is hot, the mouth dry, and the urine scanty. Increased temperature of the body, indicated by the hot skin, and shown by the thermometric observations of Traube to be present even in the cold stage of ague, is the most constant symptom of the feverish state; and the efforts of physiologists have been directed almost entirely to it, the other symptoms remaining comparatively unheeded.

Two sets of hypotheses have been advanced to account for the increase of temperature. Those belonging to the first set attribute it to increased production of heat in the body; those of the second, to diminished loss of heat from it. According to one of the first set—viz., that of Virchow—the nervous system during health is supposed to regulate the rapidity with which oxidation takes place in the body; and, by preventing it from going on too quickly, keeps the temperature below 100 deg. Fahr. even in those parts which are farthest from the surface, and therefore least exposed to the cooling action of external media. The nervous centre regulating temperature is supposed to be paralysed in fever; and thus the process of oxidation goes on unchecked, and temperature rises. This centre has been placed by Naunyn and Quincke in the medulla oblongata; and they have stated that, whenever the spinal cord has been cut in the neck, so as to sever the communication between this centre and the body of an animal, the temperature at once rises. Rosenthal and Sanderson himself, however, have shown that Naunyn and Quincke's experiments were not made with sufficient care, and, by rendering the existence of such a regulating centre very improbable, have made it necessary to look for the cause of fever in something else than paralysis of this hypothetical structure.

The chief theory of the second class is that of Traube, who supposes that the vessels near the surface of the body are contracted in fever; and, the circulation of the blood in them being thus diminished, less heat is lost than in the normal condition. But, when such a contraction of the vessels is experimentally produced, it is found that the greatest rise in temperature which it is able to effect is not to be compared to that observed in fever; and consequently this theory is insufficient. Marey's account of the condition of the vessels in fever is very different from Traube's. He believes that, in fever, the vessels generally, instead of being contracted, are dilated; and that the hot skin is due to the warm blood from the interior of the body circulating more freely than usual in the cutaneous vessels. This certainly accounts for the heat of skin, but does not explain the fact that the temperature in the interior of the body is above the normal, instead of below it, as we would naturally expect it to be from the increased cooling of the blood by its free circulation over the surface.

All the theories of fever, already considered, being thus imperfect, how is the rise in temperature to be accounted for? With characteristic caution, Dr. Sanderson does not propound any new theory, but states the facts which have been experimentally ascertained, clearly and systematically, leaving each one to draw his own conclusions. In the

animal body, heat is produced exclusively by chemical change; and in pyrexia, the warming of the body is too great to be accounted for by the mere accumulation of heat within it, or by lessening of the loss from it. The increased temperature of fever, therefore, depends on increased oxidation. In considering the question "Where does such increased oxidation occur?" Dr. Sanderson carefully avoids limiting it to any one tissue, but he clearly points out that the tissues in which it does take place must form a considerable part of the body, as otherwise no change in them could have much effect upon its temperature. By the instance of a Cornish miner working in a hot shaft, he shows that a very slightly increased action of a mass of tissue, like the muscular, is sufficient to produce fever, when the heat which it produces is retained in the body; while the effect of strychnia, in raising the temperature, furnishes evidence that a similar effect is produced by a greatly increased action of the muscles, unaccompanied by any hindrance to the loss of heat. These two examples of increased temperature throw much light on the cause of pyrexia, indicating, as they do, that it may be produced by any agent which stimulates a great mass of living tissue to increased action, whether it originates in the nervous system, as in the case of the miner, or is circulating in the blood, as in the animal poisoned by strychnia. In both of these, the stimulus acts on the muscular tissues through the nervous system; and thus Virchow's theory might still seem to be correct, but the intervention of the nervous system is not always necessary, for a similar result may ensue from the application of the stimulant directly to the tissues. This is seen when the exudation liquids of certain acute inflammations are injected into the circulation. Pyrexia ensues, exhibiting all the characters of the febrile state in its development, progress, and phenomena. This pyrexia, Dr. Sanderson tells us, can only be ascribed to the direct action of the exudation-fluids on the tissues, though he cannot say as yet what these tissues are; nor does he give us any information regarding the experiments on which he founds his statement. We feel assured that he has excellent grounds for making it, and that it may be fully accepted; and we shall look with interest for any fuller account which he may yet publish of the curious phenomena which he has already done so much to elucidate.

Before leaving this subject, we must again refer to the illustration of the Cornish miner. As soon as his temperature rose above the normal, the pulse became quick, nervous and muscular prostration came on, and the discharge of oxidised products was increased. After cooling himself in an airy galley, these symptoms disappeared. This instructive example at once suggests the question, Can we not obtain similar benefits by cooling the body in fever? The use of cold affusion when the temperature rises very high is now becoming generally recognised, and the beneficial effects of cool air and abundant ventilation are universally acknowledged. The application of the douche, or of cold packing, however, is troublesome, and apt to fatigue the patient; and these means are not generally employed in moderate cases of fever. A plan has lately been proposed by Rosenthal which seems worthy of trial. He suggests that the patient be placed on a water-bed, through which a stream of water is kept constantly circulating. By regulating the rapidity of the stream and the temperature of the water, the patient may be cooled to any amount; while the alterations in temperature are sufficiently gradual to avert the danger which might arise from a sudden chill.

THE OUTBREAK OF TYPHOID FEVER IN LONDON.

THE additional evidence which has been collected during the past week conclusively proves the correctness of the view, that the milk-supply was the source of the alarming outbreak of typhoid fever in the west of London. We explained last week the reasons which had led Dr. Murchison to suspect contaminated milk to be the cause of the mischief; and we published in detail the particulars of the inspection by Mr. Netten Radcliffe, Dr. Corfield, Dr. Whitmore, and Mr. Morton, of the farm whence the milk was supplied. Their evidence amounted to this: that typhoid fever had recently been, and was indeed, as it has turned out upon the day of examination, on one of the farms; and that the well

supplying the dairy, the water of which was employed for cleansing the milk-pails, was contaminated by sewage-matter from the privy and farm-yard. In accordance with the advice of these gentlemen, the milk-supply from this farm was at once cut off by the proprietors. The number of fresh cases of enteric fever since breaking out in the west of London has accordingly become very much diminished, and we have heard of none which can be attributed to the use of milk supplied by the Milk Company, although some cases in which the fever was contracted before the milk-supply was stopped will, doubtless, come to light. Dr. Murchison, who has energetically followed up the history of the outbreak, has, we understand, by his own investigations, and those of Dr. Whitmore, the medical officer of health for Marylebone, ascertained that, out of ninety-seven families affected, eight only are stated to have obtained their milk-supply from other sources than that suspected. Only one of these isolated instances has been as yet investigated, and it may turn out after all that the known infective cause was at work in the others, for it must be remembered that many cases, which at first appeared exceptional, were found on inquiry to have originated in the suspected quarter. Day by day the widely spread mischief, produced by the contaminated milk, is being brought to light. At a time when the London season was about to break up, many stricken persons, in whom the poison had as yet not produced severe symptoms, removed to remote parts of England and Scotland, and were there laid up with enteric fever. A large number of such cases have already been reported, and many no doubt will be added to the number. The statistics of the outbreak, although necessarily as yet meagre, are sufficient to prove its widespread character. Upwards of two hundred individual cases are already known to have occurred in Marylebone, Paddington, and St. George's; and there is every reason to believe that the total actual number, directly infected from the milk-supply, will amount to four or five hundred. But the mischief unfortunately does not end here. The seeds of enteric fever have been carried broad-cast over the country, to infect drains, water, and milk, and it is impossible to estimate the extent of evils which that polluted well may yet produce. We may hope, however, that the thorough manner in which the outbreak has been investigated and traced to its source, the publicity which has been given to the details of the inquiry, and the precautions recommended for adoption against typhoid fever, will do much to mitigate and prevent these. A remarkable stimulus has certainly been given by the occurrence of the epidemic to the investigation of the media of infection of the typhoid poison—may we hope, with important results.

MR. WILLIAM MAC CORMAC has been appointed successor to Mr. Le Gros Clark as Surgeon to St. Thomas's Hospital.

THE reported death of M. Nélaton is happily untrue, although his condition appears to be most precarious.

THE *Army and Navy Gazette* states that a new army warrant is expected on an early day. We are unable, however, to discover any reliable foundation for this report.

THE death of M. Mériadez Laennec, a relative of the illustrious discoverer of auscultation, and himself an author of some note, is announced to have taken place lately.

A COMPLIMENTARY farewell dinner was given to Mr. Harry Leach on the 11th instant, in the Dreadnought room of the *Trafalgar*, Greenwich, on the occasion of resigning his post at the Seamen's Hospital. About twenty "hosts" were present, the only other guest being Mr. W. J. Scott, the Chairman of the Port Sanitary Committee of the Corporation. Dr. Stephen H. Ward, Senior Physician to the Seamen's Hospital, presided.

DEATH FROM CHLOROFORM.

A DEATH from the administration of chloroform is recorded in the last Army Blue-Book by Surgeon J. L. Erskine, M.D., of the Royal Engineers. In that rather obscure corner of medical literature, it is not

likely to engage the eye of anæsthetic statisticians. The unfortunate patient was being operated on for the removal of diseased tibia, the result of compound fracture four months previously. The general health being very good, chloroform was given by Dr. Don, R.E., to the extent of about one drachm, sprinkled on a piece of lint, which was held over but not close to the nose and mouth, to allow a free admixture of the vapour with the air. The amount stated was, it is said, sufficient to bring the patient under the influence of the chloroform; the usual excitement only to a small extent being manifested. The inhalation having been discontinued, and the pulse remaining good, an incision over the diseased bone was commenced, when Dr. Don, who was watching the patient's condition, called out that the pulse had suddenly failed; and the man fainted. Stertorous breathing succeeded. Cold water dashed in the face, and ammonia applied to the nostrils, roused him from this condition for about a minute, and the respiration became easy, when syncope again occurred, from which he never rallied. Endeavours to restore animation were persisted in for about half an hour by several medical officers. The means employed were ammonia to the nostrils, turpentine stupes to the cardiac region, artificial respiration by Silvester's method, and a powerful galvanic current to the respiratory muscles, the region of the heart, and to the spine; the tongue being carefully kept well forward. The patient was not under the influence of the chloroform above one minute, when the first failure of the heart's action occurred. The necropsy, as reported, showed a hypertrophied heart, weighing nearly thirteen ounces; and a flabby condition of the muscular walls, which, however, do not appear to have been microscopically examined. Posteriorly, the lungs were in portions infarcted.

ANOTHER DEATH FROM CHLOROFORM.

WE regret to announce the melancholy death this week of a lady in Brighton from the effects of chloroform. A tooth was being extracted by Mr. Gibbon, dentist; Mr. Blaker, surgeon, of Brighton, being present. Immediately the tooth was extracted, the pulse ceased, the face became blanched, and the patient inspired deeply several times. Galvanism and other means were ineffectual in restoring life. The necropsy disclosed fatty degeneration of the heart. The chloroform appears to have been carefully administered, and a verdict in accordance with this was given by the coroner's jury.

CONVICTION UNDER THE MEDICAL ACT.

A PERSON named James John Young was fined at Ipswich on the 7th instant, at the instance of Dr. Chevallier. This person kept a dispensary in the town, and unlawfully, wilfully, and falsely represented himself to be a surgeon, after repeated warnings that he was illegally doing so. He was fined forty shillings and costs.

THE BRITISH MEDICAL BENEVOLENT FUND.

THIS Fund has received the sum of £30 from Miss Caroline Brown, completing a donation for the present year of £100 from this lady. The pressure on the charity is very great; and half of the applications for aid at the last meeting of the Committee were unavoidably postponed or passed over, from want of means.

THE MIDDLESEX HOSPITAL.

A SPECIAL appeal has just been issued by the Weekly Board of this hospital, which is urgently in need of pecuniary aid, as may be seen by the following particulars regarding its income and expenditure. The regular income may be set down at a sum little short of £9,000. To the above must be added donations, which are necessarily of a fluctuating character; last year, the total of this item was about £2,300. On the other hand, the expenditure during each of the last six years has never fallen below £16,000, and sometimes has risen to nearly £19,000. The average expenditure may be set down at £17,500. It will be seen, then, that for some years there has been a regular excess of expenditure over income. To meet this serious deficiency, the governors within the last few years have frequently sold out capital stock; and in December

of last year they were obliged to order a sale of £5,000 stock. The hospital was instituted in 1745, and enlarged in 1848, to meet the increased and pressing wants of a densely populated neighbourhood. It contains upwards of 300 beds for in-patients, and relieves upwards of 2,000 in- and 23,000 out-patients annually. The most serious items of expenditure have recently been a large sum spent in the erection and maintenance of an extensive and complete home for nursing, and the thorough re-draining of the hospital. The latter was undertaken at great expense, in consequence of an outbreak of typhoid fever in the building, supposed to be attributable to water-contamination from the drainage-pipes. The former has now been in existence for three years, and has already educated and sent out to all parts of the country a large number of thoroughly trained matrons and nurses.

A VERY PROFESSIONAL ALLIANCE.

WE learn from the *Philadelphia Medical and Surgical Reporter* that Dr. Abraham Jacobi, of New York, and Miss Mary C. Putnam, a female medical practitioner of the same city, who distinguished herself as a student in Paris, have entered into a matrimonial alliance. As Miss Putnam's speciality has been that of diseases of women, and Dr. Jacobi's the diseases of children, a not unnatural combination of specialities may be merged into one firm.

THE ASHANTEE WAR.

ACCORDING to official sources just received from the Commodore at the Cape Coast, the officers of the Royal Marines were well, but the sick list of the men was heavy with mild fever and some cases of dysentery. Thirty-three of the marines had been sent on board the *Himalaya* to recruit. The health of the squadron was good. No small-pox is reported among the seamen or marines. Other advices state that the unhealthy condition of Cape Coast continued, and was daily and hourly increasing. Small-pox of a fearfully virulent type was still raging there, as well as the usual diseases common to the Coast. The small-pox was causing fearful ravages.

THE SOCIAL SCIENCE ASSOCIATION.

THE National Association for the Promotion of Social Science will hold its seventeenth annual session in Norwich, from the 1st to the 8th of October, under the presidency of the Right Hon. Lord Houghton, D.C.L., F.R.S. The Health Section will be presided over by Captain Douglas Galton, C.B., F.R.S.; and the Vice-Presidents will be the Sheriff of Norwich; Sir Harry Verney, Bart., M.P.; Sir Willoughby Jones, Bart.; F. S. Corrance, Esq., M.P.; Donald Dalrymple, Esq., M.P.; Edwin Chadwick, Esq., C.B.; Alfred Carpenter, M.D.; William Hope, Esq., V.C. The following are the special questions for discussion in the section. 1. What are the most convenient administrative areas for sanitary purposes? and what are the best means of administering the sanitary laws? 2. Should there be a special diploma for medical officers of health? and if so, how should it be granted? 3. What provisions are required in a General Building Act, so as to secure necessary sanitary arrangements?

THE INTERNATIONAL MEDICAL CONGRESS.

THE third International Medical Congress will be held in Vienna, from September 1st to 8th, under the patronage of the Archduke Rainer, and the presidency of Professor Rokitsansky. The members of the congress will consist of delegates from states and from scientific bodies, and of medical men and naturalists, who shall have intimated their intention of being present to the general secretary, before the opening of the meeting. Discussions are appointed to take place on the following subjects. 1. Vaccination: reporters, Dr. Hebra, Dr. Auspitz, and Dr. Kaposi. 2. The prophylaxis of Syphilis, with reference to the Regulation of Prostitution: reporters, Dr. von Sigmund, Dr. Reder, and Dr. Zeiss. 3. Quarantine, with special reference to Cholera: reporters, Dr. Oser, Dr. Drasche, and Dr. Witlacil. 4. The Sanitation of Towns (especially sewerage and drainage): reporters, Dr. Innhauser,

Dr. Böhm, and Dr. Gauster. 5. The formation of an International *Pharmacopœia*: reporters, Dr. Bernatzik, Dr. von Schroff, sen., and Dr. von Schroff, jun. 6. The Social Position of Medical Practitioners: reporters, Dr. Schneller, Dr. Benedikt, and Dr. Schlesinger. The congress will be held in the Jury Pavilion of the International Exhibition at Vienna. The first meeting will take place on September 1st, at ten A.M.

"MEDICAL NOTES AND QUERIES."

THIS periodical expresses indignation at the unfavourable view which we have taken of the character of its columns, and replies hotly. We regret that we can find nothing in its subsequent numbers to induce us to alter the opinion that its answers to correspondents (the first, but not the only objectionable feature in it) are mischievous and discreditable. Some weekly papers of reputable character, have once or twice, attempted a similar plan of medical advice gratis by correspondence; but we believe they all became convinced that such a system involved abuses and dangers of so serious a character that they abandoned it, and that reputable medical men, who lent their aid for a time, withdrew their countenance. We find in the number of August 16th, prescriptions of phosphorous, of opium, and of strychnia to unknown correspondents, who have not been seen, and whose cases have obviously not been investigated. It is only, we imagine, under very exceptional and rare circumstances that a conscientious medical man would ever prescribe for a patient whom he had not seen, whose spontaneous statements he was not able to test by cross-examination; to whom he was not able to put a series of questions of his own, and whom he had not submitted to personal inspection and physical investigation. To prescribe wholesale in this way, and to invite the subscribers to a penny paper, to apply by letter for such advice, under the impression that it is likely to be of any value to them, is a proceeding so fraught with danger and delusion that no words could be found too strong to characterise it. It would be dangerous and indefensible were the persons addressed residents of a county where there were no public hospital, or dispensaries. In this country and in this metropolis it is rash, wrong, and discreditable in the highest degree. If the depths of human folly and ignorance were not unfathomable, it would be surprising that any one should apply for such advice, even at the cost of a penny paper and a halfpenny stamp. The conductors of the periodical, and the authors of this indefensible proceeding, are anonymous; if they be qualified medical men, we shall be much surprised if they venture to give their names.

SOCIAL SCIENCE CONGRESS.

THE following special questions will be discussed in the Health Department at the meeting of the Social Science Congress at Norwich in October. 1. What are the most convenient administrative areas for sanitary purposes, and what are the best means of administering the sanitary laws? 2. Should there be a special diploma for medical officers of health, and if so, how should it be granted? 3. What provisions are required in a General Building Act so as to secure efficient sanitary arrangements?

VOLUNTEER MEDICAL EXAMINATION.

WE are glad to hear that the following medical officers of the Volunteer service have lately passed the necessary examination at the Army Medical Board, in order to obtain the increased capitation grant for their corps; viz., Dr. M. Baines, Surgeon, and Mr. William Keen, Assistant-Surgeon, 1st Middlesex Engineer Volunteers. We venture to entertain the hope that Volunteer medical officers will, in larger numbers than has yet been the case, qualify themselves according to the spirit and recommendations of the War Office circular.

BABY-FARMING.

IN a case tried lately at Liverpool, a woman, aged 54, named Mary Ann O'Neill, was charged with having feloniously killed Charles Rogers,

The prisoner had a house in Grosvenor Street, which was a large one and well adapted for its purpose. In April of the present year, the prisoner had the care of twelve children, and from some cause the Rev. Father Quick went to the house, and found twelve children, one of that number being dead, and the rest in a very emaciated condition. He gave information to the coroner's officer, who found the surviving children in a very lamentable condition. In addition to their emaciated condition, the children were nearly all suffering from sore eyes, and one of the children had a broken arm. The surviving children were taken to the workhouse, where they recovered health, showing that they only required proper food and treatment. The Judge said though this might not be a case of what was called baby-farming, where a woman undertook the charge of children from bad motives, yet she was bound, if she took in these cases, to exercise a proper degree of skill and care in their treatment and management; and if a child died from the want of such care, she was legally responsible for its death. The plea of want of skill was no excuse, for if she had not such skill she had no business to take in the children. The jury returned a verdict of guilty. The prisoner was committed to two months' imprisonment, without hard labour.

DR. BRAXTON HICKS.

SEVERAL of our lay contemporaries have slain Dr. Braxton Hicks. We are glad, however, to say, that Dr. Hicks has so nearly recovered from his severe illness, caused by an infectious wound, that he will return speedily to his ordinary duties.

THE INTRODUCTORIES AT THE METROPOLITAN MEDICAL SCHOOLS.

THE following gentlemen will deliver inaugural addresses at the opening of the several metropolitan medical schools, on Wednesday, Oct. 1st.—Charing Cross Hospital, Mr. Bellamy; Guy's Hospital, Mr. James Hinton; King's College Hospital, Dr. Sheppard; London Hospital, Dr. Prosser James; Middlesex Hospital, Mr. Henry Morris; St. Mary's Hospital, Dr. Shepherd; St. George's Hospital, Mr. Brudenell Carter; St. Thomas's Hospital, Dr. John Harley; University College Hospital, Dr. Roberts; Westminster Hospital, Mr. Cowell.

STATISTICS OF SMALL-POX IN BERLIN.

ACCORDING to a statistical report on the epidemic of small-pox in Berlin, drawn up by Councillor Engel, the disease occurred in 4140 houses, and caused 6478 deaths: 3241 among males, and 3237 among females. Regarding the position of the rooms in which the cases occurred, the following particulars are given. In the cellars, there were 86504 cases and 932 deaths, or 7.9 per 1000; on the ground floor, 155,336 cases, with 932 deaths or 6 per 1000; on the first story, 184,518 cases, with 1,000 deaths, or 5.4 per 1000; on the second story, 166,537 cases and 1231 deaths, or 7.4 per 1000; on the third story, 139,075 cases and 972 deaths, or 7 per 1000; on the fourth story, 62,825 cases and 428 deaths, or 6.8 per 1000; while there were only two deaths among 3002 cases occurring on board barges, and 1227 deaths took place in the hospitals.

MORTALITY AT SEA.

THE following resolutions of the Standing Committee of Economy and Trade, on Commander Dawson's paper on the Legal Securities to Life at Sea have been considered and adopted by the Council of the Social Science Association. 1. That it is advisable to secure medical registration and legal inquiry by the coroner, in the case of deaths on the high seas in registered British ships, with a view to diminish mortality in the British mercantile marine. 2. That, in case of all deaths during the voyage, the causes and treatment should be inquired into by a medical officer appointed to attend the shipping office when the crew is being paid off, and that he forward without delay to the Registrar-General a medical certificate of the causes of death, the same as would have been required had the death occurred on land. 3. That, in case of suspicious, accidental, or violent death, the medical officer or Registrar-General of England should invoke the aid of the coroner of the

district, as if it had taken place on land, and the body were lying in the district in which the ship is paid off, although the body shall not be forthcoming. 4. That, in case the coroner's jury inculpates any person in connection with the death, the local police, acting under the direction of the Attorney-General, or Solicitor to the Treasury, shall take charge of the prosecution. 5. That the expenses of medical registration of deaths at sea might be defrayed out of the unclaimed wages of deceased seamen. 6. That a deputation wait upon the President of the Board of Trade and upon the Registrar-General of England, to urge these views upon their attention.

THE CHOLERA IN EUROPE.

THE Berlin medical periodicals of August 16th give the following statistics regarding cholera. At Königsberg, from August 3rd to 11th, there had been 82 cases, with 38 deaths. At Magdeburg, up to August 11th, there had been 294 cases and 130 deaths among the civil population, and 44 cases, with 19 deaths, among the military. The total number of cases in the town had been 338, and of deaths 149. In Dantzic, on August 12th, there had been an increase of 16 cases since noon on the previous day. From the date of outbreak of the epidemic, there had been 80 cases, with 40 deaths. In Munich, between the evenings of August 9th and August 11th, there were 32 new cases and 13 deaths. In Würzburg, the total number of cases of cholera and diarrhoea, from July 8th to August 10th was 69, with 30 deaths. On the latter day, there were 6 new cases and 2 deaths; 18 patients remained under treatment. In Dresden, from August 11th to 13th, there were 5 new cases and 5 deaths. In Vienna, there was a great increase of cases from August 10th to 17th; the number under treatment during that period being, in all, 536, of whom 215 died. One district is reputed to have furnished 158 cases and 91 deaths during the week; more than 50 cases occurring in one house alone, (in the Schimmelmassage). There was not, at the end of last week, a great amount of cholera in the suburbs of Vienna. In Pesth, during the week ending August 18th, the average daily number of cases was 80, while in Buda it was only 5 or 6. There were 28 patients left under treatment in the hospitals of Prague on August 12th; during the preceding two days, there had been 4 recoveries and no deaths. In Berlin, up to August 14th, 85 cases were reported officially; among these were 59 deaths; 47 of the cases occurred between the 7th and 14th. In Braunsberg, from August 8th to 11th, there were 34 new cases and 10 deaths. From the commencement of the epidemic, there had been 357 cases, with 105 deaths. There were 11 new cases and 4 deaths in Thorn from August 9th to 12th. In Tiegendorf, up to August 11th, there were 30 cases, with 25 deaths and 4 recoveries. Cholera has again broken out in Obersitzko, where, from August 2nd to 8th, there were 40 cases, with 14 deaths and 2 recoveries. It is said cholera has appeared in a severe form in several districts of Roumania, and the Turkish authorities have in consequence instituted a quarantine along the Danube. The disease was lately on the increase in Venice, Padua, and some of the neighbouring districts.

MILK-REPORTS IN INDIA.

DR. F. N. MACNAMARA (*Indian Medical Gazette*, July 1, 1873) has examined the milk yielded by the Bengali cows. He finds the average composition of it in 100 parts to be—solids, 13.07; water, 86.93; and the 13.7 parts of solids consist of—caseine, 4.82; fat, 3.33; milk-sugar, 4.17; ash, 0.75. The lowest percentage of solids in the milk of Bengali cows was 11.97. In addition to making an examination of undoubted samples of milk, Dr. Macnamara has also analysed the milk of commerce bought in the different bazaars; and it would seem that, like their English representatives in London, the Calcutta milkmen are addicted to the use of water. The milk bought in Harry Mohun Doss's Bazaar contained 4.88 per cent. of solids and 0.28 per cent. of ash, and, in fact, consisted of half milk and half water. In this investigation, Dr. Macnamara availed himself of the modifications in the methods of milk-analysis which have been introduced by Mr. Wanklyn within the last two or three years. The above investigation

is of considerable importance, from the fact of its affording an admirable illustration of one of the cardinal truths respecting milk. As Dr. Macnamara mentions in his paper, the Bengali cow, in addition to being very much smaller than the cow of England, is also a poorly fed beast. The milk of the Bengali cow is, however, not distinguishable in chemical composition from the milk given in England; but the quantity of milk is altered, and, instead of giving some gallons of milk *per diem*, as cows do in England, the Bengali cows give only four to six pounds.

A PHARMACEUTICAL CURIOSITY.

THE Berlin correspondent of the *Chemist and Druggist* sends the following specimen of extraordinary pharmacy, culled from the first edition of the Prussian Pharmacopœia (*Dispensatorium Borusso-Brandenburgicum*, 1731). This is in Latin. The specimen which he selects is "*Spiritus Cerebri Humani*", p. 206 (Spirit of Human Brain). "The brain of a young man, well built and perfectly healthy, but who has been put to death by some violent means, must be crushed, with all vasculars and the spinal marrow, in a stone mortar; afterwards mixed in a glass retort, or in a large phial, with 'Kaiser Karls Hauptwasser' (somewhat similar to our eau de Cologne) and spirit of wine. This mixture is to be distilled after having stood by for one, or better, for several years. The dose of this elegant remedy was fixed at a tablespoonful."

SCOTLAND.

DR. BELL PETTIGREW, F.R.S., has been appointed Lecturer on Physiology at the School of Medicine, Surgeons' Hall, Edinburgh.

THE Scottish Alpine Botanical Club visited, last week, some of the mountains of Perthshire. The excursion was botanically a success. Professor Balfour, Professor Dickson of Glasgow, Dr. Carruthers of the British Museum, and others, were of the party.

UNIVERSITY OF ABERDEEN.

THE summer "capping" day passed off on the 9th instant. Principal Campbell presided; and there was, as usual, a large attendance of students and their friends in the Hall of Marischal College, where the ceremony took place.

ABERDEEN: PREPARATIONS FOR CHOLERA.

PREPARATIONS have been made by the Public Health Committee to receive cholera should it break out in Aberdeen. The small Hospital on the Links, and also the Mounthooly Hospital, are in a state of preparedness, in case of being required at once to receive patients. A male orderly, nurses, and litter-carriers are ready for duty, in case of their services being required; and two nurses have been engaged on a retainer fee of five shillings per week each to be in instant readiness. Quarantine in suspected or infected vessels will be enforced; and cleansing and disinfecting are being carried out through the town.

THE CHOLERA.

IN view of the possibility of cholera reaching Scotland, the Board of Supervision has issued the memorandum of precautions recently circulated in England, and which is also applicable to Scotland. The Secretary of the Board, Mr. John Skelton, has also addressed to the local authorities of the different cities and towns of Scotland a copy of the Order of Council of the 28th ult., regarding the treatment of vessels in which cases of cholera have occurred. The circular which accompanies the order points out that, if hospital accommodation be not already available for the purposes indicated in the order, measures must at once be taken for securing and preparing a suitable house or room, to which persons suffering from cholera, if such cases should occur, can immediately be removed for care and treatment, and in which they will have suitable accommodation, and sick-bed as well as medical attendance provided by the local authority. In Edinburgh, by order of the Public

Health Committee, Dr. Littlejohn has issued a number of excellent salutary regulations requiring house-proprietors, house-factors, and others, to cause to be lime-washed and otherwise cleansed all passages and staircases of dwelling-houses belonging to them or under their charge, and the walls of back courts connected therewith, under statutory penalties. The police have, at the same time, issued notices to the effect that parties having cause to complain of accumulations of manure or other offensive matter near to dwelling-houses are requested to give immediate notice to the Inspector of Cleaning. Any person causing or permitting such accumulations within premises belonging to them or under their control are liable to a penalty of forty shillings sterling, which will be strictly enforced.

IRELAND.

LOCAL GOVERNMENT BOARD, IRELAND.

THE report of this Board, formerly the Poor-law Commissioners of Ireland, for the past year, has just been published. From it we find that there were treated in the workhouse hospitals during the year, 97,000 cases of sickness, 15,000 being of a zymotic character, and that nearly 12,000 deaths occurred in these institutions. The number which received out-door relief was 63,000, at a cost of £80,000, or a trifle over £1 per head; of this, £62,000 was given in money, £8,000 in kind, and £10,000 for orphans and deserted children. As regards the medical organisation that exists for the relief of the poorer classes, we learn that the 163 unions into which Ireland is divided are subdivided into 800 dispensary districts, having an area of 7 square miles each as an average. The dispensary medical officers attended close on 800,000 persons, 211,000 of whom were visited at their own homes. Among the diseases treated, may be mentioned 16,000 cases of fever, 10,000 of small-pox, and 7,000 of scarlatina, whilst vaccination was performed on over 250,000 people. The total expenditure for medical purposes amounted to £141,000, which is equal to about 2½d. in the pound on the valuation, whilst the total disbursements of poor-rates for all purposes—viz., relief, medical relief, burial grounds, registration of births, deaths, and marriages, and sanitary measures—was £894,888, or at the rate of 1s. 4d. in the pound on the valuation, which is estimated at £13,329,354. This, when compared with the Poor-law expenditure in England and Scotland, speaks very favourably for the Irish Poor-law system, which is considered to be the most efficient in the United Kingdom.

DISEASED MEAT.

ON the 16th inst., two parties were found guilty in Dublin, of exposing unsound meat for sale, and sentenced by the presiding magistrate, one to a fine of £6, and the other, which was an extremely bad case, to two months' imprisonment. Parties driving a trade in diseased meat have been warned over and over again that, should pecuniary penalties not stop the traffic, imprisonment, with or without hard labour, would be substituted, and they, therefore, should not complain that at last the magistrates have acted in inflicting the severer punishment.

THE MEDICAL ATTENDANTS OF THE ROYAL IRISH CONSTABULARY.

A CIRCULAR has been issued by the Inspector-General of Constabulary in Ireland, to the effect that an increase of allowance for medical attendance on the constabulary from one shilling to two shillings per man per month, to commence from the 1st instant, has been sanctioned by Government, subject to the conditions of attending all members of the constabulary force, their wives, and families, and supplying them with all medicines free of charge. This tardy act of justice is mainly owing to the exertions of the Irish Medical Association, a body which has for several years energetically worked on behalf of the medical profession, and obtained for its members several privileges which were formerly withheld.

CONFERENCE OF POOR-LAW MEDICAL OFFICERS.

A MEETING, convened by the Poor-Law Medical Officers' Association, was held at King's College on Thursday, August 7th.

Dr. LUSH, M.P., who was called to the chair, said: Our Association is one of great national, and certainly of great professional, importance. When you consider the number of members of the medical profession engaged in the treatment of the sick poor, how they are scattered over the country, and how strong their political influence might be, if it were exercised, I cannot speak too strongly in favour of such an Association, uniting medical men so situated, in furtherance of the objects they have at heart with regard to their own profession. In saying this, I do not believe any of us would wish to aggrandise the personal interests of the profession where they are not in accordance with those of the public. I have, in bygone years, acted as a Poor-law medical officer, and am therefore conversant with the grievances of those holding similar appointments. I feel that they have much to complain of; their claims have been almost systematically neglected by those in high quarters; they are inadequately paid, and their status is not that which members of a liberal profession have a right to occupy. In addition to that, they are, in many cases, greatly overworked. That is an array of grievances which would entitle any body of gentlemen of liberal education and respectable position to band together to break down the strong opposition which, for a series of administrations, has met them. I wish I could tell you there was any chance, in the next session of Parliament, of those grievances being remedied. It is known to all of you that, in the House of Commons, there is such a state, I may say, of party demoralisation, that the Government dare not bring in any strong measure, while bills introduced by private members are systematically opposed on private grounds. The important Public Health Bill, brought in last session by Sir Charles Adderley, failed to pass, not on the ground that it was not needed, but in deference to gentlemen who believe that local taxation is of primary importance. An excellent friend of ours, Mr. Dalrymple, M.P., was prepared to press to a division a resolution affirming that the services of Poor-law medical officers, with reference to inspectors of public health, should be recognised and properly paid. In the early part of the session, I elicited from Mr. Stansfeld that, wherever the services of Poor-law medical officers were used for public purposes in relation to the reports of officers of health, they were to be paid for. That was an answer given offhand, and without much authority; and it was therefore a very proper course on the part of Mr. Dalrymple to try to insert such a provision in Sir C. Adderley's bill. I believe that, had the bill been proceeded with, such a clause would have received unanimous support. The fact that Parliament is unable to attend to the interests of the profession, is a reason why medical men should exercise the influence they possess. Members should be adequately informed of the requirements of Poor-law medical officers, and should be properly instructed in the true principles of sanitary reform. No gentlemen have so great a power of conveying instruction, as to these matters, as the Poor-law medical officers. Boards of Health have already done a great deal for sanitary purposes. Under the Health of Towns Act, much has been done to prevent overcrowding and to secure drainage and a plentiful supply of water; but I may say, without fear of contradiction, that the essentials of health are wanting in our rural districts. The rural districts with which I am acquainted are, at the present time, in a condition in which people go to wells which are impure, and live in crowded cottages, where the drainage is a mere matter of casualty. The subsoil drainage is defective, stagnant ponds are neglected, and, in every respect, as far as my personal acquaintance with those districts is concerned, they are manifestly behind our great cities. It was with a view of extending sanitary provisions to the rural districts that Sir C. Adderley's bill was introduced; and I rely on your assistance in promoting that object. By way of apology for the half-dozen doctors in the House of Commons, I may say that the apathy and indifference which such measures receive have prevented our effecting anything. I hope that the general election will have a revivifying influence, and that many more members interested in these matters will be returned. Nothing is of more national importance than public health, and, if anything can save the country from deterioration, and from that mere fondness for outward wealth which is growing upon us, it is stricter attention to that subject, regardless of expense, because expense which produces results is not a loss. Every man who invests money in something practical, feels that it is not thrown away, and, if expenditure can be kept free from misappropriation, the public funds cannot be better devoted than to national health.

Dr. JOSEPH ROGERS stated that what he desired was, an improved status for Poor-law medical officers, enlarged powers of usefulness in the proper treatment of the sick poor, and thereby a diminu-

tion of public expenditure. The wretched system which now prevailed caused £4,000,000 to be thrown away. He was glad that, in spite of the apparent antagonism of certain officials of the Local Government Board, and of the general feeling of indifference, the principles which the Society had been enunciating six or seven years were producing an effect; and, though it might not come in his time, he was comforted that a system of medical relief which disgraced and degraded everybody connected with it, would, through the exertions of the Association, be displaced by something better. [Mr. Wickham Barnes then read Dr. Rogers' observations, the latter supplementing them at different points by oral remarks.] I. There should be life appointments for all Poor-law medical officers. When the Association was formed, there were many, especially in large parishes, elected annually. Now, with a few exceptions, they had succeeded in effecting the abolition of that system. The Poor-law Department of the Local Government Board had still, however, the power of compelling medical officers to resign without any legal inquiry. It was not right that, because it might suit the convenience of a permanent official to crush a medical officer rather than take the trouble of hearing him, such a power should exist. In the Army or Navy, there would be a mutiny if such a thing were attempted. II. The local authorities should provide medicines and appliances, and appoint, where practicable, qualified dispensers. Great disappointment existed at this not having been carried out. Mr. Hardy's Metropolitan Poor Act distinctly recognised the expediency of it, and the Royal Sanitary Commission had since recommended it. Three Poor-law inspectors, deputed by Mr. Goschen to inquire into parochial medical relief, urged its adoption; the first edition of the Public Health Act of 1872 contained a clause extending the principle to populous places; and Mr. Craufurd's Scotch Bill of 1873, the result of a select committee, contained clauses which would have secured the boon for Scotland, yet there was no general adoption of the principle, except in places where the initiative was taken by boards of guardians, as at Oxford, Southampton, and Birmingham. On previous occasions, he had referred to the long delay in carrying out the dispensary clauses of the Act of 1867. In Marylebone, also in Lewisham, with a population of 51,000, it had never been attempted, the excuse of the department being, that Lewisham was not sufficiently populous. Although, doubtless, much of the opposition of boards of guardians was owing to dread of the expense, and to complete ignorance of the economic results which had followed its adoption in Ireland and in places in England and Wales where it had been tried, much of the delay had sprung from something more than apathy at Whitehall. There was a remarkable confirmation of this in a paper written by Mr. Corbett, the Metropolitan Government Inspector, in 1871, which had been recently sent to all the metropolitan boards of guardians by his successor. He inveighed most strongly against the lavish administration of outdoor medical relief, and urged the guardians to refuse medical relief unless the applicants would consent to go into the workhouse or district asylum, or to grant it only by way of loan. If one thing was clearly established, it was, that on the efficiency of outdoor medical relief depended the best chance of materially curtailing the out-door poor expenditure, which last year amounted to £8,000,000 or 6s. 11½d. per head of the population, as compared with £728,000 or 1s. 1d. per head in Ireland. Unfortunately, Mr. Corbett's view was shared by many of his colleagues. Hence, although there had been conference after conference of boards of guardians, attended by Poor-law inspectors, for the purpose of considering out-door relief, they would search in vain for any reference to the desirability of amending district medical relief, though there was plenty of hostile criticism on the alleged lavish use of doctors' orders for medical comforts, which, it was said, cost doctors nothing, and were given in lieu of medicines, which did. It was strange that guardians did not see the expediency of providing the medicines themselves, but they had never been officially urged to do so. Poor-law inspectors were military and other gentlemen, knowing nothing of such matters. III. As to superannuation of medical officers, although they had congratulated themselves that the Act passed last session, it was eminently unsatisfactory. Its opponents succeeded in throwing the whole cost of superannuation on local funds, which, with its permissive character, had rendered the measure a farce in many rural unions and country towns. He would advise all Poor-law medical officers, particularly the Parliamentary Committee of this Association, to urge on candidates the justice and expediency of making the Act obligatory, and of throwing the charge partly or wholly on the Consolidated Fund. The clause, requiring the officer seeking superannuation to resign before the matter could be taken into consideration, had always operated prejudicially, and might hereafter be modified. Some gentlemen had been induced to give up appointments through being led to suppose that superannuation allowances would be granted, and then, to use a vulgar expression,

had been "sold." IV. There should be adequate remuneration, on an uniform basis. No principle whatever was adhered to in fixing the stipends of medical officers, and they still varied from 8*s.* to 7*s.* per case of sickness, the average cost of medicine for each case being 3*s.* Sir Robert Peel provided that half the stipend should be paid from the Consolidated Fund, in order that the guardians might be more liberal; but they accepted the boon of part payment, and let the salaries remain. The outlay on medical relief had increased since 1866, but there was the greatest difference in different unions. In St. George's in the East, medical relief was 5*s.* 3*d.* per head; in Mile End Old Town, 3*s.* 4*d.*; in Lambeth, 2*s.* 4*d.*; in the City of London, 6*s.* 4*d.*; in St. George's, Southwark, 3*s.* 4*d.*; in St. Leonard's, Shoreditch, 2*s.* 4*d.*; in the Strand, 6*s.* 4*d.*; and in Hackney, 2*s.* 4*d.* The report of the Irish Local Government showed a remarkable approach to unanimity; why was there not the same in England? 5. The stipends should be paid wholly, instead of partially, from the Consolidated Fund; for he contended that the sickness of the poor was a question in which the whole country was vitally interested. Epidemics invariably came to the poor, and thence spread to those above them; for sickness among the poor could not be localised. Epidemics spread over large tracts of country; yet, with strange inconsistency, the cattle-plague ravages were met by a county rate, while the ill-paid doctor was left to combat with disease. The incidence of local taxation was limited and unequal. The poorest parishes had too often to bear the heaviest burdens. Pauperism was now migratory; it had almost ceased to be parochial. All conditions required some skill and medicine; yet where there was the most sickness, there were the most niggardly arrangements. The principle of part payment from the Consolidated Fund having been conceded, what objection could there be to the whole? As to the fear of extravagant stipends, a great change must come before there was any blamable liberality in paying parish surgeons. The redistribution of national changes would be keenly discussed at the next election. They might be successful in securing the health of the poor by having the charges incidental to its preservation made wholly a national change. 6. As to the relation between the Poor-law medical officer and the medical officer of health, this question had drifted into the greatest confusion. Appointments had been made presenting every variety of area, population, and salary; and the health-officer was left to get his information how and where he could. Sir C. Adderley's Bill directed that the necessary information of unsanitary condition should be furnished by the district medical officer; but as there was no provision for payment, the Association petitioned against this threatened imposition of additional unpaid labour. This opposition contributed considerably to the withdrawal of the Bill, which, on the whole, he regretted, because it contained many good clauses; and, with Mr. Dalrymple's amendments, a great step would have been made by it. There was, however, no ground for despair. If they steadily persevered, they would eventually establish a complete correlation between the various branches of officers engaged in attending to the public health. It might be hopeless to expect anything from the present Parliament, but they should bring their claims before the candidates at the next election.

Mr. MILWARD (Cardiff) thought they would have little chance if they were simply trying to improve the status of Poor-law medical officers; but as they were also endeavouring to benefit the poor and the ratepayers, they had a better chance of gaining public attention. The dispensary clause for which they had tried, would have lessened the expenditure for Poor-law relief; for the establishment of dispensaries in Ireland had been attended with unmixed good. They not only enabled medical men to do their work with pleasure and profit, but largely decreased the expenditure on the whole service. They also sought to incorporate with the Poor-law service and sanitary service, believing that the latter could not be efficient if it did not make use of the Poor-law medical officers. This required little argument, for who was acquainted with sanitary administration except the Poor-law medical officer? He was constantly requested by the health-officer to give him information, and he got little from any other source. The Poor-law medical staff numbered about 4,000, but only 900 were yet members of the Association, though many had benefited greatly by its action. Considering how slow the country was to move, and that Parliament was the slowest body that could be moved, much had been done. Superannuations and permanent appointments had been obtained, though the Act providing former was too much permissive, and was, therefore, in many cases inoperative. Sanitary measures in Liverpool, according to the statistics of the town clerk, had resulted in saving 3,750 lives per annum. Reckoning the money value of these lives, and of the sickness prevented, and setting this against the outlay for drainage, there was a profit of nearly £14,500,000 in twenty-five years. At Cardiff, the average rate of mortality up to

1855, was 30.12 per 1000. When the first section of Mr. Hawkshaw's drainage, passing through the poorest part of the town, was opened, it fell; and in 1860, it was as low as 18.9 per 1000. It had since been 22 per 1000, and there had been absolutely a saving of 3000 lives. There were no rewards for saving life on land, as there were on water, but the hardest hearts must be sensible of the money value of the life and productive energy saved by sanitary measures. He moved: "That this meeting approves of the objects of the Poor-law Medical Officers' Association, and pledges itself to use its best exertions to promote them."

Mr. BENSON BAKER, in seconding the resolution, urged Poor-law medical officers to exercise their influence on Parliament, and to join the Association; those in London were willing to do what they could, but they wanted their country brethren to assist them. They were not labouring merely for a dispensary system for the metropolis, though they had almost accomplished this, but were labouring in order that the profession might be supplied with dispensaries and drugs, and might carry out their duties more efficiently, conscientiously prescribing what was absolutely necessary without having to think "Can I afford to do it?" It was impossible for any hygiene to be carried out efficiently without the hearty co-operation of the Poor-law medical staff, which could not be secured unless they had independence of action, and fair remuneration for their work. He should not give information to a man placed over him, and thereby make himself obnoxious to some of his guardians, owners of tenement property. He had not given the slightest information since the Public Health Act passed, and would not do so. He had pointed out to Mr. Simon that when he went to see a woman with small-pox, and with an infant two months old on her breast, the Vaccination Act had taken from him the right to vaccinate that infant, and that both mother and infant died. Mr. Simon said this was a blot, and that he would have it altered. The entire work of vaccination for 30,000 or 40,000 people had been placed in the hands of one man, who did not vaccinate as many as the Poor-law medical officers did when the work was divided into five districts. The Public Health Act had set class against class, and had made one medical man an obstruction, instead of an auxiliary, to his superior. Poor-law medical officers ought to be able, as in the army and navy, to rise by length of service, and by distinguished services. The inspectors ought to be selected from among them, thus securing men of ability who had passed through the ranks, and knew the subjects with which they had to deal. A service would remain stagnant if there were no promotion. Poor-law officers moreover were as much entitled as the army and navy to superannuation. These matters should be forced on the attention of the legislature, and the common sense of the country would endorse their claims. They had been like a bag of sand, without coherence, and were therefore a down-trodden branch of the profession. If they banded together, they would get their rights.

Dr. FITZPATRICK had been twenty-five years medical officer of the West Derby Union. He had been at enmity with the guardians a quarter of a century, and hoped to continue so till his death. [A laugh.] Independence did not depend on money, and his own independence had done him no harm, though he had been notorious in one way—he was very often in the public papers. He was not so sanguine as Dr. Rogers, and would only ask for that which was most pressing. He was anxious to get a little at once, and those coming after them could get something more. Medical relief ought to be defined, whereas it was now given indiscriminately. Men in broadcloth came to him, and joiners who had been out of work a couple of days—men paying £16 a year rent, and on familiar terms with the relieving officer. One man, who looked able to pay, explained that his former doctor, being unable to be paid, told him to go and get a parish note. The mate of a Liverpool vessel, the intimate friend of one of the guardians, was allowed by the board seven shillings a week for a month. [A voice, "It is as bad in London."] Medical relief should have a common sense definition, instead of being left to the discretion of relieving officers and guardians.

The CHAIRMAN: A man must be a "pauper"; is not that a definition?

Dr. FITZPATRICK knew a man must be out of work, but the Act did not say how long. Navvies were sent to him, earning from thirty-six shillings to forty-two shillings a week, who, in consequence of a debauch, could not go to work on the Monday, and went on the parish. He was made the stalking-horse to get them relief. There ought to be a proper definition, and it should be stated whether they kept dogs. [A laugh.] On entering the house of a pauper, he was attacked by a ferocious bull-dog, his bat alone saving him, and receiving the impression of its teeth. On his taking out a summons, the clerk said that, as he could not prove the dog had done any injury before, nothing could be done. On this, he said he should arm himself with a small

pistol, and shoot the dogs like blackbirds. [Laughter.] Mr. Robertson Gladstone, brother to the Prime Minister, was on the bench, and said he was quite justified. He laid one law accordingly the next day. Medical officers were obliged to go and visit people able to keep prize dogs. Again, the districts were overgrown. His district on his appointment had 9,000 inhabitants; it had now 30,000, yet the salary had been unaltered since 1852. As soon as the population reached a certain figure, a district ought to be divided, and the then incumbent should retain his position, or take a portion of the district at the same salary. Medical officers, moreover, ought not to be required to pay their deputies. The relieving officer, clerk—and the clerks were the greatest enemies of the medical officers—and taxcollector, if disabled from any cause, had deputies appointed at the expense of the guardians. Medical officers ought to have the same treatment. When disabled for four months, he gave his salary of £130 a year to his deputy for the whole time. Again, it ought to be compulsory on the relieving officer to give whatever the medical officer ordered. The relieving officer having once refused some coals and meat that he had ordered, he had since given such things out of his own pocket.

The resolution was carried.

Mr. WEBB (Basingstoke) remarked that harsh language and personalities would effect nothing. He had been a medical officer thirty-three years, and was frequently called on to attend as paupers persons whom the guardians refused to relieve in any other way. What right had a guardian to send a man to him, and then if he ordered him nourishment, refuse to give it? The remuneration for accidents and extra attendance required revision. He attended a man three months for a compound comminuted fracture of the arm, and charged £5, which the guardians paid, but they afterwards required him to refund £4, stating, that he would not have been entitled to anything if he had not put up the fracture before the man entered the workhouse. (Dr. Fitzpatrick: You should have held to the money.) Anyone would return money to which he was declared disentitled. As to superannuations, after ten years' service, a medical officer should be entitled to a pension of one-third of his salary; after twenty years', two-thirds; and after thirty years', the whole amount of the salary. He moved the second resolution, which urged Poor-law medical officers to join the Association, by subscribing five shillings yearly, in order to promote the more speedy realisation of its objects.

The CHAIRMAN remarked that there was a hope of the Superannuation Act being altered. It was passed by Dr. Brady for Ireland, and he got what he could.

Mr. BRIDGER said the Cambridgeshire Branch wished for equalisation of pay. The Chesterton union was the lowest in the county. Reckoning the fixed salary and extras, he received 1s. 10½d. per case. He seconded the resolution, which was then agreed to.

Mr. WICKHAM BARNES moved, "That this meeting views with regret the present action of the Local Government Board inspectors, in urging on the local authorities the appointment of health-officers over large districts, to the exclusion of Poor-law medical officers, and this meeting considers that by so doing they are directly opposing the tenour of Mr. Stansfeld's general order." He had no objection to officers of health being appointed for whole counties, provided the local men had the position and the remuneration. A man could not act for a county, unless he had the help of the Poor-law medical officers.

Mr. BRIDGER seconded the resolution. The Poor-law medical officers ought at least to be deputies, for their services could not be dispensed with.

Dr. FITZPATRICK would spurn being a deputy. Poor-law medical officers were as eligible as higher men, and he regretted that their JOURNAL had given Mr. Stansfeld the cue by depreciating them.

Dr. ROGERS wished the resolution to be modified, so as to advocate the utilisation of the local knowledge of Poor-law medical officers. They could not revoke the arrangement which had been made, but they could render great service by their local knowledge. He was turned out of office by the Local Government Board for simply doing his duty, and if Poor-law officers did their duty as health-officers, they would be similarly treated. Country practitioners had written to him that they did not possess sufficient independence to justify them in examining the sanitary conditions of their patients' dwellings, and in occupying the position which some gentlemen would thrust upon them. If there had been medical inspectors, to whom they could report, he should, nevertheless, have approved the plan; but, Mr. Stansfeld last year appointed a host of his personal friends, who knew no more than children of the matter, to whom the Poor-law medical officers would have to report.

Mr. WEBB seconded the resolution. He was acquainted with the country, and knew that Poor-law medical officers were not afraid to state their opinions.

The resolution was carried, and the proceedings then closed.

CONFERENCE OF MILITIA SURGEONS.

A CONFERENCE of militia officers was held in the large theatre of King's College at 3.30 P.M. on Wednesday, August 6th, with a view to revive the defunct Militia Surgeons' Society. Mr. BORLASE CHILDS took the chair, as President of the old Society.

The CHAIRMAN, in opening the proceedings, said they had met for the purpose of considering the grievances, as affecting militia surgeons, which had arisen, or might arise, in consequence of the working out of the new Army Organisation Bill and the establishment of central depôts. He had had certain hard cases of grievance brought under his notice, where men had suffered severely, and were likely to suffer still more. He knew of one case where a gentleman in a provincial regiment had lost at least £200 of his income in consequence of the establishment of a central depôt. Being deeply interested in the welfare of his provincial brethren, he should have much pleasure in doing anything he could to bring their cases fairly and properly under the notice of the regular authorities, as, from his residence in London, he had probably more opportunities of doing so than gentlemen resident in the country. He invited a discussion on the question, and also the adoption of such resolutions as might be conducive to the welfare of militia surgeons in general.

Mr. J. C. SMITH, of the East Norfolk Militia, said he wished to explain why he had taken an active part in summoning the present meeting. Twelve months ago, at the meeting of the Association at Birmingham, a meeting was held at which it was determined that a general meeting of the service should be summoned in London at the earliest possible opportunity. No summons had as yet been issued; and, seeing in the JOURNAL of the Association that there was a conference of Poor-law medical officers to be held, and a hint being thrown out that it would be a good opportunity for militia surgeons and other bodies to assemble, he corresponded with Mr. Ernest Hart, and, at his suggestion, issued circulars. He also wrote to Mr. Stokes of Dublin, asking him to move in the matter. He had received many letters in reply to the circulars; and they contained but one sentiment—namely, that it was most desirable that they should know their present position; and the writers fully acquiesced in the necessity of the re-establishment of the old Association.

Dr. M'CORMACK (Dublin) said he looked on that meeting with feelings of deep regret, when he saw so few faces to be recognised, and so few who recognised him. There was a time when he believed he was as well known as St. Paul's Cathedral—when he was called the great militia agitator; and, though not gifted with prophecy, he did on more than one occasion state that the day would come when the militia surgeons of the United Kingdom would deeply deplore allowing their Society, then in a flourishing condition, and able to command a very large amount of support in the House of Commons and the House of Lords, to fall to the ground. He did not wish to cast any reflections upon the individuals or the nationalities that caused the Society to cease to be in that flourishing condition; but he was amused last year, in reading the account of the proceeding of a meeting of militia surgeons in Birmingham, to see that the Irish surgeons took credit to themselves for starting a Society which they called the "Society of Militia Surgeons of Ireland", and inviting the co-operation of their English brethren. It should have been the other way. The Irish members were the first to leave the old Association in the lurch; the Scotch members followed suit; and in a short time English members did the same. Without union, they could not expect their claims to receive any support either from the Government or from the House of Commons. Their wisest course was, therefore, to resolve that the Society of Militia Surgeons of Great Britain and Ireland be revived from that hour. Speaking as an individual, he believed they could not have a worse advocate than himself, or one more unfitted to bring forward the grievances of militia surgeons before Her Majesty's Government, inasmuch as he personally was not a sufferer. Selfishness, however, was one of the causes which led to the disruption of the Society some years ago, when men declined to contribute their small quota of half a sovereign annually to keep up the Society, because they were not at that time affected, forgetting that the day might come, as it had come, when they might be so affected. He believed it to be their bounden duty, whether their own pockets were touched or not, to make a common cause for their brethren who did suffer. He had not been with his regiment for some years, and, were he to occupy the position of spokesman to address Mr. Cardwell, or any of Her Majesty's ministers, and to urge a claim for compensation, he was afraid their case would stand on a very bad basis, because the first question put to him would be, "What have you suffered?" Although he had suffered nothing, he should still suffer a prospective loss, for, if at any

time, from a desire to cease active occupation, he retired into quiet life in the country, still, as long as he was the surgeon of his regiment, he had a prospective right to go back to that regiment, and, therefore, if no compensation were given, he should lose that right, whatever it might be worth. Mr. Cardwell had given the militia surgeons some hope or some idea that he would receive their grievances and redress them individually. The militia surgeons could not be guilty of a more fatal mistake than to allow Mr. Cardwell to deal with each case individually, for they would be treated in detail. Whatever representations were made to the Government should be made on the broad basis of their having done away with the life appointment of militia surgeons, who were appointed some twenty-five, some thirty years ago, on a full understanding and belief that the appointment was for life or during good conduct, and that the appointment did produce certain pecuniary advantages. They must impress upon the Government that, by the common law of the land, they had a perfect ground to demand compensation for loss of office. The common law stated that no man should be deprived of any appointment which he held under Act of Parliament without compensation. Militia surgeons had been all appointed under an Act of Parliament. Appointments in the Civil Service, in the Poor-law Department, or in Somerset House might be done away with without compensation, but he knew no instance in which even they had not been compensated, although it could not be demanded as a right; but the militia surgeons, by the statute law of the country, could demand from the Government compensation for loss of office, because they were appointed by the Act of Parliament creating the militia. That was a very important point to impress upon Mr. Cardwell. Under these circumstances, he had great pleasure in proposing a resolution to this effect:—"That it is the opinion of this meeting that the Militia Surgeons' Society, under the old title of Militia Surgeons' Society of Great Britain and Ireland, be revived from this day." When that resolution was agreed to, then would be the time for taking another step, and making the Society useful and advantageous for the interests of militia surgeons by appointing a president, vice-president, secretary, treasurer, and committee. The Society would then be revived, and he hoped that, remembering the evil effects of allowing it once to drop, it would not be allowed to languish until they had obtained that which he believed they would obtain; if they would work together, they might bring before Mr. Cardwell such a weight of evidence that he would be bound to attend to it. He also recommended that pressure should be brought to bear upon candidates at the next general election with reference to this question.

Mr. PECKHAM, of the West Kent Militia, seconded the proposition, which he thought a most desirable one. It was a great misfortune when the old Society dropped to the ground. Another great misfortune was, that they never could get militia surgeons to hang together; they seemed perfectly apathetic in the matter, and would not trouble themselves to attend any meetings that might be called on the subject. If anyone could propose a plan by which militia surgeons would become a more united body, great good would be done. He felt convinced, from Mr. Cardwell's remarks, that he was prepared to do something, and therefore he was quite satisfied that good must result if the matter were taken up vigorously by those who were greatly interested in it.

Dr. WILLIAMS, of the Royal Flintshire Militia, said that he was appointed to his regiment in 1852. They were then only allowed 11s. 4d. a day, and 2s. forage money, and, by a little agitation, they managed to get something more. They might depend upon it that, without agitation, they would get nothing; and, although some of their brother surgeons thought they were doing wrong by agitating, he could not see that they could be doing wrong by asking for the compensation to which they had a perfect right. He deplored the want of unity existing amongst militia medical officers. He had come from the country to attend this meeting, and he hoped that they might gain some redress.

Mr. J. C. SMITH, in answer to a question as to what Mr. Cardwell was prepared to do, said that, if the depot system were carried out, the militia surgeon would lose his attendance upon the staff, his examinations of the recruits, and the two months' preliminary drill. They might keep their commission, and go out for a month in the year, and spend more money than they earned in the month.

Dr. WARWICK, of the 1st Royal Surrey, said he could not altogether agree with the remarks that had fallen from Dr. McCormack, as to the reason why many militia surgeons left the old Society. For his own part, he never did join the Society, and many others did not; and for this reason, that it was agitated at the time that the militia surgeon should be attached to the staff like the adjutant or the quartermaster. He had served about twenty years, and they must remember that at

that time many of the surgeons appointed to regiments were men who held important positions in the towns in which they lived, and it was a rule laid down by the Secretary of State for War that the surgeon of a regiment should live at head-quarters. That rule was a matter which influenced many men, and it was a strong point when they came to apply for compensation. Surgeons remained in those towns for years, and did not accept other practices, because they felt that they, as had been the rule with all servants of the crown, would hold their appointments for life, and, moreover, that they could not be deprived of them without compensation. They accepted their appointments upon the footing of what had always been the law of the land, that, as long as they did their duty, they would retain them. Still they must look at the other side of the question. Changes would occur, and it was sometimes necessary for the good of the service that individuals should suffer. Such had been the case with regard to the abolition of purchase, which, no doubt, pressed hard upon individuals. Through the kindness of Mr. Peek, the member for Mid-Surrey, he forwarded a letter to Mr. Cardwell, stating very much what had fallen from Mr. Smith; for, as far as he could remember, he had never seen their case concisely stated in any medical or military journal. The way to put it was simply from a pounds, shillings, and pence point of view, because they accepted their appointments as an addition to their practice, just in the same way as they should an appointment to a prison, or any other public establishment. They received various sums. In his own case it was about £230 or £240 a year. [*A voice, "You're lucky."*] That income was made up from attendance on the staff, from recruiting, and also from the training. It seemed that, when the depot centres were formed, they would lose the whole of the attendance on the staff, because a staff surgeon would be appointed at each depot. They would also lose the whole of the recruiting both for the line and for the militia; and all they would be paid would be simply for one month's training,—not a penny for the preliminary drill. They all knew what a month's training came to, and what the cost was. [*Hear.*] Independently of that, they had to leave their own practice and to find a substitute during the time of their absence. Was it, then, worth their while to hold an appointment of that kind, and, if it were offered to any man of standing, would he accept it? The case of volunteer surgeons was very different. They never expected to make it anything but a matter of pleasure. It was the same with the militia assistant-surgeons. They knew very well that all they would receive would be their month's training, with the prospect, of course, of promotion. One thing which had not been mentioned was this, that they could not all expect to receive the same rate of compensation.

The resolution was unanimously agreed to.

Dr. WILLIAMS then moved, "That this Society now proceed to elect a president, vice-president, secretary, treasurer, and committee, of not less than twelve, selected in proportion from each county."

Dr. WARWICK seconded the resolution. He only wished to add one further remark. Dr. McCormack said he thought it would be wise for them all to stick together. He quite agreed in that, but it must not be expected, if they received compensation, that they would all be dealt with in the same manner. It would depend upon the amount they had received from their regiments, and the time they had served in the regiments; and his own impression was, that surgeons who had served less than fifteen years would receive but small compensation. That was only an opinion of his own. He quite agreed with the resolution that they should have a small, working committee, and, as he resided near London, he should be happy to render any assistance in his power. He added that he had received a letter from Sir Henry Storks, who said:—"The Secretary of State has stated in the House of Commons that the case of militia surgeons will be considered each on its own merits. Further than this, nothing at present can be said."

Dr. WILLIAMS.—That is just about the same answer he has given to everybody.

The resolution was agreed to.

It was then resolved that Mr. J. C. Smith, of the East Norfolk Militia, be the first President of the new Society; Dr. W. Williams, of the Flintshire Militia, be the first Vice-President; and that a Secretary and Treasurer be appointed. It was further resolved that Dr. Goodchild be requested to act as Secretary and Treasurer.

A committee was appointed, consisting of the President, Vice-President, Secretary, Mr. Childs, Mr. Heathcote, Mr. H. Muscroft (1st West York), Mr. Morris (Herefordshire), Dr. Warwick (1st Royal Surrey), Mr. Peckham (West Kent), Mr. Curtis (East Kent), Dr. Roche (West Essex), Mr. Stokes (Dublin County), Dr. Gossan (Antrim Rifles), the Surgeon of the South Cork Regiment, and Dr. Nagle (Roscommon).

On the motion of Mr. SMITH, it was resolved that the Society should

ask the co-operation and assistance of the Parliamentary Committee of the British Medical Association.

The subscription to the Society was fixed at half a guinea per annum, and the proceedings were brought to a close by a vote of thanks to the Chairman.

ORGANIC MATTER IN DRINKING-WATER.

MR. J. A. WANKLYN writes to us:—My colleagues and myself have always from the first maintained that organic matter in drinking-water is to be avoided. We have maintained this even in those cases where the matter is vegetable—where it is not derived from urine or from excrement. We have maintained that a yield of albuminoid ammonia of not more than 0.06 or 0.07 per million is to be insisted upon, even in cases of peaty water.

The instance of the water-supply to the Leek Workhouse affords a striking illustration of the evil effects of a water-supply which, although devoid of sewage, is highly charged with organic matter. The water is derived from a well, and contains only 0.5 grain of chlorine per gallon, which is proof that it has received no urine or faecal infiltration. Its organic matter is, however, measured by the extraordinary figure 0.34 per million. From these data I assigned the following character to the water. "It is not calculated to give typhoid fever, but it will give diarrhoea." Having pronounced this opinion on the water supplying the workhouse, I afterwards learnt that for years past the Leek Workhouse has been notorious for the frequency of the deaths from diarrhoea, as will be apparent from the following letter from Mr. Farrow, the Inspector.

Commissioner's Offices, Leek, August 8th, 1873.

Dear Sir,—The following is an extract from a printed report of mine dated March 19th, 1866.

"The inmates of the union workhouse are in all cases included in the above calculations. The proportionate number of deaths in the workhouse during the fifteen years ending 1865 from each cause to one hundred deaths from all causes, compares favourably with those of the whole town, except in the case of diarrhoea, which is 11.5 per cent. in the workhouse, against 3.4 per cent. for the whole town."

During the twenty years ending 1870, the case stands as follows.

Proportionate number of deaths from diarrhoea to one hundred deaths from all causes.

Place or district.	per cent.
Limits of Leek Improvement Act	3.4
Workhouse	10.9
England and Wales (1870)	4.9
(Signed) I am, etc.,	R. FARROW.

THE WATER-SUPPLY TO LEEK.—BY MESSRS. DAKEYNE AND WANKLYN.

Some fifteen years ago, the water of this township was submitted to chemical examination, and found to contain unusually little mineral matter. In one gallon of the water there were only about five grains of mineral matter. This comparative freedom from mineral matter is often observed in water which does not traverse the chalk or limestone. The Leek water is, as a necessary consequence, a very soft water, and contrasts with the London water, which is hard, and contains eighteen grains and upwards of mineral matter in the gallon. Fifteen years ago, the methods of water analysis were not so advanced as they are at the present day, and at that date, when the analysis of the Leek water was made, it was impossible to tell whether or not there was much organic matter in it. We have accordingly made an analysis with the special object of inquiring into this particular, and have adopted the most refined modern methods. We find that the general water-supply to Leek, as illustrated by that which flows from the tap in our house, is rather better than water of average purity. The water taken from the spring in Upperhulme is, however, of extraordinary purity. The following are the figures.

	PARTS PER MILLION.	
	Free Ammonia.	Albuminoid Ammonia.
Tap water (Leek)	0.00	0.04
Spring in Upperhulme	0.00	0.02
London water	0.01	0.06

The present supply to the workhouse is very bad indeed; the albuminoid ammonia yielded by it being 0.34 per million.

In Endon, we have found a well-water in a dreadful condition. In Leek, as elsewhere, it is of the utmost importance to have well-water thoroughly tested.—*Leek Times*, August 2nd, 1873.

FORTY-FIRST ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

SECTION D.—PUBLIC MEDICINE.

On the Channels through which Cholera is communicable. By JOHN MURRAY, M.D., Inspector-General of Hospitals. (This paper is published at page 216.)

The Influence of Impure Water on the Diffusion of Cholera. By H. HEYGATE PHILLIPS, M.B. (This paper is published at page 220.)

The Propylaxis of Asiatic Cholera. By H. MAC CORMAC, M.D. (This paper is published at page 222.)

Dr. SHRIMPTON expressed his belief, that cholera was not to be traced to bad water alone, as was proved by the fact, that impure water had always been present, but that we had not always had cholera. He thought that the real nature of cholera was not known; but much might be gathered by looking back to its history. For a long time we were accustomed to hear of it in India, but it was never known out of India, and we never troubled ourselves about it. The peculiarity of it was, too, that it broke out first in one district, and then in another. Then it travelled from one part to another of Asia, and then from one part to another of Europe. It seemed, when it came here, to confine itself to an area at the time, and whenever it appeared once, it came again. He did not think that the conditions of a contagious disease would be found in cholera. The patient was paralysed at the last, and it was not of diarrhoea, but a flux which afflicted those stricken with it, and there was an exudation through all the pores. There was no symptom of inflammation, and there was always a reaction after death, in the cellular parts of the body.

Dr. J. W. TRIPE thought that the meeting should, in the public interest, direct its attention particularly to the question, as to the communicability or non-communicability of cholera, and whether it was, or was not communicated by the excreta of persons who had suffered from it. He had been called to the earliest cases in his district, so that he was personally acquainted with the facts. The first case was in a cellar-home in St. George's-in-the-Fields, and cases spread in the house to the row of houses, and to the street generally. It spread to seven houses in the street, before it became general in the parish. It was a question with him whether the disease was communicated by the breath or not. One point was very remarkable, and that was, the great number of washerwomen who were sufferers from the disease. He had traced out that persons of this class who were stricken, had been engaged in washing the clothes of persons smitten with cholera. It might be that these washerwomen somehow got the particles of the excreta from the clothes into their mouths. Then it was a question whether a bad case communicated its like. His view was, that the violence or lightness of the attack depended a great deal upon the position of the people, and their degree of nourishment and constitution; the stronger being able better to resist the effects of the poison than the weaker. He believed that if the cases, as they broke out, were isolated, as had been done by the city authorities lately, we should have nothing of it as an epidemic.

Dr. PARKES had nothing to add to the important facts mentioned, showing the communicability of cholera; but he would remind the members that it had been proved that the disease was brought to Manila from the Levant. He directed attention to a little book published by a Professor at Dresden, a pamphlet of only fourteen pages, taking up the question why some places enjoyed an immunity from cholera, while other places around had it regularly. In all the cases given, eleven or twelve perhaps, the writer had shown that the water-supply was pure where the cholera never obtained a footing. This was important evidence indeed, and it contrasted with the evidence given of the spread of cholera where the water was bad. The book to which he directed attention was entitled, "Spread of Cholera through Wells and Springs." It was known that in India there were places where the cholera had not come, and it was a great enigma to some officials, and drew forth remarks, that a town had cases of cholera introduced into it, without the disease spreading. A letter afterwards appeared from a missionary, making a complaint that the cause of this non-spread of the disease had not been traced out; for he said, he had been the means of making the town thus healthy. When he first went there, he found disease most rife among the people, and he gave

them pure water in place of bad water, and instituted a system of house cleaning. Thus, the missionary said, the cholera has been expelled. It might not be that having pure water was the means of keeping off the cholera, but it certainly had some effect, and in India, it was so far believed that the cholera poisoning had connection with the water-supply, that the officials in every part were using all their energies to remedy this want.

Dr. DE VALCOURT (Cannes) spoke on the question of quarantine as a means of preventing the spread of the disease. He gave examples showing the futility of quarantine as carried out abroad; as for instance, at Constantinople, where all the persons coming by sea from Odessa, were subjected to ten days' quarantine, while the passengers by train went in free; and he said, while forty went by sea, four hundred went by train.

Dr. ROYLE (Manchester) was convinced of the infectious and contagious character of cholera. He believed it disseminated itself through the air as well as through the water. He knew a case of a man who was passing a place where the clothes of a cholera patient were being burned, and it affected him so by the smell, that he said he had caught his death, and die he did of cholera. The disease was a sort of blood-poisoning, and a person might die of it without having a single purge. His idea was, that the purging was an effort of nature to cast out the poison, and that it should not be stopped too rapidly.

Mr. W. FRANKLIN HARTON spoke upon the importation and contagious character of cholera. When there was not a single known case of cholera in Ireland, one was brought over by a girl who came into the island by a steamer, and from her it spread. A second case was one where a young man coming over to Ireland to see a friend, brought the cholera. The friend then had it, and the woman who washed the clothes, and it spread in the country. He thought the main question with regard to cholera was not its cure, but its prevention. He stated his belief that the disease was due to osmosis; and that if a medicine could be got, simply to fortify the system against the osmosis, and to prevent its effect, cholera might enter the system just the same as simple diarrhoea, and with no greater harm.

Mr. J. NETTEN RADCLIFFE said that he proposed to submit some recent data upon the origin of the last epidemic of cholera in Europe. In the course of last year, an exceedingly important question arose as to the origin of the epidemic. It was asserted by the Director of the Medical Department of the Persian Government, that the epidemic had arisen out of the embers of the preceding one in 1865 and 1866. That was taken up and supported by Dr. Tholozan, physician to the Shah of Persia. Those who had been following out the question would remember that, in the course of last year, he (Mr. Radcliffe) took occasion to point out that the data which had been supplied to the English government, with the circumstances of the recent outbreak in 1866, did not show any proof of that. He pointed out that, with all due deference to Dr. Pelikan, the Director of the Medical Department of the Russian Empire, who had taken the other view of the question, until there were data to supply the connecting link between 1866 and the outbreak of 1869, or until it was shown farther that some effort had been made to prove that the recent outbreak in Persia came from the same source, the very important conclusion that the outbreak of 1869 was of Persian origin ought to be taken with some degree of doubt. Those views were submitted to the Russian government, and very recently the Local Government Board had received from the Russian government a reply to the question which he had raised. When he was asked to prepare a paper to lay before the section, he had made an application to Mr. Simon, medical officer of the Local Government Board, who had given him permission to lay the facts before them. He did not stand alone in his opinions. Inspector-General Murray was a witness personally to the great development of cholera in North-Western India in 1867, and he was so largely impressed with the character of that epidemic, that he felt certain that when it passed beyond his observation in India he should hear of it in Persia and in Europe. Dr. Macnamara, no mean authority on cholera, anticipated his (Mr. Radcliffe's) objections by some months in a paper published in the *Indian Medical Gazette*. He had the reports of the Russian physician in Krieff, and he had expressed doubts quite the same as those he (the speaker) subsequently expressed. The answer given by Dr. Pelikan was this. He supplied unquestionably a connected history of cholera in Russia from 1865 to 1869. He showed that the epidemic of 1865 had never died out in Western Russia, and there was quite a series of outbreaks intervening between the decline of 1866 and the outbreak of 1869. He argued that the present outbreak arose from the same cause, and that in fact they were then dealing with an outbreak of European origin. The same notion was taken by Russian physicians. But if the opinions were correct, they had now to deal with two great outbreaks, viz.

1852 and 1856, which was most considerable. He need scarcely point out to the gentlemen present that if the opinions of those physicians were correct, their standpoint with respect to the propagation of cholera in Europe must be considerably modified. It had been pointed out that any outbreak of cholera outside India had been of a purely local character. Those papers would soon be published, so that they would soon have more information on that point. Dr. Pelikan had supplied the link between the epidemics of 1865 and 1866 and 1869 and 1870, but he had not supplied any information whatever as to the measures taken or efforts made at the time the epidemic appeared in Krieff. His accounts rendered it certain that during the first seven months of the epidemic the physicians in Krieff and Persia believed they had to do with cholera.

Dr. J. MITCHELL WILSON said that when he was in the island of Mauritius, there were two very remarkable outbreaks of cholera, and each time it was caused by the disembarkation of coolies. There were some curious facts contained in a report of these visitations which had been published. One was, that those on the island who escaped most lightly were those who were well supplied with good water during the prevalence of the epidemic. Another epidemic was caused no doubt by a season of very great drought. He might also say that the bulk of the population in Mauritius were composed of Europeans, Asiatics, and Africans. The mortality among the Europeans and Asiatics was about 28 per 1,000, among the Africans 78 per 1,000, while the class which obtained almost total immunity were the Chinese. They had 1,800 persons in the island and they lost but two men. He thought that there could be no doubt that cholera was eminently and strictly a contagious disease, but that pure water was necessary he had no doubt whatever. In Mauritius in the second epidemic, which followed the first after an interval of two years, the proportion of people who died was larger among the fresh residents of the island than among the old residents.

Dr. CARR differed from the last speaker on the subject of the contagiousness of the disease. He lived in New York when the cholera raged there in 1862, and was one of the assistants of the Board of Health. All the cases were due to strictly epidemic causes, and not to contagion. Where people resided in very low-lying localities, such as the banks of the Ouse, the disease appeared. He believed himself, from a careful inquiry into the whole testimony borne by medical men all over the world at large, that cholera was not a contagious disease but was due to epidemic causes, which were removable.

The CHAIRMAN thanked those gentlemen who had contributed papers upon the subject, to which he as well as the gentlemen around him had listened with the deepest possible interest; and as, in such meetings of the kind, information was brought of such a varied character from all parts of the world, he much hoped that good results would accrue from the meeting, of which he himself had not the slightest doubt.

DEMONSTRATIONS ON PATIENTS.

A NOVEL and interesting feature in this year's meeting was the demonstration of various forms of disease on the living subject. The demonstrations took place on each day after the closure of the sectional meetings. The merit of the initiative in this matter belongs to the Museum Committee.

Cases of Nervous Disease.—On Wednesday, August 6th, Dr. HUGHLINGS JACKSON exhibited nine patients, each of whom was the subject of a well marked and rare form of Nervous Disease. The patients were seen by numerous members of the Association, one of the classrooms of King's College affording a good opportunity for exhibition to a large number of persons.

One patient was a girl seventeen years of age, who had been hemiplegic on the left side seven years. The interest of her case was the history of *inherited* syphilis and present marks of the same; viz., (1) remains of keratitis; (2) she had had the malformation of the teeth described by Mr. Hutchinson; and (3) had lost part of her nose from so-called "erysipelas" in infancy. Treatment had done her no good. Dr. Hughlings Jackson, believing that the hemiplegia depended on the blocking up of a syphilitic artery—on local softening, therefore—never expected benefit from iodides or mercurials.

Another case was that of a man who had hemiplegia of the left side and hemipia; the defect of sight being, that he could not look to the paralysed side—"over his left shoulder," to use the patient's expression. The significance of this case was enhanced by the fact that there was very great diminution of sensation in the paralysed parts. The case, Dr. Hughlings Jackson believed, was interesting as being the

"paralytic analogue" of those cases of migraine recently described by Dr. Living, in which there were temporary affections of sight (sometimes hemiplegic) along with one-sided motor symptoms, and in which there is presumably a "nerve-storm" or "discharging lesion" in one side of the brain.

Another case—one of remarkable interest—was that of a man who had (1) paralysis of the left side of the tongue, with wasting of that side of the organ; (2) paresis of the palate, also of the left side; it "dimpled" to the right when the man cried out "ah"; (3) palsy of the left vocal cord (the larynx in this case had been examined by Dr. Morell Mackenzie); (4) very marked paresis of the sterno-mastoid on the left side; (5) the patient was deaf of the left ear. Dr. Hughlings Jackson thought there could be no doubt that there was intracranial syphilis. The position of the disease was not at all doubtful. It would be of roots of nerves arising from the left side of the medulla oblongata, and also of some of the fibres of that part of the spinal accessory nerve which arises from the cord. Bernard's well known experiments were spoken of. The combined use of the vocal cords and the sterno-mastoids—as, for example, in singing—was dwelt on.

There was also a case of paresis of both vocal cords (examined by Dr. Morell Mackenzie), with weakness of both sterno-mastoids. Dr. Hughlings Jackson remarked that the occurrence of aphonia from intracranial disease was of more frequent occurrence than was supposed. This patient had also simple atrophy of the optic nerves. He afterwards went to Mr. Brudenell Carter's demonstration, where his optic discs were shown to many. What connexion there is in this case betwixt the laryngeal palsies and the optic atrophy, Dr. Hughlings Jackson is unable to say.

A case of supposed tumour of the middle lobe of the cerebellum was exhibited, and two cases of supposed cerebral tumour.

Extraction of Cataract.—Dr. C. B. TAYLOR, of Nottingham, exhibited patients, illustrating his method of extracting cataract by peripheral section of the iris, and the treatment of amaurosis by hypodermic medication. In extracting, Dr. Taylor removes only a portion of the periphery of the iris, without invading the pupil; this, he contends, possesses all the advantages of a larger iridectomy, and the results certainly contrasted favourably with those obtained by first-class Graefe's operations, the slight slit in the iris being concealed by the upper lid, and the pupil perfect beneath. The cases of amaurosis were ophthalmoscopically ex-



No. 1.—Dr. Taylor's.



No. 2.—Von Graefe's.

amined by Mr. Carter's demonstrating ophthalmoscope, and presented all the characteristics of white atrophy of the optic disc. One of these, a soldier, blind for three years, with only perception of light, received, after a month's treatment, sufficient sight to enable him to earn his living as a groom. Another, a captain in the merchant service, similarly affected, who was at first unable to read any print whatever, recovered sufficient sight to peruse Bradshaw's Railway Guide with ease. Dr. Taylor remarked that he had treated several similar cases with equally good results.

Epispadias and Extraversion of the Bladder.—Dr. G. LICHTENBERG showed, on August 7th, a case of complete epispadias in a boy, aged 10, without extraversion of the bladder. This rare case had been operated upon by him at the German Hospital; and he demonstrated the different acts of operation with the aid of one drawing; in another drawing was shown the original condition of the boy before the operation. At the same time, Dr. Lichtenberg exhibited a truss-like instrument, manufactured by Messrs. Krohne and Sesemann, by the assistance of which the boy is enabled to retain the urine in his bladder, which he can do for a short time, if not excited, without the use of the instrument.

Rhinoplastic Operations.—Dr. LICHTENBERG also exhibited two persons upon whom he had performed rhinoplastic operations—one for the restoration of the entire nose, and the other for the right ala. Accounts of these cases are mentioned in the Museum Catalogue, page 46, Nos. 285, 286, 287, and 288.

Laryngoscopic Demonstration.—Dr. MORELL MACKENZIE gave a laryngoscopic demonstration, at the Hospital for Diseases of the Throat, with the aid of the oxy-hydrogen light, on Thursday, the 7th inst. Dr. Mackenzie operated on two cases of laryngeal growths, and handed one over to Dr. Krishaber, who also operated successfully. Many cases illustrating the different stages of syphilis and phthisis were brought under observation; and Dr. Davies, of Swansea, brought up an interesting case of epithelioma of the arytenoid cartilages. A cystic bronchocele was tapped, and injected with iron, and several bronchoceles of fibrous

nature were injected with iodine. Dr. Hewson, of Philadelphia, also applied his "clay treatment" to a case of fibrous goitre.

Structure and Development of Hematozoa.—On August 8th, Dr. COBBOLD gave a demonstration in the Annual Museum in reference to the structure and development of hematozoa. He exhibited numerous illustrative drawings, together with the hearts of two dogs and a seal, which were stuffed with nematode worms. A discussion ensued, in which Dr. Gueneau De Mussy, of the Hôtel Dieu, Dr. W. T. Gardner, of Glasgow, Dr. Drysdale, Dr. Hayden, Mr. Hemming, Dr. Crisp, and others, took part.

Infantile Syphilis.—On Friday, August 8th, Dr. THOMAS BALLARD showed an infant, aged five months, affected with syphilis, in order to invite attention to the value of those signs and symptoms which are developed after birth, and are relied upon as pathognomonic of syphilitic contamination of the infant, and to suggest that they are not really evidence of congenital disease, but are accidents arising from certain unfavourable conditions. Three months ago the infant exhibited the following symptoms: very loud snuffles, weak voice, abundant eruption on legs, thighs, and nates, some on chin, face, and scalp. The right arm was thickly covered. The eruption consisted chiefly of circular discs with a dark centre and colourless space between it and the circumference; some were vesicated, resembling spots of variola; others, especially those about the anus and vulva, were ulcerated and moist, thus constituting mucous tubercles. The mother is apparently healthy, aged 27, twice married; in her first widowhood she had a still-born child and a miscarriage. Two years ago she was again married, and has since had only this child. Both parents deny having had any venereal disease. The following were the unfavourable conditions which seemed to Dr. Ballard to be the cause of the symptoms. The child was much wrapped in dirty flannel clothing; on its head was a red flannel cap or bonnet with a curtain, which hung down the back of its neck; around the neck was a woollen wrapper, into which the chin was buried, and which was dripping wet with saliva. Its thighs and legs were enveloped in a thick coarse flannel wrapper, which, together with the napkin, was saturated with urine and faeces—it was besides closely covered by its long clothes. The mother, being left-handed, could only carry the child on that side, hence its right arm was always in contact with her dirty red woollen shawl. No other treatment was adopted, than, as far as the circumstances of the mother would permit, the child was kept cooler and cleaner. It was vaccinated on July 22nd, and on the 29th an adult (Dr. Ballard himself) was inoculated with blood and virus taken from its arm, with the effect of producing only a modified vaccine vesicle, which is now quite well. After a careful examination of the question—"what are the signs of congenital syphilis in the infant?"—Dr. Ballard arrived at the following conclusions:—1. The death of the foetus *in utero* is the consequence of some defect in the maternal system, resulting from its contamination by the syphilitic virus, and that it is not necessary to infer, neither is there evidence to prove, that the organism of the child is intrinsically affected by it. The partial decomposition of the cuticle observed on the bodies of still-born children is satisfactorily accounted for by their maceration, probably for some weeks after death in the liquor amnii. 2. The records of cases of living children having been born with manifestations of syphilitic diseases are so few, as to allow of the supposition that they are not trustworthy. 3. Pemphigus and other forms of erysipelatous disease which may occur within a fortnight after birth, and have been regarded as syphilitic accidents, are pyæmic affections resulting from an unhealthy suppuration of the umbilicus which is produced by the child being subjected to certain unfavourable conditions. 4. The symptoms which are developed some weeks after birth, and are relied on as pathognomonic of syphilitic contamination of the system of the child are mere accidents, arising also from certain unfavourable conditions to which the child is exposed, and that they are all preventable or easily cured when the cause producing them is recognised; and consequently,—5. The practice of subjecting infants to long courses of mercurial treatment is not necessary, and is prejudicial to their healthy growth. The condition of the infant when shown was, that all the eruption had disappeared except about the anus, nates, vulva, and upper and inner part of thighs, the region of it being now entirely limited to where the napkin touches. A great many gentlemen saw the case, and there was no difference of opinion among them as to its being a typical case of congenital syphilis. The mother is an ignorant dirty woman, and does not take pains to hasten the cure of her infant. Lately Dr. Ballard had not encouraged her to do so, because he wished to preserve some of the eruption to show at the meeting, but he told his audience that he was sure that what remained of it could be cured in a very short time if it were dressed with an ointment composed of equal parts of emplastrum plumbi and zinc ointment melted together and spread upon strips of linen, the napkin being as much as possible dispensed with.

PHYSIOLOGICAL DEMONSTRATIONS.

A HIGHLY interesting and important feature of the recent meeting was the number and the instructive character of the physiological demonstrations which were given. We trust that the great interest excited by these may suffice to render such demonstrations a permanent attraction at our meetings. To the busy practitioner, who was educated in days when experimental physiology was scarcely at all taught, such demonstrations of salient points must be of great importance.

Experiments on Blood-Corpuscles.—On Wednesday, August 6th, Dr. NORRIS, of Birmingham, showed some beautiful experiments illustrative of his views regarding the formation of rouleaux by the blood-corpuscles, and the passage of the corpuscles through the capillary walls. A number of thin cork discs were so weighted with shot that, when placed in a jar of water, they maintained a vertical position below the surface of the water. The discs exhibited no tendency to form rouleaux; but, when removed from the water, dipped into paraffin oil, and replaced in the water, the discs formed rouleaux just like the blood-corpuscles. This phenomenon Dr. Norris ascribed to the repulsion between the paraffin and the water, and the cohesive attraction which the discs, covered with paraffin, had for one another. He inferred from this experiment that, when the blood was withdrawn from the body, the corpuscles underwent some alteration which led to repulsion between them and the liquor sanguinis, so that the corpuscles ran together in virtue of cohesive attraction. Sometimes, however, the corpuscles did not run together in the form of rouleaux, but gave rise to irregular conglomerate masses. He produced such forms by placing soap-bubbles side by side on a plate of glass. It was instructive to see the bubbles, in virtue of cohesive attraction, run together and produce forms similar to those often seen in the so-called dumb-bells of oxalate of lime, etc. Dr. Norris maintained that the passage of the blood-corpuscles through the capillary walls was not due to amoeboid movements, but to the action of cohesion. That it was not due to amoeboid movement, was supported by the fact that red corpuscles, which possessed no amoeboid movement, penetrated the vascular wall as well as the white corpuscles, which possessed contractility. He produced a soap-film, about a foot in diameter, and permitted a large soap-bubble to fall upon it; the bubble passed half through the film. He then applied the mouth of a wet beaker to the bubble, and, in virtue of cohesive attraction between the wet glass and the bubble, the latter, as it were, crawled through the soap film into the cavity of the beaker. The film was left intact. The film was compared to a capillary wall, the bubble to a blood-corpuscle, and the beaker to the interstice of some tissue outside the blood-vessel. Dr. Norris also dropped a wet orange again and again through a soap film; he also thrust his hand through it, and withdrew it, without producing any permanent hole in the film, owing to the cohesive character of the latter. In this way, he showed that the blood-corpuscles may pass through the capillary walls without there being, and without their leaving, any hole. These are only a few of the points which were brilliantly illustrated and most lucidly explained.

Influence of the Vagus Nerve upon the Vascular System.—A large number of members assembled on August 7th to witness Dr. RUTHERFORD's experiments on this subject, which were performed upon a rabbit. A hæmodynamometer was connected with the carotid artery, and the pulsatile oscillations of the mercurial column of the instrument were recorded upon a revolving cylinder. Dr. Rutherford closed the nostrils, so as to arrest the breathing, and showed that the heart's action was thereby much retarded. It had been stated that this phenomenon, discovered by Dr. Rutherford, was due to a reflex action, and not, as he had stated, to an action of the imperfectly aerated blood upon the inhibitory nerves of the heart. He disproved the reflex hypothesis by making a tracheal fistula, in order to permit respiration to continue during the closure of the nostrils. After making the aperture in the windpipe, he compressed the nostrils as before—now, however, without producing any influence upon the heart. He then divided the vagus nerve on one side of the neck, and faradised the lower end of the nerve. The heart's action was at once arrested for a considerable time, and the blood-pressure fell greatly, owing, as was explained, to the heart having ceased to pump blood into the arteries from which it was, however, rapidly flowing out into the capillaries and veins. After this, he divided the depressor nerve, and stimulated the upper end. Again the blood-pressure fell; this time the fall in the pressure, although slightly due to a reflex retardation of the heart, was principally owing to reflex dilatation of blood-vessels in the abdominal cavity; so that here the arterial pressure fell owing to diminished resistance permitting of a more rapid outflow from the arteries. The stimulation of the lower end of the vagus showed the action of cardio-inhibitory nerves, while the stimulation of the depressor branch of the vagus showed action of vaso-inhibitory nerves. In both cases, muscular action is diminished, and passive dilatation apparently results. He then injected a small dose of atropine into a vein,

and, speedily afterwards, the heart's action became much accelerated; this he ascribed to palsy of the inhibitory nerves of the heart, which had till then been still active in the undivided vagus. He then stimulated the lower end of the vagus as before, but the heart's action was no longer retarded by the stimulus, because the cardio-inhibitory nerves had been paralysed. He then injected a small quantity of the extract of Calabar bean, the antagonist of atropia; and, in a minute or so afterwards, he again stimulated the vagus, with the striking effect of greatly retarding the heart's action. He explained recent statements made by Schiff, to the effect that the accelerating nerves of the heart pass from the medulla into the vagus, and from thence into the superior laryngeal nerve, down the side of the larynx to the heart; and, after explaining the method of experiment, he stated that he had not been able to confirm Schiff's statement, for he had found the superior laryngeal nerve to have no accelerating influence upon the heart. Other points were alluded to and explained.

Action of Heat on the Heart.—A demonstration of the action of heat upon the heart was given by Dr. LAUDER BRUNTON, in the Museum of King's College, at 3.30 P.M., on Thursday, August 7th. Its object was simply to show the reasonableness of treating fever by cooling the body, and to demonstrate the well-known facts, that cold causes the heart to beat more and more slowly, and at last to stand still in a state of dilatation, while heat causes it to beat more and more rapidly, and finally, to stop in tetanic contractions. From this condition of "heat tetanus" it may be recovered by the application of cold, but a very slight increase of temperature will at once bring on rigor mortis, and then no amount of cooling will ever make the heart pulsate again. The apparatus employed was of the simplest possible kind, but it enables the operator to show the pulsations of the heart to a large number of persons at a time. It consisted of a piece of tin plate, three or four inches long and two or three broad, with a piece of cork fastened to it near one end by means of sealing wax. This served as a support to a little wooden lever, about three inches long, which was attached to it by a pin run through its centre, and turned freely on the pin as on a pivot. One end of the lever had a bonnet straw bearing a little paper flag fastened to it, and rested on the frog's heart, so that at each pulsation the flag waved up and down through a considerable distance. The only novel part of the apparatus was the method of balancing of the lever, so that its weight should not be too great for the heart to move. This was effected by altering the position of a pair of bull-dog forceps, which hung from the end of the lever opposite to that bearing the flag. When the end of the forceps was drawn under the pin which served as a pivot, the flag end of the lever pressed more heavily upon the heart when it was drawn much backwards, the flag was overbalanced and rose off the heart altogether. The heart of a recently killed frog being placed under the lever caused the flag to wave steadily up and down. When cooled by a piece of ice, brought into contact with the under surface of the tin plate on which it lay, the pulsations became slower, and at last ceased. On the removal of the ice, the pulsations recommenced; and, on the application of heat by means of a spirit-lamp, they became extremely rapid, then weak, and lastly stopped. On again cooling the heart, they recommenced. Tracings were exhibited, which showed that, when the temperature of a living animal was raised by enclosing it in a warm chamber, the beats of its heart became quicker, just as in the frog's heart. The tracings also showed that this was not due to paralysis of the vagus nerve, which retained its power over the heart to the last.

Experiments upon the Brain.—On August 8th, Dr. FERRIER experimented upon a cat and a monkey. After removing the vault of the cranium and the dura mater, he faradised various portions of the convolutions in succession. In applying his electrodes to the several convolutions, Dr. Ferrier predicted movements, for example, of the foot, the shoulder, the ear, the mouth, the eye, the head, etc.; and almost always the predicted movement occurred. According to Dr. Ferrier, instead of the cerebral convolutions being exclusively the seat of the intellectual operations, it now appears that they are, for the most part, the nerve-centres for various muscular movements, which can be called forth by stimulating them by electricity just as if they had been excited by volition. The cerebellum, whose function has been much disputed, is found by Dr. Ferrier to be the motor centre for the muscles of the eyeball. We believe that the researches of which Dr. Ferrier gave examples are regarded by competent physiologists as of very great importance.

Action of Light upon the Electromotive Force of the Retina and Optic Nerve.—On August 8th, Dr. MCKENDRICK placed a transverse section of the optic nerve from the eye of a frog against one, and the cornea against a second non-polarisable electrode, which formed the terminals of a circuit which included a delicate Thompson's galvanometer. Owing to the optic nerve and retina acting like a voltaic battery in generating electricity, the needle of the galvanometer was deflected to a considerable extent when the eye was kept in the dark; when, however, light

was permitted to fall upon the retina, the needle of the galvanometer swung back towards zero, indicating that less electricity was being developed during the excitation of the retina and optic nerve by the light.

Professor MAREY's experiments upon the heart were not shown, but he exhibited a curious apparatus serving to show the manner in which wings act in producing flight.

SOIREEES.

THE LORD MAYOR'S RECEPTION.—On the evening of Tuesday, August 5th, the members of the Association, and the ladies accompanying them, were received at a *soirée*, by the Lord Mayor and Lady Mayoress, assisted by Dr. Burrows, President of the Royal College of Physicians; Mr. Curling, President of the Royal College of Surgeons; and Mr. Callender and Mr. Ernest Hart, two of the honorary secretaries of the Reception Committee. The rooms had been arranged with the advice of Mr. Durham, of Guy's Hospital, and Mr. Cross, of St. Bartholomew's; and the State Drawing Rooms and the Long Parlour were filled with interesting works of art and objects of science. The Justices' Room and the Venetian Parlour were converted into dark rooms for electrical and other luminous experiments. The Egyptian Hall was arranged as a concert-room, and a concert of vocal music was performed there by Mesdames Nilsson and Patti, Signori Foley and Rizzoli, Mr. Santley and other artists of eminence. The old ball-room, to which access is obtained by the upper grand staircase, was fitted as a refreshment room. There were 3,400 visitors, including several hundred ladies. The scene was one of great animation and interest. The Mansion House has rarely received so numerous a company, but the arrangements were excellent. The supply of microscopes, spectroscopes, photographs, portable aquaria, polariscopes, minerals, etc., was large. The hospitality of the Lord Mayor has been gratifying to the profession which he has honoured, and the liberal scale on which it was displayed has been worthy of the traditions of his year of office.

SOIREE AT THE ROYAL COLLEGE OF SURGEONS.—In the evening of Wednesday, August 6th, the members were received at the house of the Royal College of Surgeons, in Lincoln's Inn Fields, by the President of the College, Mr. Curling, and the Vice-Presidents, Sir James Paget and Mr. Le Gros Clark. The tables of the library were covered with objects of artistic interest, and the works of Sir Henry Thompson, Mr. Prescott Hewett, and Mr. Seymour Haden bore testimony to the skill and zeal with which artistic pursuits are followed by eminent members of the medical profession. Professor Virchow, Drs. Cornil, Krishaber, Lazarewitch, and Spiegelberg, Baron Langenbeck, and many other eminent foreigners, testified their admiration of the great collections made by Hunter, and improved by Owen, Huxley, and Flower under the liberal auspices of the College, which devotes its funds to the purpose.

SOIREE AT UNIVERSITY COLLEGE.—On Friday, August 8th, a *soirée* was given by the Council and the Faculty of Medicine of University College. Each member of the Association was invited to bring a lady. The whole of the rooms were thrown open for the reception of the guests, who, taking the circular vestibule adorned with Flaxman's masterpieces as a centre, were free to roam in any direction; through the library, where were displayed many fine paintings by modern and ancient masters; to the portico, where the band of the Grenadier Guards performed excellent music; to the botanical theatre, where a fine concert had been organised by Dr. Roberts; to other theatres where physiological and electrical demonstrations had been prepared by M. Marey, Dr. Burdon Sanderson, and others; to the Anatomical Museum, etc. The guests were received by the Dean, Professor Marshall, and by Dr. Sharpey, who seemed to have quite recovered from his recent illness. Among the various professors and teachers present, was, we were glad to observe, Mr. Erichsen, whose recent severe illness prevented him from delivering the Address on Surgery at the annual meeting, but whose health seemed to be restored. There were upwards of 2000 persons present, all of whom appeared highly gratified with the cordial reception given to them.

EXCURSIONS, ETC.

ROYAL ARSENAL, WOOLWICH.—By the kindness of General Aclay, the Arsenal and Works at Woolwich were opened to members during the week, and large numbers availed themselves of the opportunity. Two large special parties were formed on Friday, August 8th; and were conducted through the Arsenal by Colonel Campbell, who had been most kind in offering assistance to the Committee in completing their arrangements.

MR. SPENCER WELLS entertained, on August 8th, a large number

of members and their ladies at a garden-party at his residence in Hampstead. It passed off with special success.

THE BARONESS BURDETT COUTTS, through Dr. Burrows, opened the gardens and pleasure-grounds of her villa, Holly Lodge, Highgate Hill, to members and their ladies, and provided tea and coffee to those who availed themselves of the opportunity, on Friday and Saturday. The grounds of the villa command most beautiful views of the metropolis; and in the villa a valuable collection of rare minerals was shown.

TELEGRAPH DEPARTMENT.—The General Telegraph Department, by the permission of Mr. Scudamore, was opened to the inspection of parties on Friday and Saturday. Mr. C. H. Patey was in attendance.

WESTMINSTER ABBEY.—On August 8th, a considerable number of members visited Westminster Abbey, facilities for the complete inspection of which were kindly afforded by Dean Stanley.

BRITISH MUSEUM.—By permission of Mr. J. Winter Jones, Principal Librarian of the British Museum, special facilities for visiting the libraries and manuscript departments were offered to members during the week.

HAMPTON COURT.—On Saturday morning, August 9th, about fifty members met at the Waterloo Station, and proceeded, under the guidance of Dr. Silver, to visit the old Palace at Hampton Court. Arriving at Teddington, the gentlemen passed through Bushey Park, where light refreshments were provided by Dr. Langdon Down. In the paddock, several of the valuable horses belonging to Her Majesty's breeding stud were shown, and much admired. The party then proceeded to the picture-galleries, and, as an especial favour, was allowed to see several other objects of interest not generally shown. At the bridge, two shallops were in readiness, in which the company proceeded slowly down the Thames, disembarking at Nomansfield, the residence of Dr. Down. A military band was in attendance, and played several selections. At 5 o'clock, the party sat down to a cold collation, at which Dr. Down presided. The Mayor of Kingston, in proposing the toast of "Success to the British Medical Association", took the opportunity to acknowledge the obligations under which that town was to the profession. Dr. George Harley, F.R.S., proposed "The Health of our Entertainers, Dr. and Mrs. Down." This toast was drunk with musical honours, and duly replied to. As the evening drew in, the party re-embarked, and proceeded to Richmond, where a general dispersion took place. The members were much pleased with the excursion.

NORTHERN METROPOLITAN OUTFALL SEWER AND MR. HOPE'S SEWAGE FARM.—On August 8th, at 12.30 P.M., a party of nearly forty members of the Association, including Professor Virchow of Berlin, and Dr. Parkes of Netley, with several of the foreign visitors who were interested in the matter, visited, under the guidance of W. Hope, Esq., V.C., and Dr. Corfield, the Abbey Mills Pumping Station, where the sewage of the low level northern intercepting sewer is strained and then lifted up into the sewer which already contains the sewage from the high and middle level northern intercepting sewers; and which is continued thence to the point where it enters the Thames just below high water level, a little above the entrance of Barking Creek into the river. After inspecting the splendid pumping works, the party proceeded by rail to Barking, and thence by boat to the point where the northern outfall sewer enters the Thames. The mouth of the sewer was under water, and the sewage was being discharged out of the enormous covered reservoirs which are used for storing it until the turn of the tide. The odour was most offensive, and the pollution of the water most obvious. The visitors were taken to Breton's Farm, where they saw how Mr. Hope utilises the sewage of the town of Romford, for which he pays a high price. They were shown splendid crops of various sorts, not only Italian rye grass (the seventh crop this year being well advanced), but vegetables of different kinds, and cereals, such as maize, wheat, barley, and oats, some of the barley having been sown in the last days of May, and some even late in June. They were told that plants bear very easily being transplanted when encouraged by dressings of sewage, and that the quality of the soil is of no moment whatever, plants thriving just as well on sterile gravel as anywhere else. This farm is underdrained everywhere, the drains being arranged in such a manner that the effluent water can be either turned into the Rom, a little stream which runs along the lower boundary of the farm, or returned to the sewage-tanks, and again pumped over the land with the sewage from the town. This latter course is pursued during the hot months and, to a certain extent, during all except the very wet weather, as it is found that the water itself is not the least valuable matter contained in the sewage. All the sewage, the scum and sediment being separated in the tanks is, made to pass through the soil, being applied on the ridge and furrow system, whereby the amount supplied to each

separate plot of land can be perfectly controlled. After a hasty glance at the live stock, consisting of a number of sleek little Shetland cows, which were engaged in converting the sewage-grown grass into milk, a few beautiful short-horned cows, and a most magnificent short-horned but very long pedigreed bull, of quite elephantine proportions, and some fine prize pigs, all of which bore ample testimony to the nourishing properties of properly grown sewage grass, the party was driven in Mr. Hope's conveyances to his house, near Barking, and most hospitably entertained at dinner. Everything on the table, except the salmon, was the produce of the sewage farm, or had been nourished upon it. After a toast to Mr. Hope had been proposed by Mr. Edwin Chadwick, C.B. (who had joined the party at Breton's Farm), and warmly responded to, the party returned to town. As Professor Virchow and Dr. Parkes were unable to stay long enough to visit the Sewage Farm on Friday, it was arranged that a small party should be called together for this purpose on Saturday. This was done, Dr. Oscar Liebreich of Berlin, and Mr. R. Liebreich of London being also of the party. Dr. Parkes was, however, unfortunately not able to be present.

HOSPITALS.—St. Bartholomew's, Guy's, the Middlesex, and St. Thomas's Hospitals, and Museums, etc., were opened for the inspection of members during the week. The Earlswood Asylum was opened for the inspection of members on Friday.

ORGAN PERFORMANCE.—Mr. Edmund Lloyd, of the General Post Office, gave a performance on the organ in King's College Chapel on August 8th, at twelve o'clock.

By kind permission, the following places were opened to members attending the annual meeting: The rooms of the Royal Medical and Chirurgical Society; the rooms of the Medical Society of London; the library of the Obstetrical Society of London; the Picture Galleries of Stafford House, St. James's (by permission of the Duke of Sutherland), on August 6th and 7th; the Picture Galleries of Grosvenor House, Upper Grosvenor Street (by permission of the Marquis of Westminster), daily during the meeting; Apsley House (by permission of the Duke of Wellington), between 10 and 11 A.M., on Tuesday, August 5th, and Saturday, August 9th; Dorchester House, Park Lane (by permission of Mr. Holford), daily during the meeting. Admission to the National Gallery was granted on the days on which it is ordinarily closed (August 7th and 8th). The Universities Club in Jermyn Street, at the suggestion of Dr. Laves, accorded the privilege of membership during the week to one hundred University graduates, being members of the Association, attending the meeting. Members of the Association visiting London were invited to consider themselves as members of the Medical Club during the week of the meeting. They were admitted on presenting their cards of membership. Members were admitted to the Burlington Fine Arts Club, Savile Row, on presenting their cards of membership. The Gardens of the Royal Botanical Society, Regent's Park, were opened to members presenting their cards of membership, daily, from August 2nd to August 11th. The Royal Mews: By permission of the Marquis of Ailesbury, Master of the Horse, Mr. Norton, Superintendent of the Queen's stables, Buckingham Palace, attended on Wednesday, August 6th, at 4 P.M., and conducted members presenting their cards of membership over the Royal Mews, Piccadilly. The Glass House of Messrs. Powell, Whitefriars, was open to the inspection of members of the Association.

WE have received the following letter from Dr. Stewart, and are sure that all the members of the Association will cordially endorse his expression of thanks to Lord Blantyre.

SIR,—Allow me to supply an omission of which I have been guilty, in connexion with the festivities of the late meeting. At the end of the Taplow feast on the 9th inst., when I was already on my way to the train, I was recalled, by many friendly vociferations, much more musical in my ears than some to which I was condemned to listen on the 5th, to give thanks for a very gratifying expression of good will from my fellow associates. While ascribing, as I gratefully did, to my good friends Dr. Fairbank and Dr. Edis, the whole credit of the admirable arrangements that had contributed so largely to the success of the Windsor and Cliveden excursion, I forgot to mention one—an outsider—to whom we were deeply indebted for his kind offices, most heartily rendered. When, at the beginning of May, it struck me that Stafford and Grosvenor Houses in town, and an excursion to Windsor and Cliveden, would be highly interesting and attractive to our visitors, I applied for permission to visit Windsor Castle, to Dr. Fairbank, and, for access to the other places, to Lord Blantyre. Feeling sure that he would, as he promptly did, comply with my request, and secure the assent of his kinsmen the Duke of Sutherland and the Marquis of Westminster, I concluded my note by saying, "I think I may by anticipation give you

the hearty thanks of the Association for your contribution to the enjoyment of its members." I cannot doubt that these words accurately express the unanimous feeling of the Association.

On another matter, which concerns myself, I shall request the insertion of a few remarks in next week's Journal. I am, etc.,
Grosvenor Street, August 29th, 1873. A. P. STEWART.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Royal Sea-Bathing Infirmary, Margate, on Thursday, September 4th, at three o'clock; Mr. W. H. THORNTON in the Chair.

Dinner at the Cliftonville Hotel, at five o'clock precisely. Charge, five shillings, exclusive of wine.

CHARLES PARSONS, M.D., *Honorary Secretary*.
2, St. James Street, Dover, August 19th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A MEETING of the Section took place in Queen's College, Birmingham, July 15th; Dr. WADE in the chair.

Epithelioma.—Mr. G. H. EVANS read a paper on this subject, illustrated by microscopical sections. Two of these were from a case of case of epithelioma of the lip in a woman, and one from the tongue in a man. The paper was also illustrated by carefully executed drawings. The earliest stage of invasion by the disease was demonstrated, and was interesting as tending to support the views of Rhindfleisch as to the origin of the club-shaped processes and nests from the interpapillary projections of the rete Malpighii. One specimen typically represented the various stages which the epithelial processes and nests undergo, from that of their full development to one of fatty degeneration and disintegration. The various views of Billroth, of Rhindfleisch, and others were contrasted, and illustrated by reference to the appearances observed in the sections of the tumours in question.

Microsporion Furfur.—Dr. SAWYER exhibited a specimen of microsporion furfur, the vegetable organism found in patches of pityriasis versicolor. He entered into a description of the plant, and concluded by expressing an opinion that the microsporion and similar plants have a causal relation with the skin-diseases which they usually accompany.

Healthy and Morbid Structure of the Cornea.—Mr. LLOYD OWEN illustrated by section the structure of the human cornea, giving the most recently recorded researches as to the minute structure of the part. He then dealt with the curious disease known as conical cornea, and which is really conoidal, and referred to the pathological changes observed in a case of this disease by Mr. Bowman and Mr. Hulke. In regard to the treatment of this disease, he enumerated the various plans which have been proposed for its cure, and referred especially to that plan which seems at present most trustworthy and rational, namely, the entire removal of the extremity of the cone, believing that the only permanent arrest of the disease and reduction of the curvature are to be obtained by the substitution of a firm and comparatively unyielding cicatricial tissue for the thinned and diseased cornea.

Spermatozoa.—Mr. FOSTER contributed some observations upon the structure and different appearances seen in various spermatozoa. He showed a number of interesting specimens from man, the elephant, and various other animals.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

WORCESTER.—Dr. W. Strange has been appointed Medical Officer of Health to the urban and rural sanitary authorities of Worcester City and Union, at a salary of £200 a year. Population about 35,000.

HENSTEAD (Norfolk).—Dr. J. B. Pitt, of Norwich, has been appointed Medical Officer of Health to the Henstead Union.

CHESHIRE.—A meeting was recently held at Crewe, in consequence of an invitation from the Congleton Union to the Unions of Nantwich, Congleton, Northwich, Runcorn, Macclesfield, and Altrincham, asking

them to join in the appointment of a Medical Officer of Health for the county. Mr. Bandle Wilbraham presided, and there were present representatives from the various unions in the county. After a long discussion, Mr. Biggott, of Sandbach, moved—"That this meeting recommends to its constituents that the rural sanitary authorities of Altrincham, Macclesfield, Northwich, Congleton, Runcorn, and Nantwich, within the above-named unions, except the borough of Macclesfield, be formed into a combined district for the appointment of a Medical Officer of Health." This was agreed to with one dissentient. It was also resolved—"That the salary of the medical officer be £800 a year, inclusive of all travelling expenses; but if all the above authorities do not come in, the salary be reduced by the sum that would be contributed by the dissenting authorities."

THE PORT OF LONDON.—The Town Clerk (Mr. Monckton) has issued the following notice:—

"The Corporation of London, as the sanitary authority of the Port of London, hereby requests all officers of Customs, officers of the mercantile marine, masters of ships, pilots, Thames Police officers, waterside authorities, and other persons connected with, or doing business in, the Port of London, to forward all communications on sanitary matters in connexion with the Port of London to Mr. Harry Leach (Medical Officer of Health for that port), addressed to him at his office in the Foreign Cattle Market, Deptford, S.E.; and also to report to that officer, without delay, all cases of cholera, small-pox, or other contagious or infectious diseases which may occur within the limits of the port."

CONFERENCE ON THE PUBLIC HEALTH ACT.

A CONFERENCE of Poor-law Guardians of the South-Eastern District, comprising Surrey and Kent (extra-metropolitan), Berks, Hants, and Sussex, and others interested in the working of the Public Health Act of 1872, was held at the Town Hall, Maidstone, on August 6th. The chair was occupied by Mr. J. G. Talbot, M.P. The subject was introduced by the Rev. J. G. Carey, and a discussion ensued, in which the Chairman, Lord Fitzwalter, Viscount Mahon, the Hon. Edward Stanhope, Colonel Lennard, Captain Tylden Pattensen, Mr. Francis Scott, Mr. Murray Browne, and several others took part. The danger to the community of the introduction of cholera and of other contagious diseases into districts, through the want of proper precautions in the lodging of hop-pickers during the season, was strongly insisted upon by the several speakers; and the following resolution, on the proposition of Viscount Mahon, seconded by Mr. Thomas White of Watlington, was passed unanimously:—"That, in the opinion of this Conference, it would be desirable that such powers of making bye-laws with regard to hop-pickers as are suggested in the report of Mr. Murray Browne to the Local Government Board, should be entrusted to the sanitary authorities."

CORRESPONDENCE.

THE PNEUMATIC ASPIRATOR.

SIR,—In your leading articles of August 2nd, under the head of "Pneumatic Aspiration", you state, in reference to the aspirator, that "M. Dieulafoy is the discoverer and introducer". Allow me to refer you to a paper of mine in the JOURNAL for November 26th, 1870, in which you will see by the following paragraph that I was the "discoverer and introducer" of the aspirator, or exhausting needle-trocar, as a means for the diagnosis and treatment of tumours and effusions.

"Three years and a half ago, Messrs. Mayer and Meltzer made me a set of these exploring needle-trocars, with exhausting glass-syringe attached, which I exhibited in August 1867, at the annual meeting of this Association in Dublin; at Oxford in 1868; and at Leeds in 1869: I also showed them to several eminent physicians (Drs. Campbell, Dubois, Bishop, Cormack, Dupierris, etc.) in Paris in 1868, as well as to M. Robert, the instrument-maker, and successor of M. Charrière."

On this occasion, M. Robert asked my permission to publish an account of my "Aspirateur Souscutané", as he then called my exhausting needle-trocar; at the same time observing that it was "a perfectly original invention, and was calculated to become of the greatest value in diagnosis and treatment, by allowing exploration of deep tumours slowly, effectually, and safely, for the discovery and evacuation of their fluid contents, as well as for injecting fluid remedies, without the risk of admitting air". Of these observations I took a note at the time. You may, therefore, imagine my surprise when I discovered that M. Robert had not published, as he said he would do, an account of my "Aspirateur" in his illustrated catalogue of instruments, but that he had subsequently brought out a similar instrument, giving the credit of

its invention to M. Dieulafoy, and that M. Dieulafoy had taken out a patent for the sale of this instrument in England, by Messrs. Weiss of the Strand. Having previously mentioned to Messrs. Weiss my intention, I published in the *Lancet* of June 11th, 1870, a statement giving the above dates, showing a priority of right of more than three years to the invention: notwithstanding which, M. Dieulafoy continues to claim the originality of the discovery, and also to reap the very questionable advantage derived from the patent he obtained for selling the instrument in this country at a greater price than that of Messrs. Mayer and Metzler, the original makers of the aspirator.

Whilst fully admitting the talents and ingenuity of our continental brethren, I am desirous only, in the cause of truth and fair play, to claim, as an English physician, the merit of a discovery which I believe will be found more and more valuable to our profession as it becomes more and more known and employed, and which M. Dieulafoy had exclusively, and, as I venture to think, unwarrantably, appropriated to himself in support of his patent.

I am, etc.,

PROTHEROE SMITH.

Park Street, Grosvenor Square, August 1873.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Preliminary Scientific M.B. Examination. Pass List. July 1873.

First Division.

Ashworth, John Wallwork, Owen's College
Banks, William, Private study
Barclay, Arthur, University of Edinburgh
Bedson, Peter Phillips, Owen's College
Beevor, Charles Edward, University College
Benham, Frederick Lucas, University College
Bigg, Henry Robert Heather, University College
Bigger, Samuel Ferguson, Liverpool School of Medicine
Burton, Samuel Herbert, University College
Byrne, John Joseph, Owen's College and Manchester School of Medicine
Cuming, Charles Henry, University College
Davy, Henry, Guy's Hospital
Freund, Percy Herbert Edmund, St. Thomas's Hospital
Garbutt, John Gilliot, M.A., St. Mary's Hospital
Gristock, William, University College
Hayward, Thomas Ernest, St. Bartholomew's Hospital
Hill, Samuel Alexander, Royal School of Mines
Horrocks, Peter, Owen's College
Joll, Boyd, Burnett, University College
Jones, David Rhys, University College
Lodge, Oliver Joseph, Private study
Meek, John William, Owen's College
Miller, Richard Shalders, University College
Nicholson, John Francis, St. Thomas's Hospital
Nicholson, William Rumney, University College
Priestley, John, Manchester Royal School of Medicine and Owen's College
Pye, Walter, St. Bartholomew's Hospital
Richmond, Charles Ernest, Owen's College
Robinson, Charles, Owen's College
Robson, Herbert, University College
Ryley, James, University College
Sainsbury, Harrington, University College
Sheppard, Charles Edward, St. Thomas's Hospital and Royal School of Mines
Silcock, Arthur Quarry, University College
Stevenson, Leader Henry, Guy's Hospital
Symonds, Charters James, Guy's Hospital
Taylor, Harold Gilbertson, King's College
Todd, John, University College
Watson, Charles John, Private study and tuition
Weber, Charles Alfred, B.A., University College
Willcocks, Frederick, King's College

Second Division.

Boyd, James Stanley Newton, University College
Brown, William, Birkbeck Institution and private study
Burlingham, Daniel Catlin, University of Edinburgh
Champneys, Henry Laurence, Guy's Hospital
Cooper, Frank Aspland, University College
Daniel, Alfred, University of Edinburgh
Davy, Thomas George, St. Bartholomew's Hospital
Hudson, James, Private study
Hughes, Edwin, University College
Joule, John Samuel, Anderson's Medical School, Glasgow
Lloyd, David, University College
Mears, William Pope, London Hospital
Mortimer, John, University College
Oram, Richard Rundell William, Guy's Hospital
Paddison, Edmund Howard, Guy's Hospital
Parker, William Rushton, Caius College, Cambridge
Paul, Reginald, Middlesex Hospital
Ráy, Prasanna Kumár, University College
Salter, John Reynolds, University College
Shain, William Frederick, Liverpool School of Medicine
Spratling, William Joseph, Private study and Royal College of Chemistry
Stewart, William Robert, London Hospital
Thomas, John Raglan, Epsom College and St. Bartholomew's Hospital

Vinrace, John Hinks, Private study
Weddell, William Henry, St. Mary's Hospital
Weiss, Hubert Foveaux, St. Bartholomew's Hospital

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 14th, 1873.

Buddle, Robert Maxwell, Park Terrace, Highbury
Emmerson, William Lindsay, Seaton Colliery, Durham
Satchell, Walter Alfred, Argyll Road, Kensington

The following gentlemen also on the same day passed their primary professional examination.

Bartlett, Henry, Guy's Hospital
Kerard, James T. W. T., Guy's Hospital
Collenette, Frank de Beaucamp, London Hospital

UNIVERSITY OF ABERDEEN.—During the past year, the following candidates, after the usual examinations, received degrees in Medicine and Surgery.

Degree of M.D.—George Roper, M.R.C.S. Eng., L.S.A., Aylsham, Norfolk.

At the same time, the following candidates received promotion to the degree of M.D.

William Thomas Benham, M.B., C.M., Bristol; Francis Henry Bodman, M.B., C.M., Army Medical Department; Archibald Carmichael, M.B., C.M., Barrow-in-Furness; William Henry Edwards, M.B., C.M., Antigua; James Frederic Goodhart, M.B., C.M., London; Samuel Thomas Knaggs, M.B., C.M., Newcastle, New South Wales; Nathaniel Lawrence, M.B., C.M., Longside; Patrick Mitchell, M.B., C.M., Old Rain; Thomas Raitt, M.B., C.M., Accrington; James Shepherd, M.B., C.M., Aberdeen; Henry Waldo, M.B., C.M., London; Alfred Walker, M.B., London; Charles John Wharry, M.B., C.M., Hong Kong; William Whitelaw, M.B., C.M., Cupar-Fife.

The following received degrees as M.B. and C.M.

James Adams, Kingsbridge, Devon (M.B.); John Findlay Arthur, Banchory Devenick (M.B. and C.M.); Alfred Baldock, M.R.C.S. Eng., L.S.A., London (M.B. and C.M.); Percy Hugh Benson, Whitby (M.B. and C.M.); Alexander George Burness, Woburn (M.B. and C.M.); Anthony Butler, Forres (M.B. and C.M.); James Cantlie, M.A., Dufftown, Banffshire (M.B. and C.M.); Eber Chambers, M.R.C.S. Eng., Isle of Wight (M.B. and C.M.); Louis Richard Connor, Doncaster (M.B. and C.M.); John Cran (C.M.); Meldon Joseph Dempsey, M.R.C.S. Eng., L.S.A. (M.B.); William Donald, King-Edward, Banff (M.B. and C.M.); Arthur Henry Downes, Munslow, Salop (M.B. and C.M.); John Edward Ferguson, Cove, Kincardineshire (M.B. and C.M.); Albert Frederick Field, M.R.C.S. Eng., L.R.C.P. Ed., L.S.A., Canterbury (M.B. and C.M.); Charles Henry Fowler, M.R.C.S. Eng. and L.S.A., St. Helena (M.B.); Alexander Davidson Fraser, Aberdeen (M.B. and C.M.); John Edward Garner, Woodside, Aberdeen (M.B. and C.M.); John Roubel Gray, Aberdeen (M.B. and C.M.); William Gregory, L.R.C.P. and S. Ed., India (M.B.); Charles Cormack Greig, Fyvie (M.B. and C.M.); John George Hall, Aberdeen (M.B. and C.M.); Henry Arthur Hallett, Poonah (M.B. and C.M.); Pemberton Abel Hoole, Graham's Town (M.B. and C.M.); Francis Ed. Jackson, M.R.C.S. Eng., L.S.A., Chertsey (M.B.); Walter Gawen King, Poole (M.B. and C.M.); William Lawson, Tullynessle, Alford (M.B. and C.M.); Henry Martin Lechler, London (M.B. and C.M.); Ralph Winnington Letfwich, London (M.B. and C.M.); William Frederick Lill, M.R.C.S. Eng., L.S.A., Nottingham (M.B.); Edward James Lloyd, North Wales (M.B. and C.M.); Stephen Mackenzie, M.R.C.S. Eng., London (M.B. and C.M.); William McBurns, M.A., Fintay (M.B. and C.M.); Forbes Fraser Maitland Moir, Kildrummy (M.B. and C.M.); Clement Frederick Fenn Murrell, M.R.C.S. Eng., L.S.A., Great Yarmouth (M.B. and C.M.); Charles Frederic Newcombe, Nottingham (M.B. and C.M.); Henry Alfred Alford Nicholls, London (M.B. and C.M.); Charles Oakes, L.S.A. (M.B. and C.M.); Francis Ogston, Aberdeen (M.B. and C.M.); David Aikman Patterson, Dover (M.B. and C.M.); William Peacey, M.R.C.S. Eng., London (M.B. and C.M.); Henry John Robbins, Wellingborough (M.B. and C.M.); William Roberts, M.R.C.S. Eng., L.S.A., London (M.B. and C.M.); James Russell, Croydon (M.B. and C.M.); John Scott, M.A., Aberdeen (M.B. and C.M.); William Japp Sinclair, M.A., Laurencekirk (M.B. and C.M.); Charles Gordon Lennox Skinner, Ballindalloch (M.B. and C.M.); Francis Henry Spencer, M.R.C.S. Eng., L.S.A., Chippenham (M.B. and C.M.); John Bellhouse Bowden Triggs, L.S.A., Falmouth (M.B. and C.M.); Alexander Reid Urquhart, Elgin (M.B. and C.M.); Albert John Venn, Shepton-Mallett (M.B. and C.M.); James Walker, Aberdeen (M.B. and C.M.); Lionel Alexander Weatherly, Portishead, Somerset (M.B. and C.M.); William Edward Webb, Wimbome, Dorset (M.B. and C.M.); Henry Wilcox, St. Neots, Hunts (M.B.); John Frederick Wilkin, M.R.C.P. Ed. and M.R.C.S. Eng., Folkestone (M.B. and C.M.); Alexander John Willocks, M.R.C.S. Eng., Deyrah Doaa, India (M.B.); Robert Mortimer Yule, Aberdeen (M.B. and C.M.).

Of the above mentioned candidates, Eber Chambers, Arthur Henry Downes, Albert Frederick Field, Stephen Mackenzie, Forbes Fraser Maitland Moir, William Japp Sinclair, and James Walker, received their Degrees in Medicine and Surgery, with *Highest Academic Honours*; Percy Hugh Benson, Ralph Winnington Letfwich, and Henry Wilcox, their Degrees in Medicine, with *Academic Honours*; James Cantlie, Charles Frederic Newcombe, and Alexander Reid Urquhart, their Degrees in Surgery, with *Academic Honours*. The Thesis of Stephen Mackenzie, on "Tumours of the Middle Lobe of the Cerebellum," was considered deserving of high commendation. At the same time, James McCall Fehrsen, Henry George Travers Strickland, and William Herbert Williamson, were certified as having passed all the Examinations, but did not Graduate.

INDIAN MEDICAL SERVICE.—The following candidates for Her Majesty's Indian Medical Service were successful at the competitive examinations held at London in February, and at Netley in August

1873, after having passed through a course at the Army Medical School, Netley. [Maximum number of marks, 6,900.]

Order of merit and names.	Studied at	No. of marks
1. Wilkie, D.	Glasgow and Berlin	6142*
2. Battersby, W. E.	Dublin	5745
3. Wall, A. J.	London	5613
4. Moodie, R.	Edinburgh and Vienna	5511
5. Goldsmith, S. J.	London	5144
6. Thomas, A. A.	London	4651
7. Tuohy, E. S.	Cork	4616
8. Moynan, W. E. B.	Dublin and Galway	4586
9. MacDonald, D. P.	Dublin, Cork, and London	4473
10. Browne, W. R.	Dublin and Belfast	4360
11. Baker, O.	London	4343
12. Mallins, H.	Dublin	3915
13. Wright, F. W.	Edinburgh	3904
14. Robinson, M.	London	3865
15. Leapingwell, A.	London	3460
16. Dill, J. S.	Belfast and Dublin	3200

* Has obtained the Herbert Prize.

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDWICK AND ANCOATS NEW DISPENSARY and HOSPITAL, Manchester—Senior House-Surgeon: £250 first year, and furnished apartments. Applications, 30th inst., to Rev. W. Hutton, 57, Higher Ardwick, Manchester.

BAWNBOY UNION, co. Cavan—Medical Officer for the Ballinamore Dispensary District: £90 per annum.

BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon: £100 per annum, furnished apartments, etc. Applications, August 28th, to the President, care of J. G. Douglas, M.B.

BRIGHTON and HOVE LYING-IN INSTITUTION—House-Surgeon: £100 per annum, furnished apartments, etc. Applications to T. A. Brew, Hon. Sec.

BURTON-UPON-TRENT INFIRMARY and DISPENSARY—House-Surgeon: £130 per annum, to commence, rooms, coal, and gas. Applications, 1st Sept., to J. C. Grinling, Secretary.

CLAYTON HOSPITAL and WAKEFIELD GENERAL DISPENSARY—House Surgeon: £120 per annum, residence, attendance, etc. Applications to John Binks, Honorary Secretary.

DEVIZES URBAN SANITARY DISTRICT—Medical Officer of Health: £56:15 per annum.

DROITWICH UNION, Worcestershire—Medical Officer and Public Vaccinator for the Ombersley District: £90 per annum and vaccination fees only. Applications, 26th inst.

EAST SUFFOLK HOSPITAL, Ipswich—House-Surgeon and Secretary: £100 per annum, board, furnished apartments, etc. Applications, 2nd September, to George T. Elliston, Secretary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road—Registrar and Chloroformist. Applications, 24th instant.

GENERAL HOSPITAL, Birmingham—Resident Registrar and Pathologist: £100 per annum, board and residence. Applications, 6th Sept., to Wm. T. Grant, House Governor and Secretary.

GLASGOW EYE INFIRMARY—Surgeon.

"HAMADRYAD" INFIRMARY SHIP, Cardiff—Medical Superintendent.

INVERARY—Medical Officer for the Parochial Board and Local Authority: £50 per annum. Applications, 30th inst., to Arch. Henderson, Town Clerk.

JOINT COUNTIES LUNATIC ASYLUM, Carmarthen—Assistant Medical Officer: £100 per annum to commence, furnished apartments, etc. Applications, 27th instant, to the Medical Superintendent.

LEICESTER INFIRMARY and FEVER HOUSE—House-Surgeon and Apothecary: £120 per annum, rising to £150, board, etc. Applications, 30th inst., to T. A. Wykes, Secretary.

MANCHESTER, Township of—Junior Assistant Medical Officer, New Bridge Street Workhouse: £120 per annum, furnished apartments, etc. Applications, 28th inst., to George Macdonald, Clerk to Guardians.

MANCHESTER ROYAL INFIRMARY, etc.—Honorary Assistant-Physician. Applications, 30th inst., to Benjamin Brown, Secretary.

MARGAM COPPER-WORKS and COLLIERIES, Taibach—Medical Officer. Applications to Messrs. Vivian and Sons, Taibach.

NEWCASTLE-UPON-TYNE BOROUGH LUNATIC ASYLUM—Assistant Medical Officer: £80 per annum, board and lodging. Applications, 30th inst., to John Atkinson, Clerk to Committee of Visitors.

RIPON DISPENSARY and HOUSE OF RECOVERY—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 30th inst.

ROYAL INFIRMARY, Glasgow—Physician.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—House-Surgeon. Applications, 8th September, to A. Boodle, Secretary.

ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications to the Treasurer.

SKIPTON and SETTLE RURAL and URBAN SANITARY DISTRICTS—Medical Officer of Health: £400 per annum, for three years, no private practice. Applications, 5th Sept., to Thomas Brown, Solicitor, Skipton.

TENTERDEN UNION, Kent—Medical Officer for the Rolvenden District: £45 per annum.

WANTAGE UNION—Medical Officer for the Ilsley District: £55 per annum, and fees. Applications, 8th Sept., to Edward Ormond, Clerk.

WEST SUSSEX, EAST HANTS, and CHICHESTER GENERAL INFIRMARY and DISPENSARY—Assistant House-Surgeon: £200 per annum, board, lodging, and washing. Applications, 23rd inst., to P. A. Murdoch, M.B., House-Surgeon and Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

GARRARD, W. A., Esq., appointed House-Surgeon to the Rotherham Hospital and Dispensary.

JORDAN, Frederick W., Esq., appointed Assistant House-Surgeon to the Sheffield General Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication

BIRTH.

MOORE.—On August 9th, at Cambridge Heath, the wife of Edward H. Moore, L.R.C.P.Ed., of a daughter.

MARRIAGES.

AYLEN—GIBSON.—On August 13th, at St. Mary's Church, Scarborough, by the Rev. H. W. Kemp, B.A., Vicar of St. John's, Hull, assisted by the Rev. J. A. Addison, St. Mary's Church, Cottingham, Clarence Aylen, Esq., Paymaster R.N., to Catherine Jane Ferrington, younger daughter of Henry Gibson, Esq., Surgeon, Hull.

HARRIS—BUCKLAND. On August 11th, at St. Stephen's, Shepherd's Bush, William Harris, L.R.C.P., etc., of Melton, Suffolk, eldest surviving son of *Henry Harris, Esq., M.D., F.R.C.S., etc., Redruth, to Annie Buckland, R.A.M., daughter of James Warwick Buckland, Esq., late of Her Majesty's Customs, London.

MAIR—MORGAN. On August 13th, at Llansamlet, Glamorganshire, by the Rev. W. E. T. Morgan, B.A., brother of the bride, assisted by the Rev. John Griffith and E. Lloyd Davies, A. Hunter Mair, M.A., M.B., C.M., of Morriston, Swansea, to Annie Margaretta, second daughter of the Rev. M. R. Morgan, B.D., Vicar of Llansamlet.

THE *Philadelphia Medical Times* states that Dr. Edward Warren, late Professor of Surgery in the College of Physicians and Surgeons, Baltimore, has accepted the position of "Surgeon to the Staff of the Khedive of Egypt," with the rank of colonel, and the privilege of engaging in private practice in that country.

At the Eisteddfod held at Menai Bridge, on the 6th and 7th inst., the chair prize—a carved oak chair and £10—was awarded to William Morgan Williams, physician and surgeon, Llansantffraid, Conway. The subject was "Silence"—an ode, in Welsh.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

BATH.—1. London. 2. Cambridge. 3. Oxford.

MR. REDDING (London).—We cannot recommend any work.

MR. ADAMS (Bungay).—*Chemistry*, Roscoe's or Fownes's Manual; *Physiology*, Kirkes's or Carpenter's Human Physiology; *Anatomy*, Heath's or Ellis's Anatomy for dissections, Gray's Anatomy, and Holden's Osteology.

STUDENT.—The cat's fur grows from follicles just like all other hair. All arteries have elastic tissue. The amount is usually proportional to the degree of muscularity of the coats.

MR. HARRY LOBB'S ADVERTISEMENTS IN "MEDICAL NOTES AND QUERIES."

MR. HARRY LOBB'S memory is defective as to the condemnation by the Royal College of Surgeons of England (whence he derives his diploma) of his advertisements of a pamphlet which, as he admits, the Royal Medical and Chirurgical Society considered unfit for publication in its proceedings, and which Mr. Churchill declined to issue from his publishing house.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 7, Great Queen Street, W.C., and not to the Editor.

DOCTOR INDOCTUS.

We have received an odd copy of a recent publication called *The Doctor, dari a laudatis* has been to us recently a source of legitimate satisfaction: attacked by the baser sort is the converse and equally certain proof of active fulness and good desert, and is therefore also in its way satisfactory. It was boast of a great minister to be the best praised and best abused of his day; ask no better fate.

OUT-PATIENTS AT HOSPITALS.

Sir,—Would you kindly inform me if it be in accordance with professional etiquette for the surgeons of an hospital to treat out-patients and supply them with medicine from the institution when there is an assistant-surgeon appointed by trustees to perform that duty? Your reply to this query will greatly oblige me made in reference to the following circumstances:—1. If the patients had previously under the care of the surgeons as intern patients. 2. If the patients should come with special letters from subscribers addressed to the surgeons. 3. If the patients should happen to be members of a sick benefit society of which the surgeon is the medical attendant.

August 18th, 1873.

* * The out-patients should attend the officer appointed for the department. The surgeon may sometimes desire to keep the patient under his care, and it is a few instances obviously for the patient's benefit; but this should only be in special cases, and subject to the approval of the out-patient officer. In the other cases the surgeon has no *locus standi*.

BLACK DOTS ON THE WALL.

IN the JOURNAL of August 2nd, a recommendation (copied from the *Guy's Hospital Gazette*) to use a solution of corrosive sublimate to prevent the white of the "Dots" seems to me not free from danger. A safer plan, and I believe equally effectual, is the constant use of carbolic soap. The slight odour left upon the causes the black dots, as well as the more lively red dots, to seek less odorous skins for their delectation.

CONDENSED MILK AND TYPHOID FEVER.

WE have received a letter from the manager of the English Condensed Milk Company observing that the reference to Swiss milk in our editorial article last week on the outbreak of typhoid fever in Marylebone, appears to cast an imputation on the product of the Aylesbury Company. This was not intended. Condensed milk was first introduced into this country from Switzerland, and the term "Swiss" is popularly applied to it, even though prepared at home.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

WE are indebted to correspondents for the following periodicals, containing reports, and other matters of medical interest:—The Daily Post; The Liverpool Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; Christian World; The Bolton Daily Journal and District News; The Ipswich Journal; The Manchester Guardian; The Aberdeen Free Press; The Bath Express; The Birmingham Daily Post; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Farquharson, London; Dr. George Johnson, London; Dr. Sutton, London; Dr. Protheroe Smith, London; Dr. Wahlteuch, Manchester; Mr. W. C. Boston; Mr. Baker, Birmingham; Mr. John Wood, London; Dr. Burdon, London; Mr. Callender, London; Sir William Fergusson, London; Tilt, London; Dr. Henry Bennet, London; Dr. Ord, London; Dr. Edis, London; Dr. Corfield, London; Dr. Aveling, London; Dr. Baylis, Birkenhead; Croft, London; Mr. Soutter, London; Mr. Bartlett, Birmingham; Dr. H. Leeds; Dr. Thompson, Leamington; Dr. Des Forges, South Cave; Mr. F. Walkhurst; Dr. Parkes, Netley; Dr. Brandt, Oporto; Dr. Caffé, Paris; Dr. Valcourt, Cannes; Dr. Lawson Cope, London; Dr. Andrew Clark, London; Dr. E. L. Fox, Bristol; Dr. Watson, Bourne; Dr. Wallace, Liverpool; Jagielski, London; Dr. Cobbold, London; Dr. Silver, London; Mr. T. P. T. Leeds; Dr. Chevallier, Ipswich; Mr. Thomas Leeds, Sheffield; Mr. T. Merthyr Tydfil; Mr. J. B. Pennefather, London; Mr. Adams Parker, Birmingham; Dr. Russell Reynolds, London; Dr. McDougall, London; Rev. J. Alderson, Wakefield; Mr. W. Cadge, Norwich; Mr. G. Cowell, London; Cripps Lawrence, London; Dr. Collie, London; Dr. Braxton Hicks, Foston; Mr. J. Gould, Glasgow; Mr. Goodfroy, Jersey; Dr. James Roos, Welford, Manchester; Dr. Fothergill, London; Medicus, Cork; Dr. Ruthven, London; Mr. W. Square, Plymouth; Mr. W. M. Williams, Llansantffraid; Gibson Burns, Irvine; Mr. T. Markby, Leigh Sinton; Dr. B. Pitt, Norway; Dr. Clifford Allbutt, Leeds; Dr. Alexander Miller, Edinburgh; Mr. H. T. jun., Northampton; Mr. J. G. Symes, Dorchester; Mr. Preston, London; John Fraser, Cupar-Fife; Mr. Lowne, Portsmouth; Mr. Redding, London; Baines, London; Mr. Walter Jeffery, Gravesend; Mr. T. Holmes, London; G. H. Fosbroke, Bidford; A Student, London; Mr. R. Beales, Congleton; John Ashton, London; Dr. Britton, Halifax; Rev. W. H. Rothery, Manchester; Mr. H. J. Harper, London; Dr. Shann, York; Dr. Ogston, Aberdeen; Andrew Davies, Swansea; Dr. C. Parsons, Dover; Mr. A. E. Barrett, Wiston; Mr. Poole, London; Mr. Merriion, London; Mr. Lane, Surbiton; Pettigrew, Edinburgh; Mr. Kelly, Westminster; Dr. Strange, Worcester; Rev. Saxby, East Clevedon; Mr. J. Wookey, Potter's Bar; Dr. Nicholls, Chalford; etc.

REMARKS

ON

THE STATE MEDICINE QUALIFICATION.

Read in the Section of Public Medicine at the Meeting of the British Medical Association, August 1873.

By HENRY W. RUMSEY, M.D., Cheltenham.

Now that the University of Dublin has not only instituted a diploma in State Medicine, but also granted it to some accomplished and distinguished scholars, while the older English universities—Cambridge notably—have recommended the like addition to their degrees, it is obvious that this question, so long a matter of speculation and inquiry, is at last fairly landed on the firm ground of experiment.

A very recent notice of motion in the Council of the English College of Surgeons shows that our corporate bodies have begun to recognise the necessity of a qualification, which cannot reasonably or safely be included in their ordinary licenses.

It seems, therefore, that the British Medical Association, in its Public Medicine Section, is bound to take this important matter fairly into consideration.

After the prolonged and thorough inquiry made by the General Medical Council in 1868, 1869, and 1870, the subject can hardly be considered foreign to our objects and deliberations. This section may not be fully aware of the steps already taken, and the resolutions passed by the General Medical Council on this question, or even that the proceedings of that body originated in the following memorial presented to the Council by our own State Medicine Committee.

That, whereas there is at the present time no sufficient guarantee for the general competency or the special qualification of medical men appointed as medical officers of health, and employed as medical jurists; no recognised plan for conducting their education; nor any examining body for regulating the standard, and testing the sufficiency of their acquirements; the members of this Committee earnestly urge upon the General Medical Council, to consider at their next meeting, the special qualifications required for such medical officers of health, and the mode in which they should be trained and licensed for the discharge of their varied and important duties.

(Signed)

A. T. H. WATERS, *Chairman.*

April 23rd, 1868.

A. P. STEWART, *Secretary.*

The subject of this memorial was brought before the Council by Dr. Acland and Dr. Stokes, and it was agreed:

That a Committee be appointed to report on the steps proper to be taken, if any, for granting diplomas or certificates of proficiency in State Medicine, and for recording the same in the *Medical Register*, due regard being had to the interests of existing health officers in the several parts of the kingdom.

Committee.—Dr. Acland (Chairman), Dr. Paget, Dr. Thomson, Dr. A. Smith, Dr. Christison, Dr. Stokes, Dr. Parkes, Dr. Rumsey.

This Committee, under Dr. Acland's able presidency, held several meetings in the same session.

Under the term "State Medicine" they included Legal Medicine or Medical Jurisprudence, and Preventive Medicine or Public Hygiene. They also resolved unanimously that it was desirable that special certificates or diplomas should be granted for knowledge of State Medicine; that the proposed qualification should not be compulsory on all registered practitioners; that no one should be allowed to register a qualification in State Medicine unless he had previously obtained a qualification entitling him to be on the *Medical Register*; and that the possessor of the proposed certificate or diploma should be entitled to register it as an additional qualification.

With regard to details, the Committee postponed any further discussion, and reported:

That, having carefully considered the resolution of the Council, by which the Committee was appointed on June 27th, 1868, they have decided, with a view to presenting a more complete report at the next

session of the Council, on taking evidence from various persons having special knowledge of the subjects referred to the Committee.

In the next session (1869) the Committee presented their very important Second Report, with the letter and questions which they had sent to more than seventy eminent persons in this and other European States, and with an appendix containing the valuable and interesting replies received from thirty-five of those noblemen and gentlemen. The report and appendix were published in a separate pamphlet, which has been widely circulated.

The only sentence in the report which I need now read is the following.

The Committee are unanimously of opinion that the evidence submitted in these documents, warrants, and indeed demands, that the Council should insert the requisite clauses for providing a qualification in State Medicine in any amended Bill which may hereafter be prepared for Parliament.

After a protracted discussion, the Council came to the following resolution.

That, in any amended Medical Bill which may be prepared for Parliament by the Council, it is desirable that the requisite permissive clauses for registering a qualification in State Medicine be inserted in addition to any of the qualifications sanctioned by the Medical Act.

It was referred to the Executive Committee to consider with Mr. Ouvry, the Solicitor to the Council, the foregoing resolution, and to take the steps necessary for carrying it into effect.

The Committee was reappointed, and the report and appendix, with the resolutions of Council, were circulated among the Licensing Bodies for their opinions.

In the session of 1870, the Committee presented a Third Report, which conveyed a general notion of the observations received from the universities of England and from certain corporations,* and announced that the University of Dublin had resolved on creating immediately this qualification. It is right to mention that the replies from all these bodies, with one exception, were strongly in favour of the proposed new qualification, and of its being inserted in the *Medical Register*. They also contain some useful suggestions as to the method of carrying this principle into effect. The Committee at the same time presented certain clauses prepared by Mr. Ouvry, for insertion in the Medical Acts Amendment Bill, and indicated the changes which they deemed desirable in those draft clauses.

A very animated discussion, adjourned to a second day, took place in the Council on the report and the proposed clauses.

An amendment hostile to the report, and manifesting singular ignorance of the legal facts and bearings of the case, was defeated by a very large majority. The Committee, perhaps wisely, did not pursue their victory; and there can be no doubt that, since that time, the Council has flagged in attention to the subject, for it was scarcely alluded to in the sessions of 1871 and 1872. It is satisfactory, however, to know that my much valued friend, Dr. Stokes, succeeded during the session of this year in carrying a motion strongly confirmatory, and, indeed, in advance of the resolution adopted by the Council in 1869. The main resolution, moved by Dr. Stokes and seconded by Mr. Quain, was as follows.

That it is expedient that, under any future legislation, power should be granted to the Council to register a Qualification in State Medicine, after such qualification has been granted according to regulations approved by the General Medical Council.

State Medicine, therefore, now stands prominently forward among the items for inclusion in any Medical Acts Amendment Bill. It has more than once been submitted to the Privy Council for that purpose. The Lord President of the Council has repeatedly and plainly intimated that no future measure of medical reform would be likely to obtain the support of Government which does not cover all the ground of proposed legislation. I do not see, therefore, we can avoid some decision on the question, and the preparation of some measure for another Session.

* These observations are to be seen in the Appendix to the Minutes of the Council, vol. viii, p. 75.

At the close of this paper, I believe it will be proposed to appoint a Committee to consider certain clauses relating to the State Medicine qualification; and I mean to lay before that Committee the proceedings and reports of the State Medicine Committee of the General Medical Council. In the meantime, I beg to call attention to some considerations bearing alike on the principles and the details of the measure which I may recommend for your adoption, and in so doing I may touch on questions affecting the general course of medical education.

The promoters of the State Medicine Qualification assert that a higher and more special standard of attainments is necessary for many public medical offices than has been or can be, with due regard to the exigencies of the community, required of all who enter the profession; and that it would be a hopeless fallacy to endeavour to include such higher and more special qualification within the minimum now imposed on all who are inscribed on the *Register*.

The necessity for such special acquirements becomes the more pressing now that under the Public Health Act of 1872 many important preventive duties requiring an advanced knowledge of the science of Public Health are committed to officers appointed by local authorities of all kinds, quite incapable of themselves, to judge of the comparative fitness of candidates for office. The guarantees afforded by a special examination and certificate would be of particular value to these authorities, if it did no more than relieve them from suspicion of unworthy motives in their selection of officers.

The defects of medical evidence in courts of law, and the imperfect knowledge evinced by many who sign certificates of insanity, or who take part in official inquiries respecting life, health, disease, incompetency, or injury, have been long felt and acknowledged in this country. These deficiencies would also be supplied by those who hold the proposed special qualification.

You will see that the propriety of a distinction between the common qualification for practice and the special qualification for office, was from the first recognised by the State Medicine Committee of the Medical Council.

Even were it possible, by any ingenious alteration of the present curriculum, to cram into it more subjects than any student ought to be required to master at the age of twenty-one, few practical men could doubt that some of his acquirements must be merely theoretical and very superficial—far inferior, probably, to the real and substantial qualification, which the practitioner who diligently observes disease among the poorer classes, studying its causes and methods of diffusion, may obtain after some years of private study and official experience. But although a practitioner may and does often become an excellent health-officer by self-education, it by no means follows that a normal standard of qualification may be safely dispensed with in a great public organisation. If it might—to be logically consistent—there need be no examination imposed by law to test the ordinary qualification for a medical licence; for it will not be denied that, previously to any compulsory examination for general practice—*e.g.*, before the Apothecaries' Act of 1815—there were many very able practitioners in the kingdom whose education had been voluntary and self-imposed. Whatever arguments, therefore, apply to the establishment of a minimum qualification for license to practise, apply also, *mutatis mutandis*, to the institution of a special and adequate qualification for holding office and for the exercise of public medical duties.

A State Medicine qualification established by Act of Parliament, must also, I submit, be in the nature of a *minimum*—that is, it must not exact more extensive and profound knowledge than ought to be possessed by every public medical officer—*e.g.*, by every union surgeon. And it would be both unnecessary and inexpedient that it should in any manner interfere with those still higher diplomas in State Medicine which the Universities or the Colleges, following the example of Dublin, may confer on their graduates or Fellows, and which will always be objects of ambition to the more advanced and accomplished medical students. The possession of the highest qualifications

in State Medicine would, of course, supersede the necessity of examination for the proposed *minimum* official qualification which I propose.

2. In order to obtain the ordinary State Medicine qualification for which we ask some legislative sanction, the general opinion has been that a further period of preparation is essential, and the weight of evidence is in favour of an additional two years. Now, those who wish to force a State Medicine qualification upon every practitioner, are obliged to admit that it is inexpedient to lengthen the period of general medical education, or to prevent the licentiate from registering at the age of twenty-one. It has therefore been suggested that studies qualifying for the exercise of legal and preventive medicine might take the place of other requirements now included in the regular four years' curriculum.

For instance, it has been proposed to relegate the Natural Sciences, fundamental to medicine, wholly to the preliminary education during the schoolboy period of life. Such a regulation, I need hardly say, would involve a change of grave importance in our higher school education; a change which means the possible banishment of mathematics and classics—Greek especially—from the preliminary education, or, at least, their complete subordination to the physical sciences. The young doctor would, in that case, enter on his career with lower literary attainments than are claimed by the other learned professions. The Law, the Church, the Public Departments, might therefore naturally stigmatise the medical profession as not requiring those elements of a liberal education which hitherto have given to their possessors a certain social status. For myself, I may be allowed to say that, when I had the honour of a seat in the Medical Council, I invariably supported the inclusion of Greek in the preliminary education; and I cannot now consistently be a party to its exclusion for the sake of studies which, I am sure, will be far more advantageously pursued after the completion of a good old school education. I deprecate the abandonment of a mental training in what the universities call "Arts," the loss of which entails unforeseen consequences. In the words of an eminent Oxford teacher:

We have had experience of the merits and demerits of a system of education with a classical or 'arts' basis; but we have never had experience of what new theories mean; a scientific education, in which the classical preliminary is optional. Then, when we have, let future generations lament over the loss of texture, fibre, taste, mental gymnastic, which the popularly educated mind may show. Not until the banishment of 'Arts' shall become general, will the decadence be felt, after many days, when the barbaries which will ensue, may be ill compensated by dexterity, acquisitive power, specific adroitness. What will a man be whose Philosophy is of modern training only, and whose sense of the elder founts of thought has been fed by lame second-hand fragmentary tradition? What is that man's home-knowledge of the very language of science, who has no real acquaintance with the living antiquity, in which exists the spring and source of half his borrowed implements? What? Is the main fundamental idea of the education of statesmen, priests, lawyers, one thing, and that of scientific men, another? Whence this hard and fast line—artificial, unphilosophical, and, happily, as yet untried in practice?

I agree, however, with my accomplished correspondent, that "the Arts curriculum may well be intensified, condensed, and reduced in average duration"; and I am quite in favour of the admission of the natural sciences, optionally at least, into school education. But I ask you calmly to consider this question: When we have abandoned the tried, and comparatively successful, means of bringing our profession up to the literary and social level of the other learned professions, what shall we have to show at the age of twenty-one, but a mass of well-crammed students, with a vast array of figures, facts, and names in their heads, or, at least, on their tongues, yet without the trained powers of mind which invigorate thought and observation, and give real force to effort and expression; and, what is worse, without sufficient experience of life, a qualification of far greater importance for official employment than any merely nominal qualification based on scientific attainments? Therefore, on this ground partly, do we ask for two more years beyond twenty-one, towards the formation of the official character. As a curate is not held to be fit for

a parochial charge until twenty-three years of age, and as no medical man in Ireland is allowed to undertake a dispensary district until the same age, we cannot be fairly accused of extravagance in demanding an equal period of training for the Public Medical Service in England. All we require further is, that the additional two years shall be properly employed in such practical work and special study as may prove of the greatest utility in preparation for the duties of a public officer. In short, to require the inclusion of all subjects of Public or Political Medicine in the *minimum* qualification for admission to the *Register*, is fallacious, impracticable, and impolitic: *fallacious*, as leading to pretensions which cannot possibly be realised by all, or even most medical tyros at the age of twenty-one; *impracticable*, not merely as requiring more than can be fairly accomplished by the average student, but also as diminishing—injuriously to the community—the number admitted into the profession; and, therefore, *impolitic*, as leaving the medical treatment of the humbler classes of society more and more in the hands of pharmacists and other unqualified practitioners.

3. Now it is to be observed that the Medical Act of 1858, and all the schemes for its amendment hitherto proposed, regulate only the primary qualification for entry into the profession. If the simple licence thus obtained does not, and, as I have shown, ought not to pretend to, comprehend complete qualification for official duties, the higher qualification must be an after-grant. And so it now is for medical officers in the Army and Navy. These departments of the public service secure and test the possession of adequate knowledge, by examinations conducted by their respective medical Boards, after the candidates have obtained the common legal qualification, and have extended their studies to special subjects (hygiene, for instance) which may not be included in the pass examinations for admission to the *Medical Register*.

We ask that a like security for efficiency in medical and sanitary duties shall be afforded to civil administrative bodies, and to the masses under their control, as paupers, prisoners, insane persons, labourers in public works, factories, and mines, and merchant seamen. We see no reason why fighting men should monopolise a superior machinery for health-preservation and restoration, while other public *employés* and dependants are left to a confessedly inferior machinery.

4. Once more: under the operation of the Medical Act of 1858, and in conformity with the regulations of most of the licensing bodies, the minimum age for inscription on the *Medical Register* is twenty-one. But that Act, by not recognising the necessity of distinguishing the primary qualification for license to practise from the special qualification for official employment, has had the injurious effect, as I once showed to the Medical Council, of virtually lowering the qualification for public duties, and of rendering it absolutely inferior to that required of medical officers of the Royal Navy and Army. No candid and reasonable man questions the fact that the examinations for the War Services, and the publication of their result, have had a most beneficial effect upon the final examinations of the licensing bodies; and, indirectly, has done at least as much to raise the standard of qualification for the entire profession as any step taken by the Medical Council. The same beneficial effect will be yet more extensively produced by the institution of a second and special examination for the Civil Medical Service.

5. Having already admitted the importance of allowing young men to become legally qualified and registered at as early an age as possible, so that they may soon act either as qualified assistants in practice, or as qualified subalterns in public institutions, or otherwise under the control of more experienced practitioners, I maintain that the creation and registration of a higher qualification for public appointments in no way militates against the main object, either of the Medical Act, or of any proposed amendment of that Act. But if the qualification thus created is to be registered under legislative authority as evidence, let me ask—Should this registration be extended to a variety of diplomas granted by as many licensing bodies as may obtain legal powers to confer them? Surely, an Asso-

ciation which has pronounced so definitely against leaving the general *minimum* qualification for license to practice in the hands of nineteen licensing bodies, could not consistently assert the propriety of empowering the same nineteen bodies to compete for a reduction in the standard of qualification in State Medicine—a matter, by the bye, not within the original scope of the corporations, and foreign to their primary objects.

If a legal qualification in State Medicine is to be practically worth anything, it must be of uniform standard, and of equal value throughout the kingdom. And I know not how this result is to be attained, except by authorising the General Medical Council to frame the machinery and regulations under which the *minimum* official qualification is to be granted.

The Medical Council must, in fact, be required to institute, not, indeed, a competitive examination for vacant appointments, but a Qualifying Examination in State Medicine. And to be effectual, this qualification, or its equivalent, must be compulsory upon all future holders of appointments in the Civil Medical Service. For to allow some local authorities to dispense with a condition which is made imperative upon others, would be obviously unjust, both to the gentlemen who had been at the trouble of acquiring the diploma, and to the qualification itself. If Parliament be asked to provide for the registration of such a diploma, it must be under consistent and comprehensive regulations, or matters had better remain as they are.

6. But there may still be some to reply, that Parliament need not interfere, and that administrative authorities, whether central or local, may be trusted to make the best possible arrangements, and to select highly qualified men, although not possessing a special diploma. How, then, I would again ask, are these authorities to decide upon the comparative merits of candidates? Are they to depend on their own intuitive perceptions of competency? Or are private testimonials, or recommendations from non-professional persons and bodies, to be relied on? I confess that having been often asked for testimonials of the kind, I have occasionally complied with the request, when my knowledge of the candidate seemed to justify the grant. But I solemnly declare my belief, that testimonials thus obtained rarely deserve consideration; and depending, as they do, on mere personal or private opinion, they are worth next to nothing as a protection to the public. The testimonial system is a farce! Administrative authorities, as at present constituted, are really not to be trusted to select the best men for office, unless candidates are required to produce a legal qualification in State Medicine—or what, as I admit, is equivalent thereto.

I have now endeavoured to dispose of objections, some of them almost quibbles, which have been, or may be, raised against this measure; and I now conclude by briefly describing the clauses which I hope to submit to a Committee.

The first is a clause defining State Medicine in the sense of the Bill. The debates in the Medical Council on Mr. Ouvry's definition, and the amendments then proposed, show that this is not so simple a matter as some might suppose. A brief and clear definition is, however, necessary; and difficulties vanish when faced by hearty determination.

The second is a clause empowering and requiring the General Medical Council to prepare a scheme for a Board of Examiners in State Medicine; the scheme to specify the duties of the Board, the subjects of examination, the forms of diploma or certificate, the fees to be paid by candidates, the application of monies received, the place and times of holding the examinations, and, to some extent, the courses of study and preparatory work.

The third is a clause empowering the Privy Council to *veto* the scheme or to amend it, and to prepare a scheme in case of non-feasance by the Medical Council.

The fourth empowers the Medical Council to appoint the examiners, subject to the approval of the Privy Council.

The fifth provides that no person be admitted to examine in State Medicine until two years (at least) after the date of his registration, or the time at which he became qualified to register.

The sixth clause names the several offices created by Act of

Parliament, for which the diploma of this Board will be required, exempting the following persons from such requirement :

- a. Medical officers of the Army and Navy ;
- b. Diplomates in State Medicine, being M.D.s of any university of the United Kingdom ;
- c. Members of any College of Physicians, or Fellows (by examination) of any College of Surgeons in the United Kingdom, being twenty-five years of age, who shall hold a qualification in State Medicine, granted by any one of those Colleges, and approved by the General Medical Council ;
- d. All who at present hold any of the specified offices, or who may be appointed thereto within a period named in this Bill.

The proposed enactment would, therefore, apply only to future appointments, and would fully protect existing rights. The full benefit of the reform would thus be only gradually felt ; while the experience already gained, or in course of being gained, by those in office, would in the meantime be, as far as possible, utilised for the public benefit.

APOPLEXY, WITH CONVULSIONS AND HEMIPLEGIA IN THE PUERPERAL PERIOD, TERMINATING IN RECOVERY.*

By A. B. STEELE, L.K.Q.C.P.,

Lecturer on Midwifery Royal Infirmary School of Medicine, Liverpool.

THE following case being, so far as my observation extends, of an unusual, if not unique, character, and presenting features of much interest, I have deemed it worthy of record in this Section.

The patient is a young Jewess, of florid, dark complexion ; of low stature, inclined to fullness ; of a highly nervous and excitable temperament. She suffered in childhood from chorea, brought on, it was supposed, by a fright. This was relieved by prolonged treatment, including the baths and waters of Schwalbach. She married about three years ago, being then seventeen years of age, and became immediately pregnant, when the chorea returned, and, during the early months, was very severe and distressing, yielding, however, under a course of valerianate of zinc and aloes. Her first labour was in all respects favourable, except that the child, a male, was still-born. She was confined a second time in less than twelve months, of a fine healthy male child, in February, 1872 ; and a third time in February, 1873, of a living female child. Both these confinements were favourable, and her condition has been satisfactory, the only indications of nervous disturbance consisting in slight occasional choreic twitchings of the limbs. Her last labour was rapid and easy ; the membranes ruptured without pain, or, at least, with pain of the slightest possible degree, about forty-eight hours before active labour set in, and all was over in a few hours, the child being born before my arrival. Everything went on perfectly well for the first two weeks. I saw her on the thirteenth day, and found her doing most favourably in every respect. On the morning of the fourteenth day, she complained of a peculiar oppressive sensation, and confused feeling in the head, and begged the nurse to send at once for the doctor. On my arrival about two hours afterwards, I found her just recovering from what appeared to have been a puerperal convulsion, and was told that this was the second distinct fit since her seizure. She was unconscious, with stertorous breathing, and could not be roused ; the tongue protruded between the teeth, but was not bitten severely, although the jaws were rigidly closed. There was not the extreme fullness and turgescence of the veins of the head and neck usual in severe forms of congestive eclampsia ; the pulse was full and bounding ; the tongue clean. The bowels had been freely relieved shortly before. I opened a vein in the arm ; but, after the escape of about six ounces of blood, eclampsia came on, which obliged me to tie up the arm. This fit was only slight, appearing to be cut short by the immediate rapid administration of chloroform, which threw her into a quiet sleep, free from stertor or signs of distress. A large enema of turpentine was administered ; and ten grains of calomel were given by the mouth, followed by castor-oil. There was no return of eclampsia, but she remained unconscious until night, when she began to improve, and had some natural sleep.

The following morning, she appeared much better ; but, on proceeding to change her linen, it was found that she had lost both sensation

and motion in the left arm and leg ; the bladder was also paralysed, requiring the catheter. She was quite conscious, but excessively restless, excited, and unmanageable, talking coherently, but without intermission, in spite of all attempts to keep her quiet. The tongue was clean ; pulse 80 ; temperature normal ; urine free from albumen. The bowels had been copiously evacuated. She complained of pain in the right temple ; the tongue and face were slightly drawn to the left side ; pupils natural. A blister was applied to the neck ; ice-bladder to the shorn scalp ; and forty drops of Battley's sedative were thrown into the rectum. This procured a few hours' sleep ; but, the next day, the restlessness and unceasing talking recurred. A second opiate *per rectum* failed to quiet her ; but a scruple of chloral hydrate gave sound sleep for several hours, after which she was calmer and quieter, and free from headache.

For the four following days she remained in a state of alternate sleep and excitement ; the chloral, in half-drachm doses night and morning, kept her quiet for several hours during each day ; but, in the intervals, the restlessness and constant talking were most distressing. She was occasionally incoherent, and evidently had delusions ; believed she was dying ; felt an uncontrollable impulse to bite those around her, and did actually seize the nurse's arm with her teeth. She was only prevented from further violence by her helpless condition from the paraplegia. Her condition now caused much anxiety, as it assumed the appearances of puerperal mania, the prognosis being still more unfavourable from the circumstance of an hereditary tendency to insanity. The chloral now appeared to lose much of its calmative effect, and a full dose of Battley was substituted ; but the result was not satisfactory ; and therefore it was determined to try the endermic use of morphia. One-fourth of a grain at once procured good sleep, from which she awoke much refreshed and comparatively calm. This was repeated every twelve hours for four or five days, during which time the excitement passed away, and natural sleep returned. The bladder gradually recovered its action, but the hand and arm remained completely paralysed as to motive power—sensation, however, being restored. She continued to improve ; and, at the end of the fourth week of the attack and the sixth week since her labour, she was able to leave her bed ; and, in a few days, was removed to the sea-side.

At the present time, she has so far recovered as to be able to walk fairly without assistance for upwards of a mile ; the power of the upper extremity is almost entirely restored, that of the leg becoming progressively greater ; and there is every prospect of complete recovery.

CASE OF SICK-HEADACHE TREATED WITH GUARANA POWDER.

By JAMES W. ALLAN, M.B., C.M., Medical Officer to the Belford Hospital, Fort William.

Mrs. H., aged 36, a big lymphatic woman, came under my care some time ago as an out-patient. She had been suffering from severe headache for many years before ; but, owing to the recent tragic death of a child, she had become very ill. The melancholy accident referred to had given her a terrible nervous shock. She had a severe flooding, which looked in many points like a case of abortion ; but, as she did not keep the substance which was discharged, we were left in doubt on that point. After the subsidence of this attack, the old standing malady—the sick-headache—demanded attention, as it was terribly distressing to the patient. It was a somewhat curious circumstance with regard to the headache, that, although it was never absent during the week, it always reached a sort of climax at the end of it. The patient had long been troubled by the presence of quantities of bile in her stomach in the morning. Any attempt to attend to the food-preparations for the family brought on severe nausea.

I thought the case to be one in which guarana was deserving of a fair trial. I prescribed the simple powder in ten-grain doses twice a day.

The patient called on June 1st. She had then taken eighteen powders, and, although not free from headache, thought herself very well, considering that this was usually the bad day of the week with her. This looked encouraging. I gave her two dozen ten-grain powders, and directed her to take one three times a day. This further trial of the drug did not prove satisfactory. The patient came to the conclusion that it was not giving her relief. Accordingly, the use of the guarana was abandoned, after what I consider to have been a fair trial.

On June 20th, she was given a mixture containing bromide of potassium and tincture of cascarrilla. On July 7th, she called for a fresh supply of the medicine, and reported herself to be very much better ; the headache was much relieved, and the appetite decidedly improved. She seemed quite satisfied that she had derived much more benefit from the mixture than she did from the powders.

* Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

FORTY-FIRST ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of most of the papers presented to the several Sections of the Association at the Annual Meeting. The papers themselves will, as opportunities occur, be published in full in the JOURNAL.

SECTION A.—MEDICINE.

Wednesday, August 6th.

THE President, Dr. SIBSON, F.R.S., delivered an introductory address at 12.30. It was published at page 157 of the JOURNAL for August 9th. An Instrument for Measuring the Circumference of Limbs was exhibited by Dr. J. RUSSELL REYNOLDS, F.R.S. The description of the instrument, with a drawing, will be published in the JOURNAL.

Enlargement of the Bronchial Glands. By NOEL GUENEAU DE MUSSY, M.D. (Paris). The enlargement, etc., of the bronchial glands, noticed by the anatomists as very common, has been described by the pathologists only in its most severe forms, and as very rarely met in adults. It is, however, very common. It may complicate all the affections in which the respiratory organs are concerned, and modify both the physical and the physiological symptoms of these affections. It usually produces cough or dyspnoea—in some cases aphonia and vomiting, according to the relation of the enlarged glands to the pneumogastric nerve, or to a portion of that nerve. Protracted whooping-cough, lasting, it may be, several years, is connected with this enlargement. The physical sounds are rubbing, impairment of elasticity, and acute percussion-sound at the upper part of the sternum, the inner part of the first two ribs, the intercostal spaces, and the sterno-clavicularis joint; and posteriorly over the laminae of the first four vertebrae, usually on one side. On auscultation, there are weakness, acuteness, roughness of the respiratory murmur in one part or in the whole of one lung; generally protracted respiration; sometimes localised sibilant rhonchus; and very often, near to the spine and to the sternum, an expiratory *souffle*, which is the tracheal respiration conducted by the enlarged glands. Sometimes these signs may be modified by the movements of the neck. The treatment recommended was iodine internally, and locally chloride of sodium, arseniate and carbonate of soda, and such general means as improve the lymphatic constitution.—The PRESIDENT remarked that the instrument for measuring the chest, exhibited by the author of the paper, would be a valuable means of ascertaining the presence of deeply seated aneurisms. The therapeutical results obtained by Dr. Gueneau de Mussy in a disease which might prove fatal were most gratifying.—Dr. LITTLE (Dublin) had found phosphorus in doses of a twentieth of a grain most valuable in reducing enlarged glands. It was sometimes necessary to continue the use of the remedy for some weeks before the desired effects were obtained, and also to attend to the general health.—Dr. EADE (Norwich) remarked on the advantages of phosphoric acid alone or combined. He had not found iodine of much use. He could not look on the disease as due to any one specific cause; its sources must be various. But a special diagnosis of the affection formed a most valuable part of Dr. Gueneau de Mussy's contribution.—Dr. SPENDER (Bath) also believed, with the author, that chronic pertussis was sometimes kept up by enlargement of the bronchial glands, and that from the same cause swelling of the face followed.—In answer to Dr. Drysdale, Dr. LITTLE replied that phosphorus sometimes produced irritative dyspepsia.—Dr. GUENEAU DE MUSSY said that he used phosphide of zinc in doses of a few *milligrammes*, in the form of pill. He had found it to be a more stable compound than phosphorated oil, which did not keep well.

On the Constitution and Action of Croton-Chloral-Hydrate.—By OSCAR LIEBREICH, M.D. (Berlin).—Dr. Liebreich gave an account of the action of this substance, comparing it with chloral hydrate, and pointing out some of the conditions indicating its use. Its action differed from that of chloral hydrate in that, while it produced sleep, it did not affect muscular tone or interfere with circulation or respiration. Its use was indicated where chloral hydrate was inapplicable on account of heart-disease; and in cases of neuralgia affecting the trigeminal nerve. Where large doses of chloral were necessary to procure sleep, Dr. Liebreich recommended the addition of some croton-chloral.

The Germ-Theory of Disease applied to the Explanation of the Phenomena of Idiopathic Fever. By T. J. MACLAGAN, M.D. (Dundee).—It might be accepted as proved that contagium is particulate and organised. Being organised, it must be animal or vegetable. It was an accepted fact that the contagium is reproduced to an enormous extent in the system. The reproduction of an animal organism is competent to the production of the essential phenomena of idiopathic fever. These are: I. Increased waste of the nitrogenous tissues; II. Increased consumption of water; III. Preternatural heat; IV. Increased frequency of the cardiac action; V. Increased frequency of respiration. An animal organism consumes oxygen, nitrogen, and water, and gives off carbonic acid. I. The increased waste, or, more properly, diminished bulk, of the nitrogenous tissues may be due in part to increased disintegration, but is mainly attributable to defective supply, consequent on the consumption by the contagium of particles of the nitrogen which enters the blood from the assimilated ingesta, and which is laid hold of by the contagium at the moment when it is about to pass from the circulating to the organ albumen. The propagation of the contagium takes place in the tissues; and the action which normally results in the formation of tissue, during the continuance of idiopathic fever, results in the formation of the protoplasm of the contagium-particles. This action is identical with that which leads to the formation of tissue, and is accompanied by the same increased flow of blood through the capillaries which would result from increased tissue-action. The contagium arrests the nitrogen requisite to the completion of the *constructive* tissue-changes, but the retrogressive changes go on, and urea is formed in increased quantity. 2. The increased consumption of water is due to the increased demand for that fluid consequent on the propagation of an organism which largely consumes water. 3. Preternatural heat is due to excessive consumption of the oxygen, nitrogen, and water by the contagium. It is immaterial, so far as the production of increased heat is concerned, whether the consumption of these materials result in the formation of tissue or of the protoplasm of the contagium. 4. Increased frequency of the heart's action results from the general hastening of the blood-flow through the capillaries; and this, in its turn, is due to the increased demand for blood in the tissues consequent on the propagation of an organism having wants identical with their own. 5. Increased frequency of respiration may be due to diminished supply of oxygen, or to excess of carbonic acid; to whichever cause it is attributed, the reproduction in the system of an organism which consumes oxygen and gives off carbonic acid is capable of giving rise to it. All the other phenomena of fever which are usually attributed to blood-poisoning are really due to defective supply of nutrient material. The typhoid symptoms, the delirium, and even the convulsions which occur in severe cases, are all of anæmic rather than of uræmic origin. This theory affords a sound pathological basis for that treatment which clinical experience has shown to be most successful, and which essentially consists in giving to the patient what his system is deprived of by the propagation of the contagium, oxygen, nitrogen, and water—fresh air, easily digested nitrogenous food, and water *ad libitum*.—Dr. ROSS (Manchester) said that Dr. MacLagan began by explaining the most complex case instead of the simplest. A theory of symptomatic fever might possibly be extended to the explanation of idiopathic fever, but it was perfectly certain that a germ-theory of the latter could not possibly be applied to the former condition, because of the entire absence of germs. Dr. ROSS thought that the fever was caused by the rapid growth of protoplasm, and the consequent breaking down of structure. The breaking down of structure was the essential condition of fever, since the forces originally expended in raising it were now in its fall given out as heat-vibrations. Dr. ROSS doubted the existence of germs in idiopathic fevers. The fallacy arose from not bearing sufficiently in mind the distinction between morphological and physiological individuals. All microzymes were morphological individuals of the same order; but they were physiological individuals of different orders. Some represented the adult condition of these minute organisms; others simply a stage to a higher development; while a third grade was merely formed and detached from the tissues of a higher organism. These corresponded to the actual, potential, and partial physiological individuals of Haeckel, and the microzymes of infected fluids belonged, in Dr. ROSS's opinion, to the latter class alone. He had seen microzymes form from the white blood corpuscles.—Dr. MACLAGAN said that the criticisms of Dr. ROSS were directed to the germ-theory as applied to symptomatic fever. The subject of the paper was the same theory applied to idiopathic fever, and during the whole of it no reference was made to symptomatic fever. He believed that his theory was applicable to that form of fever also, and hoped at another time to give his views on this point. He believed that the contagium was often taken into the system through the lungs, and that each contagium gave rise in all cases to its own specific disease, and never to any other.

The Symptomatic Alterations of Muscles. By GEORGE HAYEM, M.D. (Paris).—This expression was used by Dr. Hayem to denote the changes which take place in muscle under the influence of most diseases. He had found them not only in acute specific diseases, but also in diseases of slow progress, leading gradually to marasmus and cachexia. The mode of evolution and the histological characters of the changes were found to differ according to the disease which they attended. The general result of numerous researches made by M. Hayem was to show that the muscular system indicates, in distinct anatomical characters, the general disturbance of nutrition which attends all diseases. It might be said, in general terms, that, when nutrition suffers, the muscular tissue has a tendency to disappear, at least partly, more or less rapidly in various ways. Along with this process of destruction, there is also, both in chronic cachectic states and in acute diseases, a constant effort at repair, attended with varying results. The new muscular fibres, in all these cases, are formed by proliferation, either of the pre-existing muscular cells, or of the cells of the connective tissue (the internal and external perimysium). M. Hayem had found changes in the heart analogous to those met with in the muscles of the body, both of destruction and of reproduction of muscular fibres. The paper was illustrated by specimens.

Physiological Thermometry and Mathematical Thermometry: their Applications to Medicine. By E. SEGUIN, M.D. (New York).—Dr. Seguin, after alluding to the confusion produced by the use of three scales of thermometer—Fahrenheit's, the Centigrade, and Reaumur's—advocated the adoption of a "physiological thermometer" with a centigrade scale, but with zero at the normal line of health, as determined by Becquerel and Breschet (*i.e.* 98.6 Fahr., 29.6 Reaumur, or 37 Centigrade). He also proposed the substitution of mathematical tables of vital signs, easily written, and capable of being understood by nearly every one, for the graphic charts of the thermometric registration now often used, which he described as being difficult of application, and limited in use.

On the Medical Services of the Navy and Army from the Accession of Henry VIII to the Restoration. By WILLIAM R. E. SMART, M.D., C.B., Inspector-General R.N.—This paper was in continuation of one read at the last annual meeting of the Association, on "The History of the Medical Staff of the Army prior to the Accession of the Tudors." The history of the royal navy commenced in the reign of Henry VIII, who followed the principles and the discipline of the Italian republics in their navies, as well as adopting the models of their vessels. These navies appear to have had from the beginning of the fourteenth century a physician who supervised the whole squadron, with a barber-surgeon to each ship or galley to treat the sick according to his directions, which was easily done, as their cruises were never very long. Henry VIII's first fleet in 1513, had in each ship a captain or master, under whom all others were paid on the same scale as seamen. This was altered, as far as concerned the barber-surgeons, early in the reign of Charles I, but was acted on with chaplains till 1812. To compensate them beyond this, deductions were made from each seaman's pay to the extent of a *groat* per man for the chaplain, and 2d. for the surgeon every month; out of which the surgeon provided instruments and surgical remedies. The same allowance was made for army surgeons by their regiments. There was found to be much difficulty in obtaining the services of surgeons for active service; and as it has been already shown that, before Agincourt, Thomas Morestede was empowered to impress the barbers of London to form a surgical staff, so, when Henry VIII reformed the profession, removing it from the control of churchmen, he gave the office of impressing into the hands of the barber-surgeons whom he incorporated, who held for nearly two centuries the patronage of the appointments in the army and navy. Two surgeons of the Elizabethan period have left very graphic descriptions of the state of the medical services: Thomas Gale writing concerning the army, and William Clowes concerning the navy. When Charles I began his wars, he increased the pay of surgeons, and classified them as surgeons and mates; and he, for the first time, allowed money to provide medicines for the treatment of internal diseases, and confided the supply of the chests to the Barber-surgeons' Company, who entrusted the duty to a very able surgeon, John Woodall, who published his *Vitacum, a Way to the Medical Chest*, for the guidance of his younger brethren, which continued to be the *vade-mecum* of the navy through a century. Under the Commonwealth, a still further advance was made by the provision of medical comforts for the sick at the expense of the State, by establishing, at one of the Cinque Ports, an hospital for the reception of sick and hurt seamen, and by the encouragement given, by increase of pay, to surgeons to enter the service. Incidentally to the subject, it was pointed out that our kings, wanting surgeons for their war service, had patronised and raised up the surgical branch of the profession, by improving the condition of the barbers, who formed the most numerous practitioners of surgery in the middle ages, and then forbidding those

who practised barbery from practising surgery. In dwelling on the influences of the army and navy on the development of the surgical division of the profession, it was shown that, at the time when it was illegal for a surgeon, who had skillfully extracted a calculus, to administer an anodyne to his patient except with consent of a physician, the demand for reform was mainly supported on the contrary usage of the navy, where, in the treatment of all internal disease, surgeons administered the medicines supplied by the State.

On the Causes and Treatment of certain forms of Sleeplessness. By DYCE DUCKWORTH, M.D.—In this communication, the author called attention to certain forms of insomnia that appeared to have escaped the attention of many systematic and special writers. In especial, it was shown that a most common cause was dyspepsia occurring at night. The peculiarities and clinical facts of this nocturnal dyspepsia were discussed, and its relation to atonic dyspepsia was pointed out. The insomnia due to excessive use of tea, coffee, and tobacco was described; also that due to bodily and mental exhaustion. The appropriate treatment of the forms of dyspepsia, and of the sleeplessness resulting was fully dwelt upon. The insomnia due to over-anxiety or prolonged loss of sleep—the "insomnia of bad habit", was next discussed; while that form due to the presence of certain odours, and of defective hygro-metric conditions of atmosphere was also treated. Remarks were made as to posture, and the condition of the cerebral circulation during sleep, and, lastly, the methods of treatment for the varying causes of insomnia were discussed at length.—Dr. GAIRDNER (Glasgow) doubted whether the indigestion were the cause of the sleeplessness. He rather thought the dyspepsia and the insomnia were due to a common cause.

On a New Method of determining the presence of, and recovery from, true Ringworm. By DYCE DUCKWORTH, M.D.—The author called attention to the action of chloroform upon the infected hairs in cases of tinea tonsurans. It was shown that this agent caused the hairs to become white or slightly yellow in colour, and thus to be distinctly mapped out and easily distinguishable from surrounding healthy hairs. The causes of the change were briefly discussed, and the particular phases of the disorder suitable for this application were pointed out. The effect of chloroform on patches of favus, tinea versicolor, melasma, and alopecia areata was likewise discussed. It was shown that no other reagent, so far as was known, possessed the peculiar properties of chloroform in affecting parasitically diseased hairs.

The Use and Abuse of Strychnia.—By JAMES THOMPSON, M.B. (Leamington).—The author desired to draw attention to the abuse of *nux vomica* and its alkaloids in patients' hands. Several cases were given in which patients were brought to the verge of delirium tremens by inordinate use of preparations containing these drugs. One case was given, where the results of an overdose was nearly fatal. It would be well if prescribers of such active preparations would note on the prescription that the mixture was not to be redispensed unless countersigned. In the experience of the author, it was not unusual to find that prescriptions, containing stimulating materials, were kept in hand, and used to an immoderate extent, when the recipient felt out of sorts and depressed, without any consent on the prescriber's part.

Remarks on a Method of Administering Leamington Spa Waters. By JAMES THOMPSON, M.B.—By the present mode of administration of mineral waters, only those invalids who can resort in person to the spring, can obtain the water in the natural sparkling state in which it issues forth. Others, who, from personal circumstances or the nature of their maladies, are unable to come to the well, send for a supply; this, when they come to drink it, they find to be much more unpalatable than the freshly-drawn water. In a short interval after the water is drawn, the carbonic acid gas which it contains is driven off, and it then becomes flat and unpalatable. The proposed method will remedy this. The Spa water is artificially charged with gas under pressure, and is supplied in French syphon bottles containing three doses each. By this means, invalids at home can have a much more palatable drink, and the beneficial medicinal properties of mineral waters are preserved for an indefinite time.

On Herb-Poisoning at the Cape of Good Hope. By GEORGE GREY, M.D.—In his capacity as district surgeon of the district of Cradock, Cape of Good Hope, Dr. Grey had seen, during the last eight years, eleven cases of reported poisoning. In several of these cases, whole families had been affected; and generally, in each family, one or more deaths had occurred, from poison administered by the natives. In many of the cases, he found that strychnia, or the seeds of *nux vomica*, had been resorted to; in other instances, the tubers of certain iridaceous plants had, as far as could be ascertained, been used. Strychnia was commonly kept at the scattered farm-houses in the district, for the destruction of troublesome carnivora, and was, therefore, easy of access. Dr. Grey gave an account of some cases which had fallen under his

notice, and described the effects of various poisonous plants indigenous to South Africa, and which may, apparently, be used for criminal purposes.

Laryngeal Phthisis. By PROSSER JAMES, M.D.

What is Cholera? By W. S. OLIVER, M.D.—Dr. Oliver stated his theory of cholera to be, that a poison (at present unknown) enters the circulation through the gastro-intestinal or the pulmonary mucous membrane, most frequently the former; and that this poison either temporarily paralyses or, if excessive, entirely deviates the vital property which influences the germinal matter of which the body is composed, and permits the physical to supersede the vital actions occurring in the tissues. He considered that cholera is not of a fungoid nature, but that certain fungi multiply in the intestines in this disease, as they sometimes do in other forms of gastric or intestinal derangement. There was, he thought, but little doubt that the cholera poison was a fluid, and highly miscible with water, and capable of being volatilised or refrigerated by moderately high or low temperatures. For treatment, he recommended hyposulphites and carbolates, transfusion of healthy blood, and saline baths or drinks.

Thursday, August 7th.

The After-History of Cases of Railway Accident. By T. CLIFFORD ALLBUTT, M.D.

The Views of Niemeyer and Others on Phthisis Pulmonalis. By C. R. DRYSDALE, M.D.—The author expressed his dissent from the doctrine of Niemeyer, that inflammation is the main feature in cases of pulmonary consumption, and that tubercle, when found, is a product, or complication, of chronic (especially catarrhal) pneumonia; as well as from the view that diathesis has very little to do with the production of phthisis. With the exception of the phthisis caused by the inhalation of small particles of matter, it seemed to him that, with very rare exceptions, all cases of consumption are, as Louis pointed out, of tubercular origin.

The Use and Abuse of Purgatives. By WILLIAM CARR, M.D.—The object of this paper was to show the value of aperients when judiciously selected, and especially to direct attention to the value of diet as a corrector of constipation, and so non-necessitate the administration of drugs. Purgatives, the author remarked, like bleeding, were out of fashion, but would come in again, sustained by a sounder faith, and be given more in accordance with truer aims.

The Application of Pneumatic Aspiration to Medicine. By G. DIEULAFOY, M.D.—Dr. Dieulafoy exhibited and described his pneumatic aspirator, and explained its application in the diagnosis and treatment of collections of fluid, even when deeply seated.—Dr. PROTHEROE SMITH disputed the priority of the invention, alleging that he had contrived, and published a description of, an analogous instrument before Dr. Dieulafoy.

On the Formation of Uric Acid Calculi. By GEORGE HARLEY, M.D., F.R.S.—There had recently been published some discordant views on the subject, which, instead of advancing our knowledge, seemed rather to carry us back to the time ere physiological chemistry had revealed the true nature of calculi, and laid a sound foundation for their rational treatment. As perfectly healthy urine never contained any deposit, the frequent appearance of a crystalline or amorphous sediment in the urine was a sign which ought never to be disregarded, as it was the earliest indication of the formation of a urinary concretion; and it was in this early stage that medicine was potent in arresting and eradicating the disease. The deposition of a calculus in any part of the urinary passages, no matter whether it were a constitutional or accidental one, was always due to some special local cause, which might be trifling or temporary. When the deposition of urinary sediment had begun, the calculus went on increasing independently of the original local condition. The proportion of patients affected with uric acid, when compared with those labouring under other kinds of stone, was as 7 to 10, or 70 per cent. Calculi composed of uric acid and urates had two distinct modes of formation, the crystalline and the molecular. In the formation of both of these kinds of calculi, the crystalloid was united with a certain amount of colloid material. As regarded the colour of uric acid calculi, which was known to vary from a white or pale yellow fawn to a rich mahogany red or dark chestnut brown colour, Dr. George Harley stated that it depended entirely upon the urohæmatine present in the urine; the calculus varying in depth of colour according as the quantity of urohæmatine was small or great, just in the same way as crystals of sugar-candy owed their pink, yellow, or other tints to the pigment present in the water out of which they were crystallised. According to the author, nearly all uric acid calculi originated in the kidneys, and were washed down into the bladder with the urine. It was usually stated in books that uric acid gravel chiefly affected the well-fed and corpulent; but this,

the writer stated, was a great error, as it equally occurred among the poorly nourished and emaciated. He concluded the remarks by stating that constitutional calculi occurred at every period of life, from the cradle to the grave. Moreover, he believed it quite possible that, in cases where there was a strong hereditary tendency to the uric acid diathesis (which could be often traced through three or four generations), calculi might begin to form in the pelvis of the kidney while the fœtus was yet in utero.

The Preventive Treatment of Uric Acid Calculi. By GEORGE HARLEY, M.D., F.R.S.—Dr. Harley limited himself to the consideration of the means of arresting the formation of uric acid calculi, and facilitating the discharge of those not already too large to be voided by the natural channel, which included all calculi not exceeding the size of field-beans. Tea, coffee, wines, and beers were to be prohibited, or, at least, prescribed in very great moderation, to patients labouring under the uric acid diathesis. He next alluded to the recent proposal of Dr. Day, of Victoria, to give ozonic ether in such cases, and passed on to the consideration of the alkaline treatment. From the very earliest times, alkalies had been resorted to with the view of retaining uric acid in solution until its expulsion from the body; and what the ancients did empirically we moderns did scientifically by improved methods, and with much greater success. The alkalies now in most general use were soda, potash, and lithia, in the form of carbonates, citrates, and acetates. Ammonia, on the other hand, was avoided in the uric acid diathesis, on account of the salt which it formed being less soluble than any of the others. The common idea was, that the action of alkalies in the uric acid diathesis was solely and purely a chemical one. There no doubt existed a chemical action, and that a most important one; but, beyond this, there was an important physiological action produced in the body, through which the oxidation process was so much increased as to transform the little soluble uric acid into the very soluble urea. To Dr. Basham was owed the establishment of this as a clinical fact. In the treatment of the uric acid diathesis, more depended on the dose than on the kind of alkali given. As a general law, it was unnecessary to render the urine more than neutral, except in cases where we were attempting the dissolution of stones already formed; but, even then, there was danger in making the urine either too alkaline, or retaining it in an alkaline state for too great a length of time. Dr. Nunneley found that from ten to eighteen drachms of citrate of potash in twenty-four hours notably diminished the excretion of urea; and Dr. Basham found that half-drachm doses given three times a day augmented it to even double or treble its previous amount. Dr. W. Roberts, of Manchester, found that, while sixty grains of carbonate of potash to a pint of water daily dissolved twenty per cent. of an uric acid calculus, the solvent power of the solution gradually diminished as the solution was made weaker or stronger. Dr. George Harley called attention to the very great importance of the quantity and quality of the drinking water. Patients who had suffered from gravel or stone in one district, frequently got rid of it on removing to another; and this he had been able to trace to the difference in the quality of the water. Hard water, especially that from chalky districts, caused stone; soft water cured it. He consequently recommended the free use of distilled water, not only as a menstruum for the medicine, but also for cooking purposes. Moreover, as the more pure water taken, *ceteris paribus*, the more effectual was the treatment, he gave his patients, when possible, from twenty to forty ounces of filtered rain or distilled water in the twenty-four hours; and, where they objected to its unpalatability, a squeeze of lemon or a pinch of salt was added to it. Hard water must, in all cases, be avoided. The only substantial benefit derived from mineral waters was, he believed, that the medicine was there given in a very dilute form. In mineral waters the relative proportions of their ingredients were not regulated according to the age, constitution, state of health, and other special requirements of the patient. As regarded the benefit of mineral waters in the uric acid diathesis, he pointed out that, contrary to some recent published opinions, it was due chiefly to the alkaline salts they contained. The writer concluded by saying that the chief obstacle to our success with chemical therapeutics in the treatment of calculi lay in the imperfect knowledge of physiology and chemistry possessed by practical men, who almost invariably failed in their endeavours to combine science with empiricism.

Anæsthesia for the Brute. By H. MAC CORMAC, M.D.—The author of the paper advocated the use of anæsthetics to deprive animals designed for slaughter of immediate consciousness, so as to prepare them for human sustenance without the infliction of appreciable suffering.

Substitution of Goat's Milk from the living Animal for the Sucking Bottle. By H. MAC CORMAC, M.D.—The object of this paper was to show that, by resort to a tube with artificial nipple, properly adjusted, goat's milk might be abstracted from the living animal, and transferred at once to the infant's stomach. This, with ordinary care in other re-

spects, would avert the mortality hitherto attendant on artificial lactation.

Urinary Calculi: their Prevention and Solvent Treatment.—By JOHN C. MURRAY, M.D.—The paper was founded on the following proposition. Given unsaturated urine, and the chemical conditions, uric acid, and the salts composing urinary calculi, having been in solution both in the blood and in the urine, they may be retained in solution or redissolved.

The Microscopic Structure and Mode of Formation of Urinary Calculi. By H. VANDYKE CARTER, M.D.

Cyanopuon Laryngis, or Thyroiditis with Blue Suppuration. By Sir DUNCAN GIBB, Bart., M.D.—Three-and-twenty years ago, Sir D. Gibb recorded a case of cyanuret of iron in the purulent discharge of chronic disease of the breast, to which he prefixed the name of cyanopuon, and gave a summary of cases published. In October 1870, an instance of inflammation of the right wing of the thyroid cartilage came under his notice in a single lady of 27, which was followed by suppuration. The matter evacuated was of a dark blue colour, like Prussian blue, and continued to flow for some days, finally healing with no inconvenience or subsequent bad result. On chemical examination, the colour of the pus was found to depend upon a salt of iron analogous to Prussian blue, and not to indigo. The case was not only remarkable from the rare nature of the disease itself, occurring without any apparent cause, but also from the discoloration of the matter like Prussian blue. This circumstance was extremely rare, and, therefore, in combination with the suppurative external inflammation, rendered the case unique in the annals of medicine. The chemical experiments were detailed, and some speculations were offered as to the nature of the phenomena which gave rise to the blue pus. The patient had not taken iron internally for many years.

On a Case of Local Softening of the Brain from Thrombosis of Syphilitic Arteries. By J. HUGHLINGS JACKSON, M.D.—A gentleman aged 38, in apparently good health, was first seen in July 1867 for recent (July 14th) paralysis of the parts supplied by the left portio dura nerve, and for recent partial deafness of the left ear. There were also remains of paralysis of the right leg, which had begun in April. He rapidly got rid of all his nervous symptoms after taking iodide of potassium; but he did not continue the drug, because he believed all his ailments to be owing to ague-poison. He had been in the West Indies, and still remained subject to slight shivering attacks. He had had primary syphilis fifteen years before. He remained well until March 2nd, 1868, when he became hemiplegic of the left side. He would not take any drugs except aperients. Nevertheless, in about a week he was apparently well again; but on March 21st he was found apoplectic and again hemiplegic—this time of the right side. He died next day. At the necropsy, there were found diffused softening of part of the right corpus striatum, and also softening of the left corpus striatum. There was syphilitic disease of each middle cerebral artery. Thrombosis of each at the part diseased accounted for the two local softenings, and for the two attacks of hemiplegia related to them. The random succession of symptoms in this case was very characteristic of syphilis. Dr. Hughlings Jackson said that the case showed one of the several very indirect ways in which syphilis caused nervous symptoms. The hemiplegia in such a case was dependent directly on softening of the corpus striatum, produced by thrombosis of a syphilitic artery. The "syphilitic hemiplegia" here illustrated was but one of three kinds producible by syphilis. Again, the case showed that recovery would occur from hemiplegia, notwithstanding that the damage which caused that hemiplegia was not altogether repaired. Iodide of potassium was not likely to be useful in such a case of hemiplegia, though syphilitic; while it was useful in cases of recent palsies of cranial nerves. In treating the latter, we were treating recent syphilitic disease; whilst in treating the kind of syphilitic hemiplegia under remark, we were treating local cerebral softening.

Mycetoma, or the Fungus Disease of India. By H. VANDYKE CARTER, M.D.

The Morbid Anatomy of Leprosy. By H. VANDYKE CARTER, M.D.

The Absence of Purging in Cholera. By WILLIAM SEDGWICK, M.R.C.S.—The author directed attention to the fact that, in cases of cholera, purging was apt to cease when collapse became intense, owing to inability of the bowels to expel their contents. This cessation of purging was followed by abdominal distension from the accumulation of the rice-water flux; and the attempts to restore the action of the bowels by purgative drugs had signally failed. The assumed elimination, by means of purgatives, of an assumed poison in cholera, was undoubtedly based on a misapprehension of the pathology of a flux; and the practical conclusions to be drawn from the evidence adduced were that, in a fully established case of cholera, the cathartic method of

treatment would tend (1) to deepen the collapse, (2) to increase the flux, and (3) to weaken the expelling power of the alimentary canal.

Friday, August 8th.

On the Modes of Causation of Epilepsy and other Convulsive Affections at Different Periods of Life. By H. CHARLTON BASTIAN, M.D., F.R.S.—The author used the word Epilepsy in the broader sense of the term, and also included the consideration of certain allied convulsive affections, commonly known under the name of Eclampsia. His views were founded principally upon notes of upwards of 300 cases of these affections, which had come under his own care. After commenting upon the uncertain use and wide meaning of the words "cause" and "causation," as applied to particular diseases, the author pointed out that the "causation" of epilepsy and allied affections had to be considered under three main divisions. 1. The proximate cause of the fit, i.e., the actual condition of the nervous system which is brought about in all cases, and upon the occurrence of which the fit immediately depends. This was the physiological aspect of the question, into which the author did not enter. He confined his remarks to the more purely medical aspects of the problem, included under the two remaining divisions. 2. Predisposing causes; 3. Exciting causes. The "predisposition" to attacks of this kind may be acquired during the life of the individual, or it may be born with him; that is, he may inherit a tendency of this kind from some of his ancestors. In this state there is an increased mobility of the nervous system, and a lack of control in the higher centres. After considering the modes in which such a predisposition may be acquired during the life of the individual, Dr. Bastian entered fully into the consideration of the different "exciting causes" of epilepsy and other convulsive affections, showing how these varied at different periods of life, and what was their relative importance at these different epochs.

On Marienbad Water. By V. JAGIELSKI, M.D.—The author explained the separate effects of the various chemical components, viz., water, carbonic acid, sulphate of soda, chloride of sodium, bicarbonates of soda, lime, and magnesia, protoxide of iron, etc. After treating of special physiological influences, he described the collective effect produced by continued use of these waters, under the following heads: 1. The *mild aperient* action, expressive of high solvent power, which takes place without weakening the body, the iron counteracting the influence of the laxative salts: 2. The *stimulating* action, a more remote effect, which takes place not on the receptacles, such as the stomach and bowels, but on more distant parts, as the kidneys and bladder, producing diuresis and an alkaline reaction of the urine, etc.; and on the circulation, nervous system, etc., through the influence of which are exerted the functions of all abdominal glands. 3. The *tonic effects*, expressed by a general improved state of assimilation, nutrition, etc., which, especially, at Marienbad itself give rise to an improved physical appearance in a short time, restoring all bodily and mental energies to a normal condition of health. He recommended Marienbad and its waters, as invaluable prophylactic means to obviate long and painful disorders, as well as subsequent danger of apoplectic attacks, etc.

The Theory of Counterirritation. By JAMES ROSS, M.D. (Manchester)—Counterirritation was defined as the application of an irritant to one part of the body in order to influence morbid action in its vicinity. The theory advanced was that (1) the influence of the counterirritant is conveyed by continuous and contiguous tissue, and not through the blood-vessels and the nerves; and (2) the influence conveyed is always of a stimulant character. An endeavour was made to deduce the first position from the general theory of inflammation; and the author stated that the second assumption would account for all the effects which counterirritants are known to produce in the treatment of various diseases. A stimulant action might aggravate the disease in the first stage of inflammation, and counterirritants were known to produce this effect occasionally. At other times a stimulant action might in this stage assist the disease through its natural progress, by developing the second stage of inflammation. An instance of this effect occurred when the pain of pleurisy was relieved by a blister. In such a case the disease was not checked, but the effusion separated the pleuræ, and the pain was relieved. In the second stage of inflammation, and especially in chronic cases, a stimulant action was most likely to promote health, and it was in such cases that counterirritants were most safely employed. A similar remark might be made with regard to cases of local debility, in the treatment of which counterirritants were found useful. Quantitative differences were found to exist in the effects of counterirritants according, first, to the proximity of the irritant to the seat of the primary disease, and, secondly, to the degree of the artificial irritation produced, and these differences were easily explicable on the supposition that the influence exerted by the counterirritant upon the disease was of a stimulant nature.

On Treatment in Cases of Tapeworm and Threadworm. By T. SPENCER COBBOLD, M.D., F.R.S.—In this paper the author insisted upon a more careful mode of dealing with cases of tapeworm than that which, from the evidences he adduced, appeared to be in vogue. He referred to recent successes obtained in his own practice, and considered that the number of rapid cures might be relatively increased by attention to certain rules of treatment. The first portion of the paper concluded by a reference to one remarkable case, in which the patient had played the part of host or bearer for a period of no less than sixteen years. In the second part of his communication, the author remarked on the difficulties attending the curative treatment of ascariides in adults. He explained the reasons why this was the case, and expressed the opinion that radical cures were much more frequent than was commonly supposed. He passed in review the various drugs employed in his own practice, but sought to show that ultimate success was chiefly dependant upon the observance of certain sanitary and prophylactic measures. He relied chiefly upon the exhibition of salines, steel, vegetable tonics, local abutions, and cold water enemata, the latter often repeated.

Remarks on Hematozoa. By T. SPENCER COBBOLD, M.D., F.R.S.—The author called attention to the great interest excited by Dr. Lewis's discovery of worms in the blood of persons suffering from chyluria; and after passing in review some of the more remarkable records referring to the same habits in the case of other parasites affecting man and animals, he referred to his own work and experiences with this class of entozoa. In particular, he dwelt upon the sanitary aspects of the question, in relation to infection, and called attention to the remarkable energy displayed by our Indian sanitary authorities in the matter. He especially referred to the labours of Drs. Cunningham, Lewis, Hewlett, Chevers, and Joseph Fleming. Dr. Cobbold incidentally referred to Professor Leisegang's discovery of a strongyloid hæmatozoon in the blood of dogs as brought under his notice by Dr. Schliep, of the German Hospital), and he exhibited three hearts of animals stuffed with entozoa. The first heart was from a dog, which he received from Her Britannic Majesty's Consul at Ningpo, China; the second, also from a dog, was received from Yokohama, Japan, through Mr. Walsh; and the third, that of a seal, was received from Mr. Coughtrey, Demonstrator of Anatomy at the Liverpool School of Medicine.

Diseases of the Chest in Children: their Treatment by Blisters. By DANIEL MACLEAN, M.D. (Glasgow).—This paper advocated the use of, and necessity for, the application of small blisters behind the ear in cases of acute disease, or the acute stage of disease of the chest among children and infants. The author had used this treatment in many appropriate cases, and had found great benefit from its adoption. He founded it on the fact that the nervous system played an important part in all the diseases of the young. Any abnormal action going on in the brain modified the proper influence of that centre upon the tissues at a distance, and gave rise to pathological actions in distant parts. With regard to the lungs, an abnormal action, continuing in a certain part of the encephalon for a time, was conveyed along the efferent fibres of the vagus to their peripheral terminations in the lung-tissue, and stimulated the tissue to pathological action, thus giving rise to disease in the lungs, from a cause at a distance from the lungs themselves. Again, an excessive irritation of the peripheral terminations of the nerves in the lungs, as in bronchitis, pneumonia, etc., passed along the efferent fibres of the nerves to the brain, and by its continued irritation there became a cause of convulsions, hydrocephalus, etc. This mutual action of nerve-centre and lung-tissue through the afferent and efferent filaments of the pneumogastric nerves, the author held to be the principal cause of the great mortality from chest-affections among children. This irritation accounted for the nervous symptoms frequently exhibited by children in these disorders. The greater the amount of nervous sensitiveness and irritation, the greater the danger. For the removal of this important element in chest-disease, the author recommended the use of blisters on or near the course of the nerves supplying the lungs; a convenient and advantageous spot being behind the ear. This treatment was explained, and the use of blisters generally defended.

Cerebro-cardiac Neuropathy. By M. KRISHABER, M.D. (Paris).—This communication was taken from a work which the author is about to publish on an undescribed nervous malady. The description was founded on an analysis of thirty-eight cases. The constant symptoms were described to be:—1, disturbances of sensation, characterised by false perceptions and general and very intense hyperæsthesia; 2, disturbances of locomotion, manifested in the abolition of equilibrium from vertigo, paralysis, or paresis; 3, disturbances of the circulation, consisting in extreme irritability of the vascular system, palpitation, dyspnoea, syncope, and sometimes angina pectoris; 4, secondary disturbances, varying in individual cases.

[The abstracts of the papers on Chronic Bright's Disease and on Anæsthetics, and the discussions thereon, will appear next week.]

SECTION B.—SURGERY.

Wednesday, August 6th.

Notes on the Effects of Iodide of Potassium. By JONATHAN HUTCHINSON, F.R.C.S.

The Removal of Bronchocele by Operation. By ARTHUR E. DURHAM, F.R.C.S.

The Treatment of Certain Forms of Bronchocele by Injections of Iodine. By MORELL MACKENZIE, M.D.—In a former paper, the author had described in detail the various methods applicable to the several kinds of enlargement of the thyroid gland. In discussing the treatment of fibrous bronchocele in the article referred to, he did not do justice to the method recently introduced by Professor Lücke, of Berne. A larger experience, made under more favourable conditions, had convinced him that the treatment of certain forms of bronchocele by the subcutaneous injection of iodine into the substance of the enlarged gland, was of the greatest value. The following was the plan of treatment, which, in accordance with Dr. Lücke's recommendation, the author had employed. Thirty drops of the official tincture of iodine were injected into the substance of the gland once a week for the first two or three weeks, and afterwards, once a fortnight, as long as was necessary. It was well to give iodide of potassium internally, at the same time; but no medicine was given to any of the patients whose cases were now related. The advantages of the treatment were, that it did not cause any constitutional disturbance or local irritation (suppuration). In this respect, it was preferable to treatment by setons and caustic darts. The only disadvantage of the method was its slowness; this, however, could scarcely be considered a drawback, except when the enlarged gland caused urgent dyspnoea. The cases which were briefly related had been taken indiscriminately as they presented themselves, or were found in the case-book of the Throat Hospital on July 24th. Of the sixteen cases, fourteen were fibrous, and two adenoid, or soft. Fourteen patients were females and two males. Eleven were completely cured, in four a considerable reduction resulted, and one case completely resisted treatment. In one case the neck was reduced by 3½ inches in less than six months; in two cases a reduction of 2½ inches took place. The duration of treatment varied from one to eight months, the average being four months. The author concluded by remarking that the treatment of cystic cases by injections of iron, as previously recommended by him, was, of course, much more rapid, and therefore more striking; but the fibrous cases were undoubtedly the most difficult to treat of those varieties met with in practice.—In reply to questions by Mr. BERKELEY HILL, Mr. HEY (Leeds), and Mr. MEADE (Bradford), Dr. Mackenzie added that suppuration had not occurred in any case where the injection had been made into the gland itself. The failures of the treatment were 5 per cent. Mr. Meade's treatment by division of the fascia in the central line, where symptoms of dyspnoea indicated mechanical pressure, had been found successful in alleviating this.

Nine Cases of Colotomy. By CHRISTOPHER HEATH, F.R.C.S.—The nine cases related all occurred in females. Two operations were undertaken for cancer of the rectum, causing obstruction, which had existed many days; both patients died. Three operations were performed for scirrhus in an earlier stage, before obstruction had occurred; and of these one died and two recovered—one of the latter dying seven months afterwards and the other being now alive and well, seven months after the operation. Two operations were performed for syphilitic ulceration and stricture; both recovered, and are alive now. One operation was performed, as a last resource, in a patient worn out with extensive fistula and ulceration (probably syphilitic) before she applied for relief, and proved fatal. The operation was performed for the relief of a recto vesical fistula, and was perfectly successful. The result thereof was four deaths and five immediate recoveries. Mr. Heath appended some observations on the operation and its results, urging its earlier adoption in cases of obstruction and intractable disease, and showing the slight risk to the patient the operation *per se* inflicted.—In the discussion which followed, Messrs. MAUNDER, PARSONS (Liverpool), MEADE (Bradford), HUMPHREYS (Shrewsbury), and the President, approved of the operation. Messrs. HEATH (Newcastle) and MAUNDER preferred the transverse incision; the latter made the wound conical, with the apex towards the deeper parts. He had met with enormous quantities of subperitoneal fat obstructing the operation.—Dr. PARSONS (Liverpool) had a successful case of infantile colotomy; the patient, now twenty years old, working as a dock-labourer.

Some Remarks on Onychia Maligna. By WILLIAM MAC CORMAC, F.R.C.S.—Onychia maligna is a rather common disease in Belfast, where Mr. Mac Cormac formerly practised; it affects principally the girls employed in flax-pinning mills. During the ten years from June 1863 to June 1873, there were 217 cases of this malady among the

patients of the Belfast General Hospital, being 2.2 per cent. of the total surgical out-patient cases; 115 occurred in girls between the ages of ten and fifteen, and 63 between the ages of fifteen and twenty. One hundred and eighty-four were mill-workers. In his experience, Mr. Mac Cormac had found local applications and evulsion productive of only temporary benefit. The only efficient treatment was the complete excision of the secreting stratum at the root of the nail; a severe operation, and one which required local or general anæsthesia. Lately, the author had read a monograph by Dr. Vanzetti of Padua, advocating the plan, proposed originally by Dr. Moerloose of Ghent, of applying powdered nitrate of lead to the ulcerated surface. Dr. Mac Cormac had had no opportunity of testing this remedy among the patients at St. Thomas's Hospital; but, at his instance, it had been used by Dr. Scott in fifteen cases in the Belfast Hospital, with most satisfactory results. According to Dr. Scott, from fourteen days to a month were sufficient for a complete cure. All pain ceased from one to three days after the first application; and the swollen irritable margin of the ulcer gradually disappeared, leaving a healthy granulating sore.

A New Urethrotome for Incising very Narrow Strictures. By BERKELEY HILL, F.R.C.S.—The instrument, constructed by Coxeter, consisted of a slender sound, less in diameter than No. 2 catheter, grooved along its stem. The groove, deep for six inches of its length, gradually became shallow, so as to turn out a knife attached to a rod passed along the groove. By this means, a cutting edge was made to project for half an inch or less, if necessary, against the floor of the urethra. By drawing the whole instrument forwards, the keen edge was brought against the stricture and cut it through from behind forwards; the knife then returned to the groove, and the instrument could be harmlessly removed from the urethra. A subsidiary adaptation of the instrument rendered it capable of being guided through extremely narrow strictures, and also of showing exactly the position and extent of the contraction to be overcome.

On the Restoration of Perinæum and Sphincter Ani ruptured during Labour. By T. P. TEALE, M.B., F.R.C.S. (Leeds).—In this paper Mr. Teale described the mode of operation which he has found the most satisfactory. His chief efforts aim at giving solidity to the newly made perinæum. This he attains partly by making the raw lateral surfaces, which are to be brought together by the quilled sutures, broad towards the rectum, and chiefly by dissecting up the vaginal membrane, which rests on the rectum as a triangular flap, with its blunt apex forwards and its attached base backwards. This raised flap is kept in apposition with the vaginal edges of the apposed lateral raw surfaces by means of the stitches of the quilled suture.

On Warts. By S. M. BRADLEY, F.R.C.S. (Manchester).—In this paper the attempt was made to establish the essential oneness in origin of all morbid growths characterised by the abnormal development of epithelial elements, such, e.g., as scirrhus, epithelium, epulis, and common warts. The author stated that the simplest of these tumours may evolve the more complex by the agency of external forces, such as irritation, pressure, etc. (the influence of heredity is probably always great in determining the exact nature of the morbid product); and that the power and rate of infiltration and invasion of the general system is due to simple laws, such as the size and shape of the cell, their degree of moisture, and the nature of the surrounding tissues. He maintained that, as electricity, by coagulating the albumen of a part, establishes a barrier to the onward march of the cell-elements, it should, therefore, be employed in all cases of infiltrating tumours when it is decided to eradicate the growth.

The Treatment of Retention and Extravasation of Urine. By W. F. TEEVAN, F.R.C.S.

Case of Double Ventral Hernia. By E. WOAKES, M.D. (Luton).—The case occurred in a man aged 61, the herniæ making their appearance about two inches above the umbilicus, and on each side of the median line, during recovery from an attack of ascites. When seen, the tumour of the right side was strangulated, irreducible, and the symptoms urgent. He was operated upon under chloroform, and progressed without a bad symptom till the fifth day, when, in the effort of defæcation, the left hernia became strangulated. His condition becoming rapidly threatening, taxis after ice proving abortive, he was operated on a second time under chloroform. Severe peritonitis occurred; but he ultimately recovered, his condition being, for several days, precarious.

Amputation at the Wrist Joint. By RICHARD BARWELL, F.R.C.S.—Mr. Barwell divided his subject into three heads: I. The diseases likely to call for this operation; II. His method of its performance; III. The advantages of this method. Amputation at the wrist joint was most likely to be called for after severe suppuration of tendinous sheaths, ending in fungoid proliferation of cells, invading and destroying the tendons and, in great measure, the carpal bones. Mr. Barwell described his method of operation. An incision is carried from the outer point

of the scaphoid bone, downwards, across the ball of the thumb to the fold of skin formed in the palm, by flexing the fingers. In this fold a transverse incision is made to the outer side of the fifth metacarpal bone; from the end of this a third incision is brought along the outer margin of that bone to the pisiform. At the back of the wrist, on a level with the joint between the two rows of carpal bones, a transverse cut connects the two perpendicular ones. These two flaps—a short posterior and a long anterior—are dissected up, the knife being carefully kept close to the palmar fascia and muscles of the thumb and little finger, so as to spare the vessels. When the flaps are turned back on the forearm, the surgeon feels for the pisiform bone, and, placing his edge immediately above it, severs the hand from the forearm; then, removing the soft parts for a short distance on the outer side of the styloid process, the operator, with a pair of bone-forceps, cuts off as much of this as may render the end of the bony stump plain and level. The ulnar, radial, and interosseous arteries being secured, the dressing of the stump is effected simply by turning the anterior flap back, sewing its end to that of the anterior, and the edges together. The author stated that the following were the advantages of this mode of operating: I. The flaps fit accurately; II. The chief flap is formed of dense tissue accustomed to pressure; III. There are no ends of obliquely cut tendon or nerve on the stump; all these parts are cut off higher and straight; IV. The stump is square and level; V. The operation is easier and quicker, there being no possible hitch in the separation of the wrist from the arm.—Mr. DOLMAN (Derby) pointed out the rarity of cases suitable for the operation.—Mr. GANT (London) feared the loss of supinating power by the section of the styloid process of the radius.—Mr. HULKE and Mr. HEY asked wherein the operation differed from Teale's rectangular amputation.—Mr. PRIDGIN TEALE (Leeds) said that the operation differed from that of his father in the long flap (anterior) containing the principal vessels and nerves, which his father always placed, by preference, in the short flap.—Mr. BARWELL, in reply, admitted the rarity of cases suitable for the operation. The styloid process of the radius was removed only at its tip, and the insertion of the supinator longus was left untouched. The operation which he suggested differed further from Teale's amputation, in the stump being covered by tough skin, rendering it more analogous to Pirogoff's or Syme's amputation of the foot.

The Treatment of Gleet by the Insufflation of Astringent Powders. By J. ST. S. WILDERS, Esq. (Birmingham).

Remarks on Two Cases of Syphilitic Aphasia. By J. ST. S. WILDERS, Esq.

Notes on Diseases of the Rectum. By FURNEAUX JORDAN, F.R.C.S. (Birmingham.)

Ligature of the Superficial Femoral Artery for Aneurism, on the Antiseptic Principle. By P. R. CRESSWELL, Esq. (Dowlais).

Thursday, August 7th.

The Isolation and Treatment of Wounds. By GEORGE W. CALLENDER, F.R.C.S., F.R.S.—Mr. Callender described a plan of treatment which he had followed for several years in St. Bartholomew's Hospital, and of which the results were at least as satisfactory as those following the employment of the antiseptic method, while it was much more simple. In 199 cases treated in this way, there had been six deaths; and in 28 cases of compound fracture, and 33 of amputation (including 14 of the thigh), there had been no deaths. The author insisted on the removal of foreign bodies, and expressed his objection to ligatures, as being in fact foreign substances. Instead of tying arteries, he used torsion. After all bleeding had stopped, the wound was washed with carbolic acid (1 in 20 of water), closed with silver sutures, and fitted with a drainage-tube (a suitable form of which Mr. Callender had had made). After this, layers of lint dipped in carbolic oil (1 in 12 of olive oil) were laid over the line of incision or over the laceration; and over these a quantity of cotton-wool for warmth and protection. After the dressing, the wound was placed in such a position as to secure absolute rest. After the first day, the drainage-tube was generally removed, and the dressings were applied as before. No special provision was made for excluding the air. As far as practicable, each case was placed between patients free from wound or discharge; and the wound was cleaned, by means of a camel-hair brush, with a solution of carbolic acid in five parts of spirits of wine. Mr. Callender remarked that in this plan antiseptic treatment was used in a limited way; and that the results which he brought forward showed that, with the exercise of proper care and supervision, patients did as well in a large hospital as anywhere else.—Sir JOHN ROSE CORMACK (Paris) said that he had, during the two sieges of Paris, treated a great variety of the worst description of shot and shell wounds; and he had seen similar cases treated contemporaneously by others, and his firm conviction was, that the success was not so much with the skilful operator as with the man

who patiently and with scrupulous care conducted his dressings, and attended to the hygiene of his patients. Mr. Lister's system was not adopted in the American ambulance, nor in either of the hospitals of which he (Sir John Cormack) had charge; and yet in all these the success was very remarkable. The system which Sir John Cormack adopted (varying it according to circumstances) was to tide over the period of shock by large opiates; to use in all the dressings abundance of *étoupe goudronnée* or oakum, which, from its antiseptic properties and its power of absorbing the discharges, as well as its elasticity, was used universally in the American and English ambulances. He gently washed the wounds and the surrounding parts at each dressing with creasote water, to remove adherent noxious discharges; and the crevices were carefully cleansed by injecting the same fluid. When necessary and at all possible, incisions were made, and drainage-tubes were used to prevent the accumulation of discharges in crypts or pouches. The very simple and effectual method suggested by Mr. Callender, of lightly brushing out the cavities with a camel-hair pencil, would no doubt have answered as well as, and in some cases perhaps even better than, the syringe. He attributed much of Mr. Lister's success to the general medical and hygienic treatment which that gentleman strenuously carried out, rather than to the niceties and complexities of his special system. In support of his views, Sir John referred to some of his cases of lacerated wounds and amputations, in which, he believed, recovery was mainly attributable to the system which he briefly described, and in some instances, to the additional precaution of changing the personal and bed linen once, and sometimes even more frequently, in the course of the day. This had been done in one case where the patient had seventeen lacerated wounds, and made a good recovery. An additional precaution was generally taken—to wit, having the patients carried out on stretchers to the free breeze of the garden, whenever the weather permitted, so that their bedding and the wards might be cleaned. In addition to this, the floors and beds were regularly watered with creasote water several times a day.—Mr. GANT (London) was of the same opinion with regard to Mr. Lister's plan.—Mr. GREEN (Bristol) had found that many years of large hospital experience only wedded him the more firmly to the doctrines long since taught him by Mr. Lawrence—namely, extreme simplicity in the treatment of wounds, and, above all, a free outlet for discharges.—Mr. CRESSWELL (Merthyr Tydfil) and Mr. HEMINGWAY (Dewsbury) also spoke.—Mr. LUND (Manchester) said that Mr. Callender's method was really antiseptic, while its simplicity was to be admired.—Mr. HEY (Leeds) had given Mr. Lister's plan a fair and unprejudiced trial, but repeated experience of it had convinced him that, even when carried out carefully by Mr. Lister's own pupils, the method showed no superiority over a simple plan of treatment such as that employed by Mr. Callender. He had even seen union delayed in wounds by reason, as it seemed, of the employment of the more elaborate antiseptic dressings, although in other cases it answered all expectations.—Mr. CALLENDER, in reply, pointed out that his plan involved absolutely no precautions against the admission of air, and could not, therefore, be considered as a proof of the superiority of Mr. Lister's method of "antiseptic" treatment.

Median Lithotomy. By WILLIAM CADGE, F.R.C.S. (Norwich).—In this paper the author recounted, briefly and in general terms, the results of his personal observation and experience of median lithotomy. He summed up the advantages and disadvantages of the operation; compared and contrasted it with an equal number of cases of lateral lithotomy and of lithotripsy; glanced at the causes of death after median lithotomy, and stated the conclusions to which he was led by this experience—viz., 1. Median lithotomy is not applicable to very young subjects; 2. It is objectionable in all cases in which the stone is of considerable size; 3. It has its proper sphere, and possesses decided advantages in cases in which the stone is of moderate dimensions.—Mr. TEEVAN (London) greatly preferred the lateral operation of lithotomy. He had only performed median lithotomy once, but had met with cases in which sterility had followed it. The prostate was not dilatable; but, as shown by Mr. Ellis, the neck of the bladder was always lacerated in the attempt. He had lost only three patients in forty-nine operations.—Mr. MAUNDER (London) thought that one great advantage attending the median operation was that the patient had a dry bed. He was sure that the prostate was dilatable; for children could hold their urine directly after the operation, although the neck of the bladder had been freely dilated.—Mr. LUND (Manchester) considered median lithotomy to be really urethrotomy.—Mr. CADGE admitted Mr. Lund's criticism as to the name, and explained the operation in some detail. He pointed out that Mr. Teevan's statistics were fallacious; for out of his forty-nine cases only seven were adults, and of these two died. Every one knew that lithotomy in children was a perfectly safe operation. He had never once in all his experience been able to hear of a case of median lithotomy followed by sterility, although he had made special

investigations into the point. In the lateral operation, the parts were as much bruised as they were injured by cutting in the median method. Median lithotomy was, however, fast being relinquished in Norwich.

Excision of the Enlarged Spleen. By SPENCER WELLS, F.R.C.S.
Fallacies and Failures in Antiseptic Surgery. By E. LUND, F.R.C.S. (Manchester).—The author described certain fallacies, or erroneous notions, which seemed to be ascertained in reference to the antiseptic treatment of wounds. He arranged these in six classes, having reference (1) to the mode of action and exact influence exerted by carbolic acid; (2) the presence or absence of suppuration; (3) the use of pus as a solvent for indurated tissues; (4) the effects of the entrance of air; (5) the contagion of septic matters; (6) the necessity for absolute cleanliness in the management of wounds. The sources of error or failure in this mode of dressing, especially after operations, were also considered under six heads: 1. Imperfect preparations before the operation, so as to free the parts implicated and the instruments employed from septic matters; 2. Inefficient assistance during the operation, with the same object; 3. Imperfect adjustment of the dressings after the operation, so as to filter and disinfect the air which must gain access to the wound; 4. Delay in the removal and replacement of the dressings; 5. Carelessness in the particular method of doing this; and 6. Erroneous notions as to the possible approach of serious symptoms in the progress of any case which would yield to a steady perseverance in the plan, but which often led to its entire abandonment at the most critical stage of treatment. All these points were brought forward as deductions from direct personal observations by the author himself, in his daily practice of the antiseptic system.

A Case of Traumatic Pneumothorax, Illustrating the Use of the Aspirator. By HERBERT PAGE, M.B. (Carlisle).—The history of a case was detailed in which, owing to wound of the lung from in-driving of a fractured rib, there was pneumothorax, with total collapse of the right lung. The case was, from the first, an urgent one; the dyspnoea and collapse being both extreme. The chest was punctured four hours after the accident by Dieulafoy's cannula; and, on exhausting air from the pleural cavity by means of the pneumatic aspirator, immediate improvement in the condition of the patient followed. At the time of the operation, blood was drawn into the receiver; and examination of the chest on the day after the injury revealed dulness on percussion at the base on the right side. This was due to the presence of blood; and the aspirator was subsequently used three times for the removal of this blood, and the further withdrawal of air from the cavity of the pleura. The patient made a good recovery, and the lung was restored to its normal state. In the remarks on this case the writer, while admitting the advantages of Dieulafoy's cannula as an instrument for puncturing the chest, called attention to the possible source of danger from hæmorrhage into cavities exhausted of their contents by the aspirator.

Amputation through Joints without Interference with the Proximal Bone.—By G. H. B. MACLEOD, M.D. (Glasgow).

Syphilitic Iritis. By C. R. DRYSDALE, M.D.—The author believed that syphilitic iritis rarely occurred in adults before the fifth or sixth month after the inoculation of the poison. It was met with in about 4 or 5 per cent. of all cases of syphilitic infection. Having described the affection, he spoke of the prognosis, regarding which, he said, the practitioner should be cautious. In young adults, with very careful treatment, the prognosis was usually favourable. In double iritis, of course, it was less good; but even here, in adults under 50, the prognosis was excellent if atropia were carefully used. In the treatment, he regarded atropia as the sheet-anchor; all other medicines, even iodide of potassium, being of very secondary importance. Atropia allayed the local sensitiveness, gave rest to the ciliary muscles, and prevented closure of the pupil. Sometimes one drop *per diem* was sufficient; in other cases, the application required to be made four or five times daily, according to the obstinacy with which the pupil contracted. Iodide of potassium was useful, if given in doses of ten, fifteen, or even twenty grains, daily.

On Some Important Cases in Surgery and their Treatment by the Antiseptic Method. By S. LODGE, L.R.C.P. Ed. (Manchester).—The cases described were one of severe injury of the abdomen, and one of malignant tumour of the shoulder.

A New Apparatus for the Treatment of Fractured Ribs. By C. A. HEMINGWAY, Esq. (Dewsbury).—The apparatus described by Mr. Hemingway was one which he had some months ago employed in his own case, having unfortunately broken his ribs by a fall. It consisted of a case of soft leather, formed so as to accurately fit the chest, without impeding the action of the abdominal muscles and diaphragm. The back portion, being continued upwards, overlapped and pressed on the scapulae. Inside the lining of the case, a layer of cotton wadding might be placed if necessary. Between the case and lining eight pockets were formed, three on each side, and two, larger and deeper,

behind. Into these pockets were introduced splints; for which the author preferred pasteboard soaked in hot water, bent so as to adapt itself to the chest, and dried. The splints should be applied on that side only of the chest where the fracture existed. To assist in keeping the fractured portions in apposition during the movements of respiration, he placed elastic bands between the pockets. The apparatus was fastened around the chest and over the shoulders by straps and buckles. The apparatus, and a photograph of its application *in situ* were shown.

On Dislocations of the Clavicle and Humerus. By WILLIAM BROWN, Esq. (Callington).—In 1846, Mr. Brown reported a case of dislocation of the clavicle at its sternal end; and since that time he had had three other cases under his care. In all, the dislocation was forwards. He had met with only one distinct case of dislocation at the acromial end. In the treatment of the sternal dislocation, he generally applied a long strip of emplastrum roborans obliquely from below upwards over the injury and over the top of the shoulder; after this, a wedge-shaped pad was placed in the axilla, a figure-of-8 bandage applied, and the elbow confined firmly to the side. He used the same treatment in his case of acromial dislocation, and also in fracture of the clavicle. In the reduction of dislocation at the shoulder-joint—of which Mr. Brown had had many cases—he employed a method which he considered to be, in a great measure, new; it was always successful, and did not require the aid of chloroform. The patient being placed with his sound side resting firmly against the back of a strong chair, and held there by a jacket-towel, steady extension was made downwards and outwards by means of another towel fixed above the elbow. During the extension, the head of the bone is guided into its place by the surgeon's hands. Mr. Brown had found injuries of the elbow very frequent, especially in boys: while fractures of the shaft or of the upper third of the humerus were rather rare. The injuries of most frequent occurrence were dislocation—simple or complicated with fracture—of the ulna backwards. Mr. Brown also related the case of a boy, in whom the lower epiphysis of the humerus had become separated from the shaft, which projected through the integument. The projecting portion of bone was sawn off; and, after some threatening symptoms, the boy recovered with an useful limb.

A Mode of Using a Three-pad Tourniquet in the Treatment of Aneurism. By E. LUND, F.R.C.S. (Manchester).—The tourniquet employed was that known as Signoroni's, with a pad from the centre of the arch, so attached that it could be moved to and fro by a screw-action. The instrument was applied in the usual way over the artery, and such pressure made as would not arrest entirely the force of the pulsations. The extra pad was then brought into action, so as to press against the external side of the limb, and drag the tourniquet transversely across it. This had the effect of so displacing the vessel and the tissues surrounding it, that the artery was made to assume a curvilinear in place of a straight direction; and by this means the circulation could be completely stopped with less actual compression of the skin and other structures.

Friday, August 8th.

Management of the Pedicle in Ovariectomy.—Dr. MACLEOD (Glasgow) exhibited a torsion-clamp of his own invention for securing the pedicles of ovarian and other tumours by torsion. He mentioned the success obtained by himself and others from its application.

Excision of the Tongue.—Dr. MACLEOD also showed his vulsellum with rests for preventing the slipping off of the *écraseur* wire or chain in operations for removal of the tongue.

Traction-Clamp.—Dr. MACLEOD showed his traction-clamp for applying extension to the lower limb. The clamp consists of a sort of bandage-roller, which, by winding up the bandage, exercises traction in the direction of the axis of the limb.

The Diagnosis of Hip-joint Disease. By G. H. B. MACLEOD, M.D. —The author demonstrated an exact method of measuring the length of the femur, as suggested by Giraud-Teulon; and expressed his belief in the rarity of real shortening or elongation in morbus coxæ.

On the Treatment of the Superficial Affections of the Eye. By GEORGE CRITCHETT, F.R.C.S.—The object of the paper was to endeavour to group the superficial inflammations of the eye under two primary heads, each presided over by a distinct set of nerves, and involving a distinct set of blood-vessels; also to show that each group required its own special system of treatment, which would be unsuited and even injurious to the other. A main object of the paper was an endeavour to define those cases in which astringent and caustic applications are indicated, and the converse.—The paper was followed by an animated discussion, sustained by Mr. ADAMS (Maidstone), Mr. DE MÉRIC, Dr. JACOB (Dublin), etc. All concurred in regarding atropine, rest, constitutional remedies, and especially pressure to the eye, as the chief and most reliable means of treatment; while opinions differed regarding the value of the setons as employed by Mr. Critchett. Mr. Adams advo-

cated paracentesis corneæ and section of the ulcer in obstinate cases of irritable ulcer of the cornea.

Astigmatism of the Cornea after Extraction of Cataract. By G. COWELL, F.R.C.S.

Conical Cornea, with Hernia at the Apex. By F. WATERHOUSE, L.R.C.P. Lond. (Bolton).—The patient was a woman aged 49, in a low state of health. The disease was first noticed when she was in her twenty-fourth year. Sight had been failing several years; but she could read with both eyes until a few months before she came under treatment. Both corneæ were conical; and, the apex of the cone of the right eye having ulcerated, a large hernia had protruded, covered with recently deposited lymph. The central portion of the iris was also pushed forward to a vertical plane some distance anterior to the margin of the cornea, as could be seen when viewed from the side. Increased vascularity, pain, photophobia, and lachrymation, were the inflammatory symptoms, and were sympathetically repeated in the left eye. Lunar caustic was applied to the protruding membrane. The upper eyelid was drawn forward and pulled over the staphyloma, and secured by plaster. Pressure was ensured by pads of lint, well besmeared with belladonna extract, and bandaged down. Water was allowed to soak through the bandage every day, to moisten the extract. In ten days, the dressings were removed, and the hernia was found much reduced. The same treatment was again pursued, and in five days the hernia had disappeared, leaving a cicatrising ulcer. Mr. Waterhouse pointed out, among other points of interest, the rarity of hernia in these cases, and the fact that, although the results aimed at and attained were those for which the operation of Von Gräfe was devised, vision was better in the left than in the right eye.

On Peculiar Modes of Transmission of Syphilis in Married Life. By VICTOR DE MÉRIC, F.R.C.S.—The author passed first in review the modes in which a wife may be contaminated by her husband, and *vice-versa*; paying particular attention to those cases where no outward signs of syphilitic taint are apparent. He alluded, then, to the share of gestation in the mechanism of the contamination of the wife, observing that impregnation is not the only mode in which she may become affected with the complaint. Numerous facts had put beyond doubt the modes of transmission just alluded to; but he had met with cases where contamination had been effected in an exceptional manner. The author then related some of his exceptional cases. The first had reference to a gentleman who had been under his care several years before his marriage, and had passed through the usual periods of syphilis. He married eighteen months after the last symptoms, and a series of healthy children were born. That father suffered now and then from inperigo, and had once very severe osteitis; but neither the wife nor children experienced any contamination. About ten years after marriage, the husband was indiscreet, and caught a chancre which subsequently became phagedenic. Considering the lesion, at first, as a mere abrasion, he took no precautions, and the result, unfortunately, was the breaking out of a fearful set of symptoms of syphilis in the wife. The author now asked whether this case did not prove that the secretion of a soft chancre, seated in a syphilitic individual, might convey the general disease; and added a few remarks as to the effects of pathological secretions from a person suffering, or having suffered, from syphilis. The second case was illustrative of the great difference between occasional intimacy and the actual bonds of marriage. In this case the disease was conveyed from wife to husband, though no such accident occurred through several years of former intimacy. The third case related to a married gentleman, who caught a chancre which eventually proved indurated. The lesion was, however, so insignificant at first that no heed was taken. The wife was far advanced in pregnancy at the time, and the consequence was that fetus and mother were contaminated. These facts would go far to prove how infectious was the chancreous erosion in its nascent state. The fourth case was of a remarkable kind, as the gentleman suffered from systemic syphilis without having ever presented a primary sore. Here the wife escaped at first, but eventually had the disease through her infected child. Mr. de Méric alluded subsequently to a few other cases, in which mothers and numerous children remained healthy, though the husbands suffered from syphilis before and after marriage. He concluded by mentioning instances where the wives of syphilitic husbands had fallen into bad health, without presenting any actual symptoms of the disease.—This paper gave rise to a discussion bearing chiefly on the question as to the frequency and forms of transmission of syphilis to the offspring, and as to its transmission to offspring without affecting the mother. Mr. GANT mentioned an instance of a married patient who, after having borne healthy children, acquired syphilis from her husband, and after some time gave birth to a healthy child. A recrudescence of the disease some years afterwards was followed by the birth of another healthy child. Mr. Gant mentioned the possibility of

these children exhibiting symptoms after the period of the second dentition.

Melanotic Tumour developed in the Neighbourhood of a Congenital Mole. By FRANCIS MASON, F.R.C.S.—The patient was a man aged 64, an inmate of St. Thomas's Hospital, who had had through life a congenital mole, about the size of a small pea, on the right cheek, an inch from the angle of the mouth. A year before he came under observation, he noticed a pimple in close proximity to the mole. The pimple steadily increased to the size of an orange. On admission, the tumour was a soft fungating mass, from which a sanious inoffensive fluid exuded. Manipulation gave no pain. At the lower part of the tumour, the congenital mole was observed isolated and apparently distinct. Several glands in the submaxillary region were enlarged, but they were not painful to the touch. The tumour was removed by Mr. Mason by an incision around the circumference. A perfectly healthy surface was left. The edges of the wound were brought together with hare-lip pins. An attempt was made to remove the enlarged glands; but, on applying the fingers to enucleate them, the capsules burst, and it was found impossible, as important structures were involved, to remove the whole of the diseased structure. A microscopic examination of the tumour and glands confirmed the opinion as to their melanotic character. Recovery was rapid, the patient leaving the hospital about a fortnight after the operation. Mr. Mason had learned that in July the man was in every way quite well, following his employment as a labourer. The patient's photographs before and after the operation, together with a microscopic drawing by Mr. Arnott, were exhibited.

SECTION C.—OBSTETRIC MEDICINE.

Wednesday, August 6th.

In the absence, through illness, of the President, Dr. BRAXTON HICKS, F.R.S., Dr. G. H. KIDD of Dublin took the chair, and delivered an address which was published at page 187 of the JOURNAL for August 16th. In it, he referred to certain points in the pathology and treatment of some forms of dysmenorrhœa.—Dr. GRAILY HEWITT thought that in by far the largest proportion of cases of dysmenorrhœa the pain was due to obstruction; and that flexions, especially anteflexions, were frequently overlooked.—Dr. TRACY (Melbourne) considers that dysmenorrhœa frequently occurred without displacement, the symptoms being due to congestion of the uterus and ovaries, which was entirely overcome by the daily introduction of tampons of cotton soaked in glycerine immediately before the menstrual period—producing copious serous depletion of the cervix and vagina, superseding the necessity for leeches. He found that pessaries frequently aggravated the evil.

On Transfusion of Blood. By H. M. MADGE, M.D.—Dr. Madge said that he brought this subject before the Association with the view of increasing the stock of information desired by the Committee of the Obstetrical Society. He noticed the several ways in which transfusion had been performed, viz.: I. Transfusion with defibrinated blood; II. Transfusion with pure blood; III. Immediate transfusion from vein to vein; IV. Immediate transfusion from artery to vein; and gave a summary of the opinions of Playfair, De Belina, Higginson, Braxton Hicks, Richardson, Savage, etc. Of the four plans, all might at present be used with an equal chance of success; but transfusion with defibrinated blood was the easiest mode. Direct transfusion from vein to vein, as described and recommended by Dr. Aveling, was apparently rather more difficult than the mediate method; but, with a little practice with Dr. Aveling's simple and effective instrument by passing water through it, the operation would become much easier. The cases of undoubted success which had attended transfusion should encourage the attempt to find out the causes of its failure. In conclusion, Dr. Madge suggested the following subjects for further inquiry: (1) The exact time at which human blood coagulates when drawn from a vein; (2) Does blood, when injected into a vein, go direct to the heart, or does it become lost or diffused in the general venous system? The effects of transfusion (3) with blood kept in a state of non-coagulation by means of phosphate of soda; (4) With blood containing ammonia; (5) With milk; (6) With defibrinated blood; (7) The microscopic appearances of defibrinated blood; (8) The effects of transfusion, by Dr. Aveling's plan, on animals of the same species; (9) Transfusion with blood in its natural condition; (10) Experiments to show whether the blood of animals can be introduced with impunity into the human system; (11) Transfusion with defibrinated blood, with the addition of ammonia or phosphate of soda; (12) Transfusion with saline solutions.

Transfusion in Extreme Uterine Hemorrhage. By J. RINGLAND, M.D. (Dublin).

The PRESIDENT had met with two cases of transfusion, both of which were fatal.—Dr. W. S. PLAYFAIR agreed with the author of the paper that the true value of the operation was not yet known. To gain this knowledge, it would be necessary to largely increase his number of cases in which the operation was practised, and to carefully study the results. The apparatus must be simple and inexpensive, and ready at hand. As long as it was considered necessary to have a costly apparatus, the operation would never be popularised; and it would be postponed until, in nine cases out of ten, it would be too late. The method of transfusion with defibrinated blood was, he thought, the simplest, and the most likely to prove generally serviceable. The simplicity of Dr. Aveling's method was, he believed, more apparent than real, as it required some practice and delicate manipulation, and various circumstances would seriously militate against its success. No doubt Dr. Aveling could work his own contrivance easily, but he doubted if others could do it as well. The objections to his use of defibrinated blood were purely hypothetical. There seemed to him less fear of embolism than in other methods; and the operation could be done with the utmost calmness and deliberation. The experiments of Pancoast and Brown-Séquard had proved that the fibrine was quite useless in transfusion, the important element being the corpuscles. Borrowing Dr. Aveling's idea, he had had valves put to his instruments, which made it into a miniature Higginson's syringe; and so it could be used without any practice, and by the most unskilled. Costing only a few shillings, it was within the reach of all, and might be carried in the corner of the obstetric bag ready for any sudden emergencies.—Dr. BARNES believed that, for the purposes of transfusion, the blood of animals was quite as efficient as human blood. The objection to the former might be said to be a sentimental one. No one would maintain that the blood of animals might not be taken into the human stomach, whilst the idea of swallowing human blood excited horror and disgust. The objections to Dr. Aveling's instrument had been overstated. All operations required dexterity and skill. It was certainly less bulky and less complicated than Dr. Ringland's apparatus. Valves were objectionable from their tendency to arrest coagula, which might become detached and form small emboli. As to the relative merits of fibrinated and defibrinated blood, each had succeeded. Fibrine was certainly not injurious, as its successful employment had shown. Time was an object; and defibrination involved loss of time. Transfusion was destined to a far greater extension, and would undoubtedly be employed in other diseases, such as puerperal convulsions, in which pure blood was required rather than an increased supply. The injection of saline fluids, which was a form of transfusion, had saved life. The form of apparatus, and the various questions as to the best mode of conducting the process, were questions which could only be determined by further experience.—Dr. ROBERT MACDONNELL (Dublin) had operated in several cases, in three or four successfully. The results were much more favourable in patients of the well-to-do class. In the poorer class it scarcely ever succeeded. He approved of Dr. Aveling's instrument, but preferred his own, which comprised every possible requirement within a small compass. He regarded defibrination as an essential condition. Pure blood coagulated rapidly, was liable to give rise to small emboli, which, he believed, were the invariable cause of those deaths which occurred a few days after transfusion. Fibrine was an excrementitious element, as shown by its absence in the blood which had passed through the great depurating organs of the body. Defibrinated blood contained all the elements necessary for temporary stimulus. It was physiologically better and surgically safer than pure blood. Defibrination need not necessarily cause delay.—Mr. HIGGINSON (Liverpool) stated that his experience comprised fifteen cases of transfusion, of which ten were successful. His apparatus was not suitable for immediate transfusion. He always used pure blood. He highly approved of Dr. Aveling's instrument, and would certainly give it a trial. It might be used for intermediate, as well as for immediate, transfusion.—Dr. KEALY (Gosport) thought that, in the majority of cases, transfusion was out of the question for want of time.—Dr. BIRD (Sydenham) wished to know which of the various forms of apparatus was the best.—Dr. STEELE (Liverpool) said that Mr. Higginson's operations had shown the best results—namely, ten successful out of fifteen; and he (Mr. Higginson) expressed his opinion that Dr. Aveling's instrument would supersede all others.—Dr. WILTSHIRE (London) alluded to the cases of Dr. Martin of Berlin, who had twelve successful cases, in all of which defibrinated blood was employed.—Dr. AVELING considered that transfusion was universally recognised as a legitimate operation; at present, however, none knew much about it; and we must therefore speak with diffidence. The desiderata in apparatus were simplicity, small cost, and non-liability to get out of order. Syphilitic or other taints in the blood must be guarded against. The use of defibrinated blood involved delay, during which the patient might die.

The Anticipation of Post Partum Hæmorrhage. By EWING WHITTLE, M.D. (Liverpool).—The author long ago observed that *post partum* hæmorrhage was preceded by sharp and strong pains of short duration, with the intervals between the pains relatively very long. To prevent hæmorrhage from taking place, the character of the pains must be altered, so as to make them longer and the intervals shorter. This was accomplished by giving a full dose of ergot as soon as the os uteri was fully dilated, if the soft parts were sufficiently lax and dilatable. Dr. Whittle generally gave the equivalent of two drachms of the liquid extract of the *Pharmacopœia*. If this did not act on the pains, he repeated it in an hour, but this he seldom found necessary. Great care was necessary in primiparæ, as the ergot sometimes acted with great energy; as a rule, it was better not to administer it in these cases until the head began to rest on the perineum, and the soft parts were well dilated; the dose also should be smaller, not more than thirty-five or forty minims, which could be repeated if necessary. The probable *rationale* of the phenomena was this. The uterus was contracting sharply, then relaxing suddenly and fully; the same habit continued after delivery, and the short-lived contraction was followed by complete relaxation and copious gushes of blood; but if the character of the pains became altered before delivery was completed, then the uterus maintained a firm contraction, and the patient was quite safe.—Dr. DESMOND (Liverpool) maintained that no woman ought to be allowed to die of *post partum* hæmorrhage. Compression of the uterus during, and for some time after, expulsion of the child and placenta, was the main point to be observed.—Dr. KIDD believed that the timely application of the forceps was one of the best preventives of *post partum* hæmorrhage.—Dr. TRACY (Melbourne) was satisfied that chloroform was a frequent cause of flooding.—Dr. PLAYFAIR said that the best preventive against flooding was the proper management of the third stage of labour. He attached the utmost importance to the mode of removing the placenta—*i.e.*, to cause the uterus to expel it by its own efforts, and on no account to draw upon the cord.—Dr. WALLACE (Liverpool) believed that frequently flooding was the result of too much haste in removing the after-birth, and inculcated the advantage of waiting a sufficient time without any interference whatever.

On Retained Placenta, with a New Instrument. By ADOLPH RASCH, M.D.—The author insisted on the necessity of making a thorough vaginal examination in cases where hæmorrhage or pains, or both, continue after alleged abortion. Retroflexion might be present after abortion, which ought to be rectified, and, if necessary, a pessary applied. But very often the abortion was not over, the fœtus being still retained in spite of the contrary assertion. By cold irrigation properly applied in some seemingly desperate cases (from *partial* detachment of ovum), the fœtus might sometimes still be saved. But where we saw no chance, and where ergot and cold did not stop the hæmorrhage, or the tampon did not bring away the contents of the uterus, extraction was indicated. In most cases, it could be done by the fingers in the vagina and outward fixation of the uterus. But still cases occurred where the retained placenta could be touched but not brought down, and where prolonged and dangerous hæmorrhage made the speedy removal imperative. The instruments contrived for that purpose seemed to the author to have all the fault in common, that the operator did not feel what he had hold of. The author's instrument was a sensitive forceps, one half of which consisted of the index finger, the other half of a scoop, with a finely toothed bowl, just large enough for the tip of the index-finger, on which it was introduced through the os. The instrument was then pushed up on the outer side of the placenta—the index guiding, and at last pressing, the latter into the bowl. Three fingers of the same hand performed, by pressing the stem into the hollow of the hand, what was necessary to transform this single blade or this half forceps into a complete one. Thus all danger of injuring the uterus was obviated, and a firm purchase of the placenta or membranes effected. After five years' trial, Dr. Rasch warmly recommended his simple and cheap instrument.

Thursday, August 7th.

On the Management of Labour in the Common Forms of Contracted Pelvis, with Remarks regarding Diagnosis. By OTTO SPIEGELBERG, M.D. (Breslau).—The forms of contracted pelvis most commonly met with in practice were described by Dr. Spiegelberg as being: 1. The amply flat pelvis (contracted only in the conjugate diameter); 2. The generally and uniformly contracted pelvis (pelvis *æqualiter* justo minor); 3. The generally contracted flat pelvis (a combination of forms 1 and 2). The means of diagnosis of these forms were pointed out, and the mechanism of labour in the various conditions, and the plans of treatment to be followed, were described.

On a Digital Impression produced by the Accoucheur in the Cranium of a Fœtus during Birth: its History and Results. By J. MATTHEWS

DUNCAN, M.D. (Edinburgh).—The case was one in which Dr. Duncan, while producing artificial rotation of the head in a case of narrow pelvic outlet, made with his finger an impression in the parietal bone to the depth of about half the thickness of the finger. The result was slight, short, but very frequently repeated epileptiform seizures, which lasted for some time after the digital impression had disappeared, and which at first were gradually modified, and afterwards became replaced by slightly awkward movements, somewhat choreic in appearance.—Dr. STEELE (Liverpool) suggested that rotation of the fetal head at the outlet might be effected by the forceps more readily and with less risk of injury than by continued pressure on one point of the cranium by the finger.—Mr. BASSETT (Birmingham) said that severe injuries to the child had sometimes occurred during hard labour; as a rule, they rapidly recovered from, although occasionally permanent mischief ensued. He had seen paralysis of the right side from this cause, but had never known mental disturbance to follow such accidents.—Dr. RINGLAND (Dublin) considered the case related quite exceptional. The restorative power after injuries to the fetal head during labour was considerable. He had seen many cases of injury produced before labour set in from falls or blows sustained by the mother. In two cases the pregnant women had fallen some time before labour. The child in each instance was born with a fracture of the occipital bone—both recovered. These injuries are uncertain in their result; they may, or may not, do harm to the child.—Dr. ATTHILL (Dublin) doubted whether mental disease or paralysis in these cases was really the result of the injury. He thought the forceps not unfrequently caused mischief, and that they were used too frequently in the present day.—Dr. THOMSON (Edinburgh) felt satisfied that the beginning of mental disease had been frequently traced to injuries at birth. He knew one case where the head was so injured by the forceps that it was now, at the age of eight years, a helpless idiot. He considered it important in forceps delivery to avoid sustained pressure on one point of the fetal head.—Dr. DENHAM (Dublin) said that, granting there was a certain risk of injury to the child, it was better to incur that risk than to jeopardise the life of both mother and child by delay. The older he grew, the more value he attached to the forceps as an obstetric instrument—with ordinary skill and caution, it was as safe as the catheter.—Dr. KIDD (Dublin) strongly advocated the use of the forceps; he doubted the connection between hard labour and convulsions. The head is often much deformed after natural labour, without causing any mischief. He had known both sloughing of the scalp and paralysis to occur after unassisted labour. These cases almost invariably recovered rapidly.—Dr. FITZPATRICK (Liverpool) spoke in favour of the use of the forceps.

Dr. LANSAREWICH (Charkow) showed his diaphanoscope.

Tedious Labour from Debility, and its Treatment. By HUGH MILLER, M.D. (Glasgow).—The remarks in this paper had reference solely to cases in which delay was due to enfeeblement or failure of the natural powers of the organs specially called into action during parturition. The writer held that the element of time should not be considered in the classification of labours, that it was unscientific to do so, and that uncomplicated labours should only be assumed to be unnatural when the pains were no longer active, and the labour non-progressive. After considering the powers of expulsion in a healthy woman, the author referred to the forces at work which prevented a high standard of health from being maintained in city life, and said that, in proportion as it was wanting, labour was prolonged in many cases. Labour in cities was thus frequently tedious from constitutional debility, so that, even while it might be regular and its progress certain for a time, the pains either lingered or became arrested through exhaustion taking place before the labour was completed. When symptoms of acute fatigue set in, the pains were short and sharp, and they recurred more frequently. The general indications for treatment were to support the strength before labour set in, and during the first stage, and, as soon as the pains indicated debility, to deliver with the forceps. The timely application of the forceps was preferred to ergot, because it seemed more reasonable to assist a weakened organ by giving help from without, than by applying a stimulant to an already overworked one. This practice, instead of inducing flooding, helped to prevent it, through preserving the power of the uterus from becoming exhausted; it also prevented inflammatory diseases of the passages, and the death of the fœtus. In his private practice, he found one case in every twenty-six labours show symptoms of debility; and, since he had adopted the early application of the forceps, not one of the children so delivered was still-born.

On Some Improvements in the Construction of the Long and Short Forceps, and their Use in Midwifery Practice. By T. MORE MADDEN, M.D. (Dublin).—The author observed that obstetric medicine, having for its ends the lessening of the dangers and the abridgement of the sufferings

of childbirth, had of late years been much advanced in both respects by the more frequent and timely use of the forceps. To the numerous attempts to improve its construction, he had ventured to add some modifications in the long and the short forceps. As an examiner in midwifery, he had had occasion to learn that, notwithstanding all that had been recently written in favour of the forceps, its application was still regarded with prejudice by many; and that, in some of the text-books most in vogue with students, its employment was restricted by rules originally laid down by writers whose experience of this instrument was limited. Dr. Madden cited the statistical reports of the Dublin Lying-in Hospital from the earliest period, to prove the almost complete desuetude into which the forceps fell for a long time, as well as the saving of human life and of human suffering which had resulted from its reintroduction into modern obstetric practice. He also laid before the Section seven tables containing the particulars of his own forceps-cases from May 1st, 1868, to July 16th, 1873. These cases amounted to 148, of which 88 occurred in the hospital, and 60 in private and consultation practice. The patients' ages varied from 17 to 48, the most frequent ages being 28 and 31. The duration of labour varied from under four hours to eighty-four hours. In 79 instances, the cause of interference was inertia; in 27, disproportion; in 11, malposition; in 4, hæmorrhage; in 4, convulsions; in 1, rupture of the uterus; in 7, rigidity. The instruments used were Dr. More Madden's short forceps in 72 cases, the hospital short forceps in 36, the hospital long forceps in 23, and Dr. More Madden's long double curved forceps in 14 cases. The instruments employed by Dr. Madden differed in several respects from any other forceps. He regarded the long and short midwifery forceps as perfectly distinct instruments in their construction, and in the purpose for which they were intended. Dr. More Madden's short straight forceps weighed only eight ounces, and was a very powerful tractor. This instrument was intended only for cases of delay in the second stage of labour, and might be used with wonderful facility as well as power. The long double curved forceps was intended for a very different class of cases—viz., those in which a degree of difficulty existed (before the head of the child had passed through the brim of the pelvis) that could not be overcome by the use of the ordinary long forceps, and in which craniotomy or cephalotripsy might therefore have been resorted to. Dr. More Madden's long forceps was described as a double curved instrument of great weight and length, possessing great powers of leverage and compression. At the extremity of the movable handles, a screw was affixed, by which the amount of pressure exercised on the child's head might be exactly regulated. The curves of the blades were peculiar, and were so arranged that the compressive force exerted on any one point of the head, as well as the danger of slipping, were reduced to the minimum. The cases in which these instruments should be employed, as well as the manner of applying them, were then fully described by the writer.—Mr. BASSETT (Birmingham) protested against the too frequent use of the forceps, and thought that once in six cases was too often to employ it. He considered all short forceps defective and inefficient.—Dr. GRAILY HEWITT (London) expressed his astonishment at hearing the use of the forceps forbidden or restricted. Whenever there was no progress for two hours with regular pains, the forceps should be used.—Dr. STEELE (Liverpool) failed to discover any improvement in the instruments now shown, over the forceps originally devised by Mr. Robertson, of Manchester, and improved upon by the late Sir James Simpson, and now perhaps more generally used than any other form. The essential points in the forceps, he maintained, were strength and sufficient length of handle, the pelvic or second curve, and parallel shanks in front of the handles. The forceps constructed on this principle was adapted for every position of the head, thus obviating the necessity for more than one pair for all cases. He had written some years ago in favour of a more frequent use of forceps than was recommended in most text-books, and subsequent experience had confirmed this view, which had been anticipated and endorsed by our most eminent obstetricians. Statistics had abundantly shown that the maternal and fetal death-rates were diminished in direct ratio to the frequency with which the forceps were used.—Dr. KIRD (Dublin) said that the Dublin obstetricians, with but few exceptions, preferred the straight forceps, and recommended their prompt use in retarded labour.—Dr. WILTSHIRE (London) objected to long forceps in ordinary cases.—Dr. ATTHILL (Dublin) maintained that the use of the forceps in competent hands did not increase the danger to the perineum. In Dublin it was the general practice not to deliver by forceps without a consultation.

Dr. WALLACE (Liverpool) exhibited stethoscopes for uterine and vaginal æsthescopy; also a cephalotribe, designed by himself, on the Edinburgh model, but more powerful and with a better leverage.

On the Diagnosis of early Pregnancy. By ADOLPH RASCH, M.D.—The object of the paper was to draw attention to an important sym-

ptom of pregnancy of the first three months, of which until now no notice has been taken by French, English, and German authors. After briefly reviewing the early symptoms as taught in handbooks, including the symptom on which Dr. Barnes laid stress before this Association, Dr. Rasch said that no opinion should be expressed in any case unless the uterus had been made out beyond doubt by the bimanual examination. The vaginal examination should always be made by two fingers, unless circumstances forbade it, as by so doing results much more accurate could be obtained. An enlargement found, the distinction had to be made between enlargement by hypertrophy, or by tumours, and enlargement by pregnancy. To solve this difficulty, the author has continued his investigation in a very large number of cases of which he kept notes for nearly ten years, and enlarged experience has fully borne out what had helped him in making a few times a right diagnosis where better men had failed. This important symptom was fluctuation. That it must be felt very early seemed to him, *à priori*, certain. For why should half an ounce or more of liquor amnii, enclosed under conditions very favourable for this purpose, not be felt fluctuating equally well as a few drops of pus in a paraitum? The notes of several hundred cases satisfactorily answer this question. Fluctuation could be felt in some cases as early as the seventh week of pregnancy; in most cases after the second month. With every following year the author had less difficulty in detecting this very important symptom. By adding to it the areolar signs of the mammae, we should be able in many cases to make an almost certain diagnosis. The author here mentioned another valuable symptom in early pregnancy which often directed attention to pregnancy—viz., the increased desire to pass urine, especially at night. It certainly ought to put the practitioner on his guard, and make him eschew the use of that valuable instrument for confirming a diagnosis already made—the uterine sound—which, in fact, should never be used by those that could not dispense with it in making a diagnosis. The objection to fluctuation as a symptom of pregnancy might be that it could not be felt, or if felt, might be due to retention of other fluid than liquor amnii. Considering the great rarity of retained menses or other discharges, the mistakes would be rare, even if other symptoms did not help us to make a distinction. But it would certainly be safer practice for a short time to suspect pregnancy, where it did not exist, than to do the reverse. To meet the other objection that fluctuation could not be felt so early, Dr. Rasch urged his hearers to try patiently, and assiduity would be rewarded. The best way to feel it was to introduce two fingers into the vagina, while the other hand steadied the womb through the abdominal walls, and alternately to manipulate the uterus with the two fingers. In some part of the uterus the fluctuation would be found often in one corner of the fundus, sometimes lower down. In most cases of early pregnancy, the author found the uterus anteverted, and then the manipulation was easier done than when the womb was retroverted. The fluctuation was in the beginning mostly only felt by the fingers in the vagina, sometimes, too, by the outer hand at the same time. After three months, it would be mostly felt by outward manipulation alone, but we should never trust to that only. The catheter should always be introduced when accurate results were desired.

Acute Metritis occurring in the Seventh Month of Pregnancy during Rheumatic Fever. By JOHN WALLACE, M.D. (Liverpool).—Before reading the history of this case, Dr. Wallace pointed out its unique character. Most systematic writers on midwifery ignore rheumatic puerperal metritis, and the German and French writers refer to a form of chronic or subacute rheumatism. Pointing out that metastasis frequently takes place to the heart, the cerebral membranes, the lungs, and even the peritoneum, as in Mr. McDowall's case (*vide Dublin Hospital Reports*, vol. ii, p. 325), which ended fatally in a few hours, Dr. Wallace stated that the same thing had happened to the puerperal uterus. The patient's history was shortly as follows. She had rheumatic fever, of some days' standing, when about seven months pregnant. Without warning, she was seized with intense uterine pain, which ruptured the membranes, and expelled a dead child and placenta. This was followed by well marked metritis, tympanitis, suppression of lochia, etc. Treatment relieved her somewhat, and revulsives certainly brought back the rheumatic swelling, etc., into the ankles, but she became worse and died, as if from acute peritonitis. The uterus remained large. No post mortem examination was allowed.

Friday, August 8th.

Notes of a Case of Imperforate Hymen, with Retained Menstrual Fluid. By D. LLOYD ROBERTS, M.D. (Manchester).—The patient was a girl, aged 20. Under chloroform, a small exploratory trocar was introduced, and after it a larger trocar, through which 84 ounces of thick fluid escaped; and during the subsequent fortnight, from 15 to 20 ounces exuded. Some feverish symptoms and abdominal pains set in, but subsided; and subsequently the opening was enlarged

with bougies and the membrane divided on each side. The patient recovered.—Dr. WALLACE (Liverpool) suggested that in such cases the fluid should either be withdrawn slowly with the aspirator, or, if it be evacuated by a free incision, the cavity should be injected with an antiseptic solution.

On the Prevention of Uterine Inflammation. By EDWARD J. TILT, M.D.—The author gave it as an admitted fact, that the most frequent cause of uterine inflammation was to be found in parturition and in abortion; and his own experience led him to believe that a tedious labour and a bad miscarriage could hardly occur without entailing more or less of uterine inflammation; frequently overlooked in its onset by the medical attendant, metritis, in one form or another, being the almost inevitable sequel of such cases, although many years might elapse before the disease was recognised. The author proceeded to answer the following questions: 1. What are the symptoms of a bad getting up? 2. What are the organic lesions of a bad getting up that lead to uterine inflammation? 3. How to prevent a natural function from becoming a frequent cause of metritis? 1. After tracing the symptoms of a bad getting up, the author deprecated the little attention paid to the persistence of a red or muco-purulent vaginal discharge for a month or more after parturition. He wished such cases to be carefully inquired into, instead of being treated in a haphazard fashion by tonics and change of air. 2. Although a natural function, parturition had too often untoward results, such as defective uterine involution, placental ulceration of the womb, contusion and laceration of the cervix. Laceration of the cervix was represented as very common, particularly after tedious and instrumental labours. The healing by first intention of these lacerations was given as the rule when they were not extensive, and when women were healthy; but if, on the contrary, these lacerations were extensive, they did not heal in sickly women, and had originated some of the worst cases of uterine inflammation that the author had seen. Under similar unfavourable circumstances of health, the bruising of the cervix by a tedious labour was represented as beyond the power of the womb to repair, unless by the repair of ulceration thus produced. Ulceration of that part of the womb to which the placenta had been attached was considered a rare disease, sometimes following the forcible tearing away of the placenta from the womb, and originating one form of internal metritis characterised by frequent flooding. The most important and most frequent cause of uterine inflammation, and of other diseases of the womb, was said to be defective uterine involution. To an exaggerated belief in the safety of a natural function was ascribed the fact that medical men too often neglected to ascertain accurately what were the organic lesions that impeded a patient's recovery after parturition; so that, as a rule, defective involution was only recognised when time had confirmed and made it more difficult to cure. 3. The measures calculated to prevent parturition being a frequent source of metritis, were represented to be the logical deduction of the right appreciation of the damage done to the womb by parturition; and it was strongly urged that when, at the end of four or five weeks after parturition, notwithstanding fair nursing, food, wine, and tonics, women still continued weak, with persistent back-pain and muco-purulent or red vaginal discharges, instead of blindly trusting to nature, it would be wiser to ascertain, by an accurate examination, whether the inability to recover health did not depend on one of those organic lesions that could not be cured without the calling in of surgery in aid of nature. The same line of conduct was advised when women were recovering from parturition who had previously suffered from uterine disease, on account of its liability to relapse. The unusual severity of uterine inflammation that originated in abortion was said to depend on the absence of definite rules of conduct to be observed by women after miscarriage, and on the little care they then took of themselves; whereas Dr. Tilt wished the profession could persuade the public that a month of convalescence was not too much to exact after a moderately bad miscarriage; and that if, at the end of that time, a patient did not recover strength, could not walk, had pelvic pains and a red or muco-purulent vaginal discharge, the cause of these symptoms should be carefully investigated. The author stated the difficulty of curing defective uterine involution to be in direct proportion to the time it had already lasted; and he therefore urged its speedy recognition. He recommended leeching the cervix if there were signs of active congestion of the womb, the internal administration of ergot and of iodide of potassium, the painting of the lower part of the abdomen with oleate of mercury, and vaginal injections. It was also admitted that pregnancy had sometimes cured the mischief done by a previous one. Dr. Tilt concluded by emphatically asserting that, by a judicious management of lying-in women, and of those recovering from abortion, uterine irritation and congestion would be reduced, and lacerations healed; and that uterine inflammation would be checked in its origin, and, at all events, its acuteness and duration

would be greatly diminished.—Dr. STEELE (Liverpool) doubted the utility of vaginal injections as curative agents in inflammation within the cavity of the cervix or uterus, which could only be successfully combated by medication at the seat of the disease. He also thought there would be some difficulty in so localising internal metritis as to justify the term placental ulceration.—Dr. THOMSON (Edinburgh) believed that subinvolution was a frequent cause of uterine ailment.—Mr. BRACEY (Birmingham) endorsed many of the views expressed in the paper, which he regarded as a most valuable communication. He understood that vaginal examination was recommended only when convalescence did not proceed favourably.

Case of Apoplexy and Hemiplegia in the Puerperal Period, terminating in Recovery.—By A. B. STEELE, L.K.Q.C.P. (Liverpool). [This paper is published at page 250.]—Mr. BASSETT (Birmingham) adopted the view taken by the author, that the case was not puerperal eclampsia but apoplexy.—Dr. WALLACE (Liverpool) observed that the presence or absence of albuminuria was not pathognomonic of puerperal convulsions.—Dr. GRIFFITHS (Swansea) thought the phenomena related were consistent with the view that this was a case of hysterical paralysis.—Dr. STEELE replied that this was not so. The paralysis and resulting temporary wasting of the muscles, together with other conditions, showed conclusively that there was some cerebral lesion.

Case of Vegetating Epithelioma of the Body of the Uterus.—By T. CHAMBERS, M.R.C.P.

The Causes and Pathology of the various acquired Malpositions of the Uterus.—By T. D. GRIFFITHS, M.D.

Case of Stricture or Atresia of the Female Urethra.—By J. WALLACE, M.D. (Liverpool.) After pointing out the different causes of obstruction of that tube, he referred to the almost complete silence on that subject of nearly all the systematic writers on surgery, midwifery, and gynaecology. Referring to Sir B. Brodie's case (vol. ii, p. 455), where it is stated that the orifice of the urethra is nearly always the part affected, the following history of Dr. Wallace's case was given. Mrs. B., aged 36, suffered from retention of urine and dribbling for nearly twelve years, for which she had consulted several medical men without relief. The urethra was so closed as not to admit the smallest probe. It was drilled open with Lister's probe forceps, but closed in three weeks, although Dr. Wallace had passed the finger into the bladder. It was again dilated, and incised laterally at the neck of the bladder with Simpson's hysterotome. In three weeks it had again closed at the external orifice. It was opened again, and was now, at the end of six weeks, remaining open. The patient was cured. A catheter for permanent wear was shown, which would be introduced if the urethra closed again.

Treatment of the Flexions of the Uterus.—By THOMAS SAVAGE, M.D. (Birmingham). The cases were taken from the out-patients seen by Dr. Savage at the Hospital for Women, and were limited to flexions of the nulliparous uterus. The object of the paper was to advocate the use of an intrauterine stem. In all cases where recourse was had to this plan the symptoms were improved, and great relief was given without any of the dangerous or serious after-effects which are sometimes said to arise. Even in the case of the unmarried, the symptoms were so severe, the relief from the instrument so marked, that Dr. Savage did not think it right to withhold from such patients the benefit of treatment advocated. Dr. Savage had used intrauterine stems for retroflexions and antelexions in forty-four women who had never been impregnated, and in not one had any ill effect followed. The discharge, slight as a rule, even when profuse, had not been found troublesome, and could be kept in check by the frequent use of ordinary astringent injections. It had always seemed to disappear on the use of the instrument being discontinued. Dr. Savage had tried the galvanic stem as usually sold; also the modification of it, as suggested by Mr. Lawson Tait, *i.e.*, with a bulbous extremity, the plain vulcanite stem, Dr. Greenhalgh's stem, one devised by Mr. Ross Jordan, with a perforation near the extremity, through which was passed a thread of India-rubber, after the manner of the winged catheters; but the tendency of all was to slip out. Dr. Chambers's stems seemed most likely to remain in without other assistance, but in two instances they too escaped. The padlock of Dr. Graily Hewitt was in some cases an admirable contrivance, and most frequently remained *in situ*. The best means to adopt was to insert the stem, and keep it in place of a shell-pessary cut small, or a small ring elongated, and moulded to the size and shape of the vagina. The supports of Dr. Wynn Williams seemed to be very useful. It did not seem at all clear why the stem slipped out in a few hours in one patient, while in another it was retained for weeks or even months. Dr. Savage gave some illustrative cases.

The Treatment of Displacements of Internal Organs and of their Functional Diseases by Mechanical Means externally applied. By PROTHEROE SMITH, M.D.—Dr. Protheroe Smith said that, as the various internal organs were placed and sustained *in situ* by certain

natural powers which, when acting normally, constituted health; so the same powers, under circumstances of displacements of such organs, consequent on distortion of the body, acted inimically and tend to the production of functional disease. Consistently with the explanation of these physiological and pathological conditions, the author proposed to treat such maladies by mechanical adjustment of the dislocated members by the external appliance of his "pelvic band," which, in a large number of instances, he had found to be adequate to the end proposed, viz., the cure of the diseases enumerated without the aid of other appliances or medicines.

SECTION D.—PUBLIC MEDICINE.

The State Medicine Qualification.—By HENRY W. RUMSEY, M.D. (This paper is published at page 249.)

Dr. WILLIAM FARR (London) moved—"That a committee be appointed to consider the best means of providing for an adequate qualification in State Medicine for all public medical officers. That the committee consist of Mr. Donald Dairymple, M.P.; Mr. G. W. Hastings; Dr. Parkes, F.R.S.; Dr. Heslop; Dr. Ransome; Dr. Anstie; Mr. Ernest Hart; Dr. Tripe; Dr. Stewart; Mr. Michael; Dr. Arlidge; Mr. Ceely; Dr. R. Macdonnell; Dr. Rumsey; with power to add to their number."

Dr. TRIPE seconded the resolution.

Dr. GIBBON (London) objected that there were already too many degrees; and the proposed qualification in State Medicine would not ensure the possession of practical knowledge. A medical officer of health should be appointed after a competitive examination, or should have been in practice seven years.

Mr. LIDDLE (Whitechapel) said that medical officers of health should be men of experience, and should have power to call in the assistance of special experts when required, at the expense of the Boards.

Dr. T. W. GRIMSHAW (Dublin) said that, if there was to be a government body granting diplomas, there should be no other licensing body. He heartily supported the proposition for this committee. He thought it would do great good to all the health-officers throughout the country. He had heard most extraordinary opinions expressed on matters connected with health by some of the most eminent men in the profession, and if there had been a class of specially qualified persons things might have been much better.

Mr. ROGERS (Swansea) said his attention had been drawn to sanitary science during the last thirty years in a secluded Welsh valley, and he considered himself quite equal to the position of a medical officer of health under the new Act. There were hundreds of gentlemen similarly placed. If such a proposition as this were carried, it would put a veto upon men like himself, and shut them out from those prizes of the profession just now coming within their reach. Gentlemen were asked to set aside what might be a great addition to their incomes. An immense number would have to be shut out; and if gentlemen were not allowed to take these appointments without submitting to a special qualification, it would be dealing great injustice. They must know who were to appoint the examiners. What were the qualifications of the examiners to examine such men as Dyke of Merthyr, or Davies of Swansea, men who had been practically working for many years? They might be very great men in London. They would have young men, twenty-three years of age, well crammed and brimming over with sanitary science, but when they came to deal with the question practically they would be nowhere. In his opinion, the Boards of Guardians had appointed the best men in the right place. He would only mention Mr. Dyke, of Merthyr, than whom a more competent sanitarian did not exist in this country, and who was perfectly competent to fill the highest position. Dr. Thomas, of Llanelly, was another great sanitarian; and Mr. Michael, the greatest sanitary lawyer, was a medical practitioner. Mr. Rogers contended that the whole of the medical profession of this country had a right to become health-officers under the new Act, and that it would be foolish to allow such a proposition as this to be carried.

Mr. HASTINGS (Chairman) had been most anxious to hear Mr. Rogers. There were two sides to every question. Mr. Rogers had very extensive practical knowledge, and he (Mr. Hastings) quite agreed with him, not only with regard to the duties of medical officers of health, but with regard to the duties of a great number of other officials, that their practical knowledge was one thing and practical knowledge another. There had been rather too great a tendency in this country to exalt mere theoretical knowledge by way of competition at the expense of practical experience acquired in work. He quite saw that there might be a danger of pushing those theoretical ideas too far. At the same time, that could not be urged as an objection to the resolution of Dr. Farr, that a committee be appointed to consider the best means of quali-

fying medical officers of health. If that committee, on consideration, should be convinced that the best means of providing medical officers of health was by requiring that the men should possess the qualification of actual experience, they were competent to say so, and the question was not prejudged by passing a resolution appointing the committee. He would now speak in a few words as to the necessity for a state qualification. The appointment of a great number of medical officers of health had lately been rendered compulsory; and with the greatest possible respect for the medical profession, he thought that it did not follow that, because a man had practised the medical art generally with success, therefore he must be successful for the highly onerous, responsible, and peculiar duties of a public officer of health. He might be, and was very often, so fitted. Many well-informed private practitioners were not fitted for the duties of medical officers of health, and therefore it was that this proposition for a state medicine qualification was made. Several names were quoted by Mr. Rogers, and all agreed that they were men of high attainments. But Mr. Dyke gave evidence before the sanitary commission in favour of this state medical qualification. With regard to Mr. Michael, Mr. Hastings thoroughly agreed with Mr. Rogers that he was the greatest sanitary lawyer in this country. His name was placed on the committee with his approval. He (Mr. Hastings) had ventured to express his own feeling that it was most expedient to consider this matter, and to say what was the best way of getting a highly qualified body of medical officers of health in this kingdom. The salaries of medical officers of health would not be equal to those of physicians and surgeons in good practice; and he knew that the income of practising barristers exceeded that of even the judges upon the bench; but the attraction of a good salary was so great that men gave up much larger incomes, when those incomes were precarious, to take one with an assured subsistence for their life. When he heard of medical officers appointed under the Public Health Act receiving £20, £12, and £8, he thought that the time had arrived when a protest should be made against the degrading of a great profession by offering men such sums for such objects.

Dr. GIBBON (London) moved an amendment "That it is unnecessary and inexpedient to establish a special diploma in State Medicine, but it is desirable that no person shall be qualified to act as medical officer of health, if he has not been in actual practice for seven years."

Mr. ROGERS seconded the amendment.

Mr. ERNEST HART said that the present struck him as being a parallel case to those which had occurred often before in the history of the profession. For example, similar opposition had always been made to the institution of every kind of degree, test, or qualification in the profession. In the beginning of this century, no gentlemen serving in the Navy as assistant-surgeons were required to have diplomas; and when it was proposed that no surgeon should serve in the Navy without a diploma, the same thing occurred that was embodied in this amendment, viz., that the experience which those gentlemen in the practice of their profession had gained was sufficient; that it was unnecessary to require a diploma; that it was enough for them to go on using their ability; that then six or seven years should suffice to pass them as assistant-surgeons in the navy. All recognised the utter absurdity of that argument. It was felt that, if special duties were required, there was no reasonable objection that a test of capacity should exist. All that was now asked was, that there should be a possibility of securing a test of education to persons who were in the future to be called upon to perform special duties. The ground urged against the resolution was not tenable. It did not affirm the necessity for such qualification, but it only suggested the propriety of appointing a committee. It would be unfortunate if it were to go forth, that the members of the medical profession were really disposed to consider that it was not proper for a committee to decide what qualifications should be acquired, and how a test of these qualifications should be provided. If this meeting decided in the sense of the amendment, it would stultify itself, and be running counter to the most remarkable and best thinkers in the profession and amongst the public.

Dr. FARR said he apprehended that, after the committee reported, they would have to discuss the report, and this was the only way to ensure the elaboration of any views. He saw great force in what Mr. Rogers said, that he and others who had been expecting these appointments would be shut out if they came to the examination; but this was one of the things that the committee would have to consider. He trusted that Dr. Gibbon would withdraw his amendment.

Dr. GIBBON said that, for the honour of the profession, he intended to press it. If Dr. Farr would make this a committee of inquiry, he would withdraw, but so long as the principle stood, he must press the amendment.

The amendment was put, and lost by a large majority, only eight hands being held up for it. The original resolution was carried.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 30TH, 1873.

THE ADDRESS IN SURGERY.

MR. JOHN WOOD'S Address in Surgery, at the recent Annual Meeting of the Association, was worthy of the place in which it was delivered and of the audience which listened to him. Though the Association had to lament Mr. Erichsen's absence, to which the orator gracefully and feelingly alluded, Mr. Wood did all that could be done to limit that regret to personal considerations. As far as professional topics went, there was little, indeed, to desire. The grand old motto which Mr. Wood chose—

"Not to know of things remote
From use, obscure and subtle, but to know
That which before us lies in daily life,
Is the prime wisdom"—

was fitly followed by a discourse of which the chief part was devoted to the discussion of the commonest of all the duties of a surgeon—that is to say, the treatment of a wound.

Nothing would seem more surprising to a person unacquainted with the medical controversies of the day, than to be told that the inheritors of the surgical experience of many centuries are still occupied in discussing the first principles of the treatment of wounds, and the best methods of applying those principles; yet such is the unwelcome fact forced upon us by Mr. Wood's address. The experience of all the surgeons who have treated wounds, from the time of Machaon to the present day, though we may hope it has produced improvement in practice, has certainly not produced uniformity of theory. We have got rid of the meddlesome and superstitious surgery of our ancestors; we are all to a great extent agreed that the chief, perhaps the only, duty of the surgeon, is to remove as far as possible the main obstacles to the natural process of union; but we are far indeed from any agreement as to what those main obstacles are. Professor Lister and those who follow his theoretical teaching contend that these obstacles are caused by impurities conveyed in the atmosphere, although the air, when pure, is thought to be harmless; and they teach, accordingly, that the complications which delay or prevent the healing of a wound, and often cause the patient's death, may be avoided (if not entirely, yet certainly in a very large proportion of cases) by excluding or neutralising such impurities. To exclude them involves the total exclusion of the air conveying them, which in practice can hardly be effected. But to neutralise them by charging the air with some "antiseptic" vapour, is said to be both possible in theory and highly successful in practice. In sharp contrast to this most important and most definite doctrine, is the experience of the accomplished surgeon who addressed the Association last week. Mr. Wood tells us he has made careful and, as he believes, "fair" trial of Lister's method, in King's College Hospital; that, so long as no epidemic influence existed in that hospital, productive of erysipelas and pyæmia—so long, that is, as other wounds not treated antiseptically were doing generally well—the trial succeeded admirably; but that, when such epidemic influence manifested itself, as in the course of time it did, "the erysipelatous blush appeared with blameworthy impartiality in cases treated in all kinds of ways, and almost as impartially on my own antiseptic side of the hospital as on my colleague Sir William Fergusson's non-

antiseptic side." This shows, by the way, that the lifelong experience of Sir William Fergusson has not taught him the necessity of any precautions against the presumed germs of putrefaction in wounds. And, after relating a case of amputation treated antiseptically, in which, though little or no evidence of putrefaction was discovered, the patient died of chronic pyæmia, Mr. Wood avows his belief "that the agencies, whatever they are, in pyæmia, operate in the general system, or, if through the atmosphere, in other channels besides the wounded part, as in cases of pyæmic poisoning from deep internal glandular pus-deposits." Again, turning to another of the addresses—that of Professor Humphry—we find him suggesting quite a different method for the generation of pyæmia, although he allows the importance of local purification of the air; and we learn, again, from Mr. Wood's address, that Professor Humphry still adheres to his plan of treating wounds by exposing them freely to the air, with no dressing whatever, and that the same plan is uniformly followed in Billroth's wards. Mr. Wood also intimates that he has obtained equally good results with other substances used as dressing, and without any special antiseptic precautions, as by Lister's method; and the same thing is asserted by many other surgeons.

The state in which the "antiseptic" controversy now is, we take to be this. The theoretical groundwork of Professor Lister's method has been rudely assailed, and has been but feebly defended. To re-establish it in the belief of the general professional public, experimental proof is required, which as yet has not been furnished by its author or any of his disciples. Yet, apart from theory altogether, the question of practical success remains; and to this we beg respectfully and very earnestly to call Professor Lister's attention. Is it or is it not true, as Mr. Wood's experience suggests, that the complications of wounds are as frequent in an "antiseptic" as in a "non-antiseptic" ward? Has not the time which has elapsed been sufficient to collect materials in Edinburgh for the decisive solution of this elementary question? No experience of a stranger to the antiseptic faith, or a half-believer like Mr. Wood, will be or ought to be accepted, since the failures may depend, not on the method, but on the person who employs it. But no such answer is possible in the case of Mr. Lister's own experience. For ourselves, we should be much surprised, and, we own, grievously disappointed, to find Mr. Wood's very depreciatory account of antiseptic surgery endorsed by other experimenters. But the question is, after all, one of practice—at least for the great majority of surgeons, who do not possess the knowledge of physics required for the theoretical investigation. Therefore, if it be true that those surgeons who practise in the same hospital and under the same conditions as Mr. Lister, and who are known not to share his views or to follow his practice, can show equally good results in similar cases, it is a fact which surely ought by this time to be susceptible of proof, and which it is of the utmost importance to ascertain.

We have noticed this topic of Mr. Wood's address at such length, that we have no space to do justice to the rest of the paper. But the other topics, though inferior, of course, in interest to the question of treating wounds (for that may almost be said to embrace the whole range of surgery), are most important in themselves, and derive additional importance from their mention by Mr. Wood, who has made them, as is well known, the subjects of his special attention. They are, the radical cure of hernia; the treatment of extroversion of the bladder, of epispadias, and of stricture; the operation for restoration of the nose, and that of skin-grafting. What Mr. Wood has said on all these points will be read with much interest, and well deserves to be studied. But the observations on the radical cure of hernia—"Wood's operation", as it is familiarly called—will be turned to first; and we cannot avoid congratulating our distinguished associate on the calm, sober, and frank manner in which he speaks on this head. The result of his ample practice, extending to nearly two hundred cases, is here laid before his readers; and it forms, certainly, a strong contrast to the rash manner in which "the radical cure" used to be spoken of when Wutzer's operation first came into vogue. Out of these cases, 188 in

number, only 107 had been kept in sight. Of these, 51 were known to have been unsuccessful; and of the 56 reputed successful, 32 only had been followed for two years or more. There had been 3 deaths among the 188 cases. Mr. Wood concludes (and in this he has probably been anticipated by the judgment of the profession, founded on the data he had previously supplied) that the operation is one which may often be useful to the patient, and which "forms a valuable addition to the resources of surgery", but in which the wishes of the patient, when the matter has been fairly explained to him, should be the guide of the surgeon.

This very imperfect summary of a most able address will have answered its purpose if it should form the starting-point for a commentary by our surgical readers on the important text which Professor Lister has given out, and especially if we can be furnished with an authentic report of the Edinburgh experience of antiseptics, as compared with non-antiseptic surgery in the same hospital.

THE COURSE OF THE CHOLERA IN AMERICA.

TRACING the course which the cholera has followed in its recent visitation of America, from the date of its appearance at New Orleans, the editor of the *American Practitioner* points out that it entirely supports the evidence afforded by the researches of British inquirers in India and Europe, that it follows the lines of human travel. It proceeded slowly up the Mississippi to Memphis, and then fell upon Nashville, whence it was radiated to many towns in Tennessee, Kentucky, and Alabama, along the river and the railroads. Nashville, as in all former visitations of the epidemic, suffered severely; no other city in the country up to this time has been visited by the pestilence in so aggravated a form. It is computed that 1000 have fallen victims to it in Nashville and in the county of Davidson during its prevalence. The mortality has also been great in Gallatin, and at various points in Sumner County. One hundred and nine are reported to have died in the town, and one hundred and forty in the county.

Following the railroad into Kentucky, it has prevailed successively in Franklin, Bowling Green, and Elizabethtown. In Franklin and the surrounding country, the deaths before the disease subsided amounted to forty-seven. Proceeding east and south from Nashville, it fell upon Lebanon, where it had evinced great malignity in its former visitations, and carried off thirty-four people, chiefly negroes. At Murfreesboro the number of deaths has been fifteen, nearly all negroes. It spread to Shelbyville, Huntsville, Chattanooga, and Birmingham, along the railroads; and at the latter place, a town of recent origin and very rapid growth in Alabama, its ravages have been unusually severe. The pestilence has for the first time, it is believed, penetrated into the mountains of East Tennessee, and prevailed with a good deal of fatality at Greenville, a few fatal cases having also occurred at Knoxville and some other points.

The towns in Kentucky on the Ohio have not escaped, and Paducah and Henderson have lost a number of their inhabitants, negroes, as everywhere else, being the greatest sufferers. Mount Vernon, in Indiana, has been severely scourged. This is a cleanly town on the Ohio, and has one of the most elevated sites on the river between Evansville and Cairo. Nothing in its situation or sanitary aspect would have pointed it out as a place likely to invite the disease, and yet forty deaths occurred there in one week from cholera, while Cairo and Evansville were almost, if not quite, exempt from it.

Cases of cholera have been announced in various places north of Kentucky, as well as in some of the towns in the centre and north-eastern parts of the state. The boat which brought the first cases up the river from New Orleans landed cholera patients at Cincinnati, and there have been almost daily reports of deaths from the disease in that city for two months past; but the extent of the epidemic has never been alarming, if indeed it is correct to speak of it as an epidemic where only a few deaths a day have resulted from it in a population of two hundred thousand. In the Ohio penitentiary, at Columbus, a num-

ber of the convicts have died from the disease. At Carthage, in Ohio, six deaths from cholera were reported on the 18th of July as having taken place in forty-eight hours. Union City, Tennessee, on the Mobile and Mississippi Railroad, has experienced a sharp visitation of the pestilence; but it has nowhere assumed a more malignant type than at Louisiana, in Missouri, where eight deaths are reported as having occurred in four hours. It seems to have been scarcely less virulent at Prairieville and Troy, in the same state; but in all of these places its stay seems to have been very short.

The localising or secondary causes of the epidemic have seldom been more strikingly exhibited anywhere than at Nashville during the late visitation. When it was raging with great mortality along the creek bottoms, the elevated best-ventilated quarters of the city were comparatively healthy. It is correct to say that the scourge was nearly confined to the outskirts and lower portions of the city. Edgefield, on the north bank of the Cumberland River, opposite Nashville, standing on a low, sandy plain, with wide well-ventilated streets, and supplied with good cistern-water, reports less than twenty deaths from the epidemic.

The remark made a month ago in respect to the cholera now prevailing continues to be true: the disease shows little tendency to assume an epidemic form. In no city but Nashville, and in only a few smaller towns, has it exhibited that character; for, although it lingered long in Memphis, and carried off many victims while it prevailed, it was hardly regarded by the citizens or the profession at any time as an epidemic. St. Louis has suffered but little from it. One week, in a mortuary list of two hundred and forty, not a case of cholera was included, and in a subsequent week only fourteen deaths were set down to that disease. In Cincinnati, as far as is known, the greatest mortality from the disease any day has been fourteen, and it is said to be declining there as at all the points where it has broken out. It has been the good fortune of Louisville again to escape the pestilence. A number of cases have been brought here, but the disease has not been propagated. Dr. Palmer reports two cases in another department of the *Practitioner*, and a third case followed close upon the heels of his second, in the same neighbourhood; but, since that time, no new cases have been reported in the city.

The disease, at the same time, has exhibited generally its characteristic virulence wherever it has broken out. Thus, at Cincinnati, where the cases have been few in proportion to the population, death in one instance is related to have followed the attack in an hour, and in not a few cases it took place in five, six, or seven hours. In one hundred and sixteen cases it ran its fatal course in less than twenty-four hours, and in twenty-five others ended in death in from twenty-four to forty-eight hours. In Louisville two or three of the few fatal cases had a duration of less than twelve hours. The first cases everywhere have been the most fatal, as has been remarked heretofore of cholera; for the reason, first, that the disease is most virulent at the beginning, and, secondly, because the first cases excite no alarm and reach a fatal point before remedies are resorted to. After a time it grows less malignant, and people, being on their guard, attend to the earliest manifestations of the complaint.

It continues to be the uniform testimony of physicians that, when the first symptoms are met with appropriate remedies, cholera is altogether manageable.

THE OUTBREAK OF TYPHOID FEVER IN LONDON.

FROM facts which have come to our knowledge, it would appear that the causes at work in producing the outbreak of typhoid fever in the west of London have, in all likelihood, existed in a slight degree since December last. Cases of typhoid fever have occurred since that date in families which obtained their milk-supply from the Dairy Reform Company. The disease during the winter was very far from prevalent in London as a whole, so that the occurrence of a considerable number of cases of typhoid fever in families supplied by milk, known since to be contaminated, may be explained. The poison remained, no doubt,

more or less, in abeyance until the intense heat of July afforded unusually favourable conditions for rapid increase.

The daily reports coming to hand of additional cases have materially increased the list which we gave last week. Dr. Murchison has collected particulars of more than 120 families, representing upwards of 500 cases of typhoid fever which occurred in the West End of London alone; while several hundred cases may safely be added, as having occurred in persons who contracted the disease before leaving London, and who were laid up in distant parts of England, Wales, Scotland, and even Switzerland. Of the London cases, a small percentage only had received their milk-supply from the Dairy Reform Company, which has been unfortunate enough to cause so much mischief. In a few, the source of the milk-supply has not yet been ascertained. There will, of necessity, be much labour in collecting the statistics of the outbreak. It is of the utmost importance, however, that its whole history should be thoroughly investigated and recorded. With that view, Dr. Murchison has requested that medical men and others will communicate with Mr. J. Netten Radcliffe, 14, Regent's Park Terrace, on the following points regarding cases of typhoid fever contracted in families resident in Marylebone, Paddington, and St. George's, Hanover Square:—(1) Their address in London; (2) Number of cases of fever, and ages of patients; (3) Number of persons in family who have escaped fever, and their ages; (4) Date of commencement of symptoms in those attacked; (5) Deaths; (6) Date of family leaving London; (7) Locality to which they have removed; (8) Name of dairy which supplied family with milk during residence in London; (9) Whether the milk was ever observed to be of bad quality or to become rapidly "putrid;" (10) Whether the disease has in any instance been propagated in the country to persons who had not resided with the family in London.

THE Library of the Obstetrical Society will be closed from September 1st to September 13th, both days inclusive.

THE King of Prussia has conferred on Professor Helmholtz of Berlin, the rank of a Knight of the Order of Merit for Science and Art.

THE reports of M. Nélaton's health are this week much more favourable.

MR. WILLIAM WARWICK WAGSTAFFE has been elected assistant-surgeon to St. Thomas's Hospital. A vacancy is thus created in the post of Resident Assistant-Surgeon.

MR. BROUGHTON, the Government quinologist at Ootacamund, in a report to the Chief Secretary, denies that eucalyptus globulus contains quinine, quinidine, cinchonidine, or cinchonine, in any such proportion as has been asserted.

THE second annual meeting of the French Association for the Advancement of Science has been held in Lyons. The session commenced on the 21st instant, and terminated on the 28th, and was attended by about 600 members. The Prefect of the Rhone opened the meeting by bidding the visitors welcome; after which M. de Quatrefages, the President, delivered an address.

THE BRITISH SPARROW.

UNDER the title of "The Survival of the Fittest", the *Philadelphia Medical Times* records one of the successes and one of the failures of the British sparrow. "As every one knows," writes our contemporary, "until the last year or two we have suffered in Philadelphia from a plague of 'measuring-worms', which even Egypt, in her palmiest days, might have envied. Some enterprising genius suggested the importation of English sparrows. A diet of worms resulted—a diet which ended our plague. But the pest is coming upon us in a new form. The caterpillar of the moth *Orgyia leucostigma* opens his eyes a little later in the season than his friends the measuring-worms; consequently, for meals he in former times found the luxurious leaf-banquets in our public squares looking like the remains of an over-night club-supper, and—didn't prosper. Thanks to his hairy coat, the sparrows

don't take a fancy to him; and consequently, the measuring-worms being put out of the way, and the leaves allowed to grow, he is prospering and rapidly multiplying under the stimulus of food, good, abundant, and cheap. At present, very many trees in this city have again put on the familiar woe-begone look of old, hiding their misery with the merest tatters and shreds of leaves. 'But the new-comer doesn't drop on you!' Doesn't he, though? If he does not drop, he crawls, or gets on some way or other; and the man who has felt his long hairs tickling his neck, struck for a fly, and found in his hand a bare and *burst* carcass, on his shirt-collar a stain, and down his back a bunch of tickling hairs, will vote the 'survival of the fittest' in its latest form an unmitigated nuisance."

DANGEROUS BALLAST.

AN "old cruiser" sends to the *Sanitarian* the following account of a fever originating in a naval vessel a few years ago, and traced to its cause. A French frigate, well ordered, with a crew in health, arrived at the port of Cobija, in the desert of Atacama, where, after a few days, a fever known to the French surgeons as the *fièvre pernicieuse* made its appearance and spread in the ship. As rain is unknown in that district of dry sand, there is no vegetation within leagues, and the vessel was perfectly clean, the disease was a surprise. At last, it was discovered that a boat-load of sand had been placed in the hold, from which a slight odour arose, perceptible to the smell, and with a slight astringent effect on the nostrils. This sand, brought from the clear beach, being removed, and the locker cleaned with chlorides, the fever entirely ceased. At Aspinwall, it is known that a somewhat like result occurs when vessels there take in ballast from the convenient but wet shore-line in the bay. Such vessels generally find fever to break out after having been at sea several days; while the more experienced traders, obtaining stones and dry ballast from a space inland, are for the most part exempt.

THE CHOLERA IN EUROPE.

DURING the week from August 16th to 23rd, there was a marked diminution of the cholera in Vienna; the numbers of new cases on the several days being respectively 36, 59, 58, 52, 47, 56, and 36. In the cholera hospitals, on the 17th, there were 178 cases; to which 215 were added in the subsequent week, making in all 393, of whom 102 recovered, 131 died, and 160 remained under treatment. In Berlin, 44 cases occurred during the week from August 14th to 21st, making, with 85 previously reported, a total of 129, with 90 deaths. Cholera has been for some weeks prevailing with much severity in some of the western provinces of Prussia. In Magdeburg, from July 16th to August 18th, there were 865 cases, with 377 deaths. On August 19th, 71 new cases occurred, and there were 39 deaths; and on the 20th there were 94 new cases and 49 deaths. At Königsberg, on August 16th, 17th, and 18th, the fresh cases were respectively 42, 28, and 54, and the deaths 13, 15, and 31. In Braunsberg, from August 11th to 15th, there were 105 cases and 40 deaths; the total number of cases from the outbreak of the epidemic being 406, and of deaths 145. In Munich, up to August 18th, the number of cases was 332, and of deaths 124; and on August 19th there were 27 cases and 14 deaths. In Würzburg, from August 11th to 16th, there were 24 new cases and 10 deaths. In Italy, cholera is said to be spreading slightly in the Venetian provinces and in Parma, disappearing from some localities, and attacking others.

THE CHOLERA IN TRANSYLVANIA.

A CORRESPONDENT of *Le Progrès Médical* writes that the epidemic of cholera has assumed frightful proportions in Transylvania, having penetrated even into the mountain valleys. In Petroseny, situated in the valley of the Sil at an elevation of 2,186 feet, traversed by the mountain streams, and exposed to the north-east winds, there have for some weeks been about fifteen deaths a day, in a population of 7,000. In the village of Flek, in the neighbourhood of Kolosvar in Transylvania, consisting of scattered houses surrounded by gardens and fields, at an

altitude of 1,468 feet, with a population of about 400, the death-rate for the last two months has been two, three, or four persons daily. Another mountain village that has been ravaged by the cholera is Tupsa, in the valley of the Aranios. It consists of several isolated groups of houses: five of these groups have escaped, while one, situated on the main road near the river, had, at the end of July, lost 78 out of about 350 inhabitants. Some of the towns in the interior of Transylvania have escaped, while others have been severely attacked. At Kolosvar, with an ordinary population of 26,000—much reduced, however, by emigration—the average daily mortality has been 15; and it is remarked that there is always an increase in the number of cases of cholera on Mondays. The hygienic arrangements of the town are bad, although it is surrounded and, to some extent filled, with gardens, the only sanitary (?) arrangement that has been carried out is the formation of ditches, which are full of mud and filth. In many towns, the introduction of fruit, even ripe, has been prohibited; the country people consequently, in the prospect of not being able to sell their fruit, eat it in the unripe state, or allow the gipsy children to do so. It is remarked that the gipsies are not attacked by the disease, in spite of their mode of life; but, living in the open air, they are placed in quite different conditions from the other inhabitants of Transylvania.

TYPHOID MILK AT WOLVERHAMPTON.

THE London outbreak has happily made people more than usually suspicious of their milk-supply. We shall now, no doubt, be for a time reminded of the frailties and shortcomings of our dairymen by the reports of numerous typhoid epidemics traced to some polluted water-source. Brighouse could show last week its forty victims; and now we have before us the account of an outbreak of typhoid fever at Wolverhampton propagated by the same medium. Mr. J. H. Love, the medical officer of health, assures us that several cases have undoubtedly occurred in the borough, the origin of which has been traced to the milk-supply. All the affected persons were supplied by the same milkman, and members of his own family are indeed suffering from the malady. The water-supply of the farm was obtained from a well much contaminated by sewage.

MODEL MILK-DAIRY FARM.

As a result of the recent disclosures regarding the dangers of milk, we understand that a co-operative milk company will shortly be started, in which every known means will be taken to prevent milk-contamination. Model and very extensive dairy and cow-sheds will be erected, a pure water-supply secured, and the whole superintended by trustworthy and known authorities. The scheme of the promoters has received the approval of some of the leading physicians in the West End, and it will no doubt stimulate vendors to take measures which shall ensure a better supply of milk generally to London and other towns than has been the case in late years.

A VICTIM TO SCIENCE.

THE Berlin medical journals record the death from cholera, on August 20th, of Dr. Otto Obermeier. Dr. Obermeier was in a fair way of gaining, and indeed had to a considerable extent gained, a high reputation as a scientific investigator of disease. Within the last few months he published some interesting researches on the blood in typhus fever (maculated); and, when seized with his fatal illness, was engaged in researches on cholera. Having too great confidence in his power of resisting infection, in consequence of having not taken fever during his investigations on that disease, he kept in his bedroom pathological specimens taken from persons who had died of cholera, and also portions of their excreta; and it is believed that in this way he became infected. According to one account, he injected some blood from cholera patients into his own vessels. He was so devoted to his inquiry that, after he had become aware of the condition in which he was, he made some microscopic examinations on his own blood. His death occurred after an illness of seven hours, in the thirty-first year of his age.

ADMIRALTY INJUSTICE.

It will hardly be credited, but it is, we believe, a fact, that a young naval surgeon at a port within a radius of two hundred and fifty miles of London, finding 'the eighteen months' instruction imposed on him, equally as on all assistant-surgeons entering the navy, incompatible with his tastes and comfort, respectfully tendered his resignation. After several ineffectual attempts to obtain its acceptance, he was threatened with court-martial for persisting in his design. This was followed up with a memorandum addressed to certain ships, to the effect that, should this officer dare to make such an application again, the captains of these vessels were not to forward it. In other words, should he attempt to communicate with the Admiralty without the approval of the captain, his letter would be treated as, and would have the fate of, waste paper. A more glaring instance of injustice, to say the least, served out by the Admiralty to naval medical officers, has not for some time come within our notice.

ANOTHER SERIOUS OUTBREAK OF TYPHOID FEVER FROM MILK.

AN extensive outbreak of typhoid fever, which is believed to have originated from the contamination of the milk, has occurred at Brighouse, in the Halifax Union. It appears that, while Dr. Britton, the medical officer of health, reports very unfavourably of the sanitary condition of some parts of Brighouse, he has found that, out of thirty-one cases of fever, twenty-nine have received their milk from the same source. On inspecting the farm whence the milk was obtained, he discovered that the cows drank from an open cesspool supplied by a drain through the fold-yard, in which was a large heap of manure. Dr. Britton—somewhat hastily, we think—jumped to the conclusion that here was a sufficient source of mischief, as the milk, he thought, of necessity partook somewhat of the character of the liquid which the cow drank. But, as this opinion is as yet mere assumption, and not founded on any known evidence that typhoid fever can thus be propagated, further inspection of the farm and its water-supply, and also of Brighouse itself, would be desirable.

AUTUMN MANŒUVRES—CANNOCK CHASE.

OUR correspondent with the troops at Cannock Chase writes:—Since the arrival of the troops at this camp, the weather has been scarcely less unpropitious than it was at Dartmoor. Certainly, there has been some sunshine; but the thunder, lightning, and rain, which we experienced on the nights of the 24th and 25th, would go far to counterbalance this. The encampments are here well situated, both as regards sanitation and picturesqueness; and no ill effects appear to have arisen as yet from the inclemency of the weather. It certainly is surprising to find how few men catch cold, rheumatism, etc., from what one would suppose would be a fertile source of such diseases. For instance, last week the troops of our brigade struck their tents, and went out for a field-day; about mid-day a drenching rain set in, which soon wet them through, and, on their return in the afternoon, they had to repitch their tents on the wet ground. Fortunately the soil is light and the ground sloping, so that the water soon runs off; and the food-supplies are good, which goes a great way towards keeping the men, as they are, cheerful under difficulties; and sickness has been slight. It has been suggested, and with good reason, that, when the tents are struck in the morning merely for practice, they should be repitched before the troops march off the ground, as it is of very great importance to the health and comfort of the men that the ground on which they lie should be dry. The regulation number of fifteen men to a tent is too great, and how this number of Guardsmen can be stowed away in this space is a mystery. One would have supposed that the allowance would have been modified for them. Both battalions of Guards here wear the valise, and the men speak in high praise of it, though they find that it produces a little stiffness at first over the loins; and, now that the eye is becoming accustomed to the difference, we shall probably hear no more complaints about its wanting in smartness. No impartial observer could for a moment doubt the greatly increased

Brit med journal

freedom it gives to the action of the heart and lungs, but there ought to be more freedom, and this can only be obtained by loose clothing; and, notwithstanding all that has been said and written, on this point, the padded tunic still continues to seriously constrict the chest, as the tunic collar, when hooked, does the neck. The ground on which these manœuvres take place is so limited, that the troops are not likely to be distressed by long marches, though they may be fatiguing, owing to the steep hills and high heather. The medical arrangements do not appear to have been very satisfactory as regards one brigade, no field hospital having been attached to it for a week after its arrival; and, if rumour speak truthfully, though now erected, it is without medical supplies.

DEATHS FROM ARSENATE OF SODA AND PHOSPHORUS.

AN unfortunate accident has occurred at Blackburn, whereby two children lost their lives from poisoning by arseniate of soda, which was found by them on a heap of ashes. Twenty-eight other children were more or less affected by the poison.—The *Lincoln Gazette* also announces the death of a child from biting off and swallowing the phosphorus from about forty matches.

SCOTLAND.

MR. DISRAELI will deliver his inaugural address as Lord Rector of the University of Glasgow about the middle of November. There will however be no banquet, it is anticipated, on the occasion.

PRECAUTIONS AGAINST CHOLERA.

THE local authorities in the Firth of Forth have been kept employed during the past week or two by the examination of numerous vessels from the Baltic, reported to be infected with cholera. The precautions adopted are likely to prevent any case of the disease from coming ashore; but no patients with cholera have, we believe, as yet been met with amongst the vessels.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Royal Sea-Bathing Infirmary, Margate, on Thursday, September 4th, at three o'clock; Mr. W. H. THORNTON in the Chair.

Dinner at five o'clock precisely. Charge, five shillings, exclusive of wine.

The following papers have been promised:—

1. Dr. Rowe: Case of Caries Tarsi successfully treated without Operation.
2. Mr. Treves: Case of Ovariectomy.
3. Mr. W. H. Thornton: Remarks on Cases in the Infirmary Wards.

Gentlemen who intend to be present at the dinner, are particularly requested to inform me on or before Tuesday, September 2nd.

CHARLES PARSONS, M.D., *Honorary Secretary.*

2, St. James Street, Dover, August 25th, 1873.

CORRESPONDENCE.

MILK AND THE TYPHOID POISON.

SIR,—A rare opportunity now exists of solving an important question in relation to the poison of typhoid fever. The severe epidemic lately prevalent has been traced to the water of a certain well in Oxfordshire, and no one can doubt that typhoid poison enough exists in that well to disseminate fever broadcast over the country. Let not such an opportunity be lost, without an endeavour to ascertain something more than is at present known respecting this poison. Let the water be examined chemically and microscopically by some of our leading analysts, and let the result be carefully recorded. Above all, let the question respecting the contamination of the milk of sewage-grass-fed cows be definitely brought to the test. Let certain cows be supplied with water exclusively from the typhoid-tainted well, while others are permitted to drink pure water,

and let the condition of the cows and the character of their milk be noted daily for a fortnight. If the cows supplied with typhoid-tainted water remain in good health, and their milk be sweet, and do not putrify more readily than the milk from the other cows, there will, I apprehend, be little risk in drinking it, and the fair presumption will be that it would not prove noxious. At all events any gentleman, who at the present time would devote a fortnight to observing the effect of typhoid-tainted water on the animals which supply the community with milk, and to noting its effects on the milk itself, would deserve well of the profession and of his country.—I am, etc.,

13, Manchester Square.

HENRY WM FULLER, M.D.

THE DAIRY REFORM COMPANY AND TYPHOID.

SIR,—It is so difficult for critics after an event to place themselves exactly in the position of those who were actors in it, and to realise the ignorance of subsequent developments under which those actors laboured at the time, that we are not surprised that our position and actions have been, to a certain extent, and by some writers, misunderstood. We, therefore, ask your permission to make a very brief statement in your columns, believing that the whole subject is so important to the medical profession that they will not consider us presumptuous, as laymen, in addressing you.

First, we have always been under the impression that no case of typhoid poisoning, through milk, had ever occurred unless in presence either of proof or of the gravest suspicion of adulteration. The idea that there was any real danger of milk which was unadulterated being nevertheless poisoned, had, we readily confess, never occurred to us. Of the immense medical value of genuine milk, we had the highest opinion; and when we started business in 1867 we frequently sent in tenders to hospitals and workhouses. Our tenders were always high, for unadulterated milk is an expensive article; and we found, to our disappointment, that the subject was, with a very few exceptions, treated with the greatest apathy and lukewarmness. This naturally tended still farther to throw us off our guard as to sanitary precautions; and we confined our attention to preventing adulteration, to seeing that the milk was properly cooled, the cows properly fed, and to fighting our natural enemies—the perquisite-loving cooks. To give some idea of our system and organisation, we enclose for your inspection a copy of our rules, and the engagement form which all our *employés* sign.

Under this condition of things, we received Dr. Whitmore's statement, that circumstances seemed to point to our milk as producing typhoid, with such absolute incredulity that one of our directors, Mr. Hope, was not even informed of it until the second day. But when we then found that Dr. Whitmore was under the belief that the whole, or the major part, of our milk came from a sewage-farm, we regarded the whole thing as arising from a misconception, inasmuch as we derived no part of our supply from any such source.

When persons once start with an apparently justified scepticism of this nature, nothing is more difficult than to surmount it; for what does it involve? That a theory started upon a datum—among others—which was erroneous, should nevertheless prove correct for another reason.

Again, as was very natural, Dr. Whitmore was himself far from satisfied at first that it was the milk; and in his first letter used the following words: "without presuming to express any opinion as to the cause of this outbreak." If he was doubtful, why should we have been certain? Especially as, in the words of our letter to the *Times*:—"As often happens in a moment of anxiety and pressure, the medical gentlemen who first communicated with us each thought that the facts, in full detail, had been put before us by one of the others. The result was that we remained in ignorance of most of them, and learned them from the columns of the medical journals, for the first time, after we had cut off the suspected supply."

But we are prepared to go further, and to question the policy, on public grounds, of stopping any business and throwing out of work a couple of hundred people, on *suspicion*, however strong; for even one mistake would raise a host of coarse, bitter, and ignorant enemies, of the very class which already gives much trouble to medical officers.

However, the precautions we are now taking are such as have never before been carried out for the protection of any article of food. They are briefly as follows:—

1. That the sanitary condition of each farm shall be from time to time inspected and reported upon by a medical officer from London.
2. That the local medical men shall report to us weekly on the health of the individuals, and, on a single case of infectious disease arising, shall immediately stop the milk.
3. That the local veterinary surgeons shall report to us weekly on the health of the cows, having similar power to stop the milk.
4. That all our *employés* in London shall be medically inspected

weaken the London medical man having full power to close all or any of our establishments if he see fit, without reference to us.

5. Experiments shall be watched and analysed from time to time by two eminent chemists, who have power to enter our premises at all hours and take what samples they please.

6. Finally, as a satisfaction to themselves, we have sent orders of admission to our premises to the medical officer of health of every district where we have any customers.

Many of your readers can suggest any weak point in our armour, we will take immediate steps to remedy it.

In conclusion, we beg to say that, though circumstances made us appear at first as if antagonistic to the medical authorities, this only arose from the double misunderstanding which we have explained above. What we have always desired to be is a useful and reliable instrument in the hands of the physicians of London.

I am, etc.,

D. MACONCHIE, Secretary.

Dairy Reform Company, Limited,
Orchard Street, London, W., August 28th, 1873.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination. Pass List. July 1873.

First Division.

Briggs, Harry, Beecham, King's College
Hobson, Lewis John, University College
Jones, Arthur Henry, Guy's Hospital
Jones, Cyril Lloyd, Guy's Hospital
Messer, Charles Arthur, London Hospital
Pepper, Augustus Joseph, University College
Rogers, Thomas King, University College
White, Ernest William, King's College

Second Division.

Chapman, Paul Morgan, University College
Clun, Thomas Robert Hood, Guy's Hospital
Cotton, Eugene, St. Bartholomew's Hospital
Edwards, Edward Joshua, St. Mary's Hospital
Hancock, John Gashell, King's College
Jameson, Leander Starr, University College
Lamb, William Henry, Guy's Hospital
Paghe, Rhinolt Navalw ap Joan, Liverpool Royal Infirmary School of Medicine
Koch, Bernard Mathias Simon, University College
Seward, William Joseph, University College
Voelcker, George Henry, University College
Williamson, George Edward, London Hospital

Excluding Physiology.

First Division.

Ferrier, John Christian, Guy's Hospital

Second Division.

Batterbury, Richard Legg, King's College
Conker, Edward Marriott, King's College
Duke, Herbert, Guy's Hospital
Evans, Charles Walter, University College
Heller, John Benjamin, Leeds School of Medicine
Landon, Arthur Jermyn, St. Bartholomew's Hospital
Langley, John Geoffrey, University College
Taunton, William Whitchurch (B.Sc.), University College
Whitelegge, Benjamin Arthur, University College

Physiology only.

Second Division.

Hickman, Richard, St. Mary's Hospital
Homan, George William, King's College
Keworth, George Hawson, Guy's Hospital
Rigby, James Arthur, Guy's Hospital

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 21st, 1873.

Day, Edmund Overman, Hemel Hempstead
Rodwell, Thomas Harry Bate, Loddon, Norwich
Smith, Thomas William Toome, Anstray, Warwick
Watson, Charles Russell, Sydney, New South Wales

The following gentlemen also on the same day passed their primary professional examination.

Crétin, Eugène, St. Bartholomew's Hospital
Mason, Samuel Butler, London Hospital

ARMY MEDICAL SERVICE.—The following gentlemen competed successfully for appointments as Surgeons in Her Majesty's Army Medical Service at the examination held at the University of London, on August 11th, 1873.

Order of merit.	Names.	No. of marks.	Order of merit.	Names.	No. of marks.
1.	Langridge, G. J.	2318	7.	Thomsett, R. G.	1900
2.	Fowler, B. W.	2219	8.	McQuaid, P. J.	1868
3.	Webb, W. E.	2145	9.	Tobin, J. J.	1685
4.	Gubbins, W. L.	2090	10.	Spencer, F. H.	1660
5.	Wood, O. G.	2005	11.	Ring, J.	1640
6.	Mapleton, R. W.	1905			

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House, on August 11th. Fourteen candidates competed for eleven appointments; thirteen were reported qualified.

	Marks.		Marks.
Wilcocks, A. J.	2195	M'Kay, H. K.	1845
Maloney, J.	2076	Wilkins, J. J. H.	1715
Swaine, F. R.	1980	Bartholomew, M. L.	1390
Deakin, C. W. S.	1922	Thompson, P.	1310
Allison, H.	1920	Ross, R. C.	1245
Collis, J. G.	1891		

CHOLERA IN SIAM AND BURMAH.—The last overland mail brings us news of a terrible epidemic at Bangkok. It is said that a very malignant type of cholera, accompanied with hæmatemesis, is carrying off the natives of the city at the rate of 200 per day. Cholera has also broken out Singapore and at Rangoon among the men of the Royal Artillery, and in Kalee, Kumaon. Dengue fever is very prevalent in Moulmein and other parts of Burmah, though decreasing in the Nag-pore division, where small-pox cases are also diminishing in number.

MEDICAL VACANCIES.

The following vacancies are announced:—

ALRESFORD UNION—Medical Officer for District No. 2: £100 per annum.
ARDWICK and ANCOATS NEW DISPENSARY and HOSPITAL, Manchester—Senior House-Surgeon: £250 first year, and furnished apartments. Applications, 30th inst., to Rev. W. Hutton, 57, Higher Ardwick, Manchester.
BRIGHTON and HOVE LYING-IN INSTITUTION—House-Surgeon: £100 per annum, furnished apartments, etc. Applications to T. A. Brew, Hon. Sec.
BRISTOL DISPENSARY—Additional Medical Officer: £150 per annum to commence. Applications, 6th Sept., to Edward Stock, Secretary.
BURTON-UPON-TRENT INFIRMARY and DISPENSARY—House-Surgeon: £130 per annum, to commence, rooms, coal, and gas. Applications, 1st Sept., to J. C. Grinling, Secretary.
CAISTON UNION, Lincolnshire—Medical Officer for the Waddingham District: £45 per annum, and fees. Applications, 12th Sept., to George R. F. Haddelsey, Clerk to Guardians.
CHELTENHAM UNION—Medical Officer for District No. 3: £30 per annum.
EAST ASHFORD UNION, Kent—Medical Officer for the Workhouse, and District No. 1: £55 and £60 per annum, respectively.
EAST SUFFOLK HOSPITAL, Ipswich—House-Surgeon and Secretary: £100 per annum, board, furnished apartments, etc. Applications, 2nd and September, to George T. Elliston, Secretary.
GENERAL HOSPITAL, Birmingham—Resident Registrar and Pathologist: £100 per annum, board and residence. Applications, 6th Sept., to Wm. T. Grant, House Governor and Secretary.
"HAMADKVAD" INFIRMARY SHIP, Cardiff—Medical Superintendent.
HOLYHEAD—Admiralty Surgeon and Agent.
KILMATHOMAS UNION, co. Waterford—Medical Officer to the Workhouse: £90 per annum. Applications, 9th Sept., to Wm. Hunt, Clerk to Union.
LEICESTER INFIRMARY and FEVER HOUSE—House-Surgeon and Apothecary: £120 per annum, rising to £150, board, etc. Applications, 30th inst., to T. A. Wykes, Secretary.
MANCHESTER ROYAL INFIRMARY, etc.—Honorary Assistant-Physician. Applications, 30th inst., to Benjamin Brown, Secretary.—Physicians' Assistant: £84 per annum, board and residence. Applications, 6th Sept.
MARGAM COPPER-WORKS and COLLIERIES, Taibach—Medical Officer. Applications to Messrs. Vivian and Sons, Taibach.
METROPOLITAN FREE HOSPITAL—Honorary Assistant Physician. Applications, 2nd and Sept., to George Croxton, Sec.
MORPETH DISPENSARY—House-Surgeon: £110 per annum, furnished house, etc. Applications, 1st Oct., to D. F. Wilson, Hon. Sec.
NEWCASTLE-UPON-TYNE BOROUGH LUNATIC ASYLUM—Assistant Medical Officer: £80 per annum, board and lodging. Applications, 30th inst., to John Atkinson, Clerk to Committee of Visitors.
PROVIDENT SURGICAL APPLIANCE SOCIETY, Bartholomew Close—Assistant-Surgeon: £60 per annum to commence. Applications, 10th Sept., to J. P. Caesar, Secretary.
RIPON DISPENSARY and HOUSE OF RECOVERY—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 30th inst.
ROMNEY MARSH UNION, Kent—Medical Officer for the Brookland District: £50 per annum.
ROYAL FREE HOSPITAL—Junior House-Surgeon. Applications, 10th Sept., to James S. Blyth, Secretary.
QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—House-Surgeon. Applications, 8th September, to A. Boodle, Secretary.
ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications to the Treasurer.
SKIPTON and SETTLE RURAL and URBAN SANITARY DISTRICTS—Medical Officer of Health: £400 per annum, for three years, no private practice. Applications, 5th Sept., to Thomas Brown, Solicitor, Skipton.
TENDRING UNION, Essex—Medical Officer for District No. 1: £56 per annum.
TRINITY COLLEGE, Glenalmond, Perth—Resident Medical Officer: £254 per annum, average last three years; duties 9th Sept. Applications to Walter Rosser, M.D., 39, North End, Croydon.
WANTAGE UNION—Medical Officer for the Isley District: £55 per annum, and fees. Applications, 8th Sept., to Edward Ormond, Clerk.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

MILLIGAN, William, Esq., L.R.C.P. Ed., appointed Medical Officer of the Brasington District of the Ashbourne Union, *vice* *W. Cantrell, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication

BIRTHS.

- CLARKE.—On August 17th, the wife of *W. Fairlie Clarke, Esq., of 12, Mansfield Street, Cavendish Square, of a son.
 CRIBB.—On August 24th, at Bishop's Stortford, Herts, the wife of *Henry Cribb, L.R.C.P. Lond., of a son.
 DENTON.—On Tuesday, July 29th, the wife of *Edward R. Denton, Esq., of Rutland Street, Leicester, of a daughter.
 PEARSE.—On July 10th, at Botesdale, the wife of *Arthur Pearse, M.D., of a son.

MARRIAGES.

- AYLEN—GIBSON. On August 13th, at St. Mary's Church, Scarborough, by the Rev. H. W. Kemp, B.A., Vicar of St. John's, Hull, and Master of the Charter House, assisted by the Rev. J. A. Addison, St. Mary's Church, Cottingham, Clarence Aylen, Esq., Paymaster R.N., son of Capt. Aylen, R.N., Welton, to Catherine Jane Terrington, younger daughter of Henry Gibson, Esq., Surgeon, Hull.
 BEVERLEY—HOTBLACK.—On August 21st, at the Church of St. Peter per Mountgate, Norwich, by the Rev. Hinds Howell, Rector of Drayton and Hon. Canon of Norwich Cathedral, assisted by the Rev. C. W. Jackson, Michael Beverley, M.D., St. Giles' Street, to Marian, eldest daughter of John Hotblack, of St. Faith's House, Norwich. No cards.
 NETTLE—PRIDEAUX.—On August 11th, at St. Martin's Church, Liskeard, by the Rev. J. Lakes, B.A., Vicar of the Parish, assisted by the Rev. W. A. Prideaux, B.A., brother of the bride, William Nettle, Esq., Surgeon, Liskeard, to Kathleen Vivian, youngest daughter of Alfred Prideaux, Esq.

OPERATION DAYS AT THE HOSPITALS.

- MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
 WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
 SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 3.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 3.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. E. R. MORRIS (Nottingham).—Duly received.

H. D.—We cannot recommend any particular practitioner. Our correspondent should consult any respectable medical man in his neighbourhood.

T. C.—We shall endeavour to insert the paper when space permits.

DR. HARRIS.—An asterisk is placed against the names of gentlemen belonging to the Association.

DR. WATT (Ayr).—We shall be glad to do so, provided that blocks are sent to us or the cost of executing them defrayed by our correspondent.

MR. R. O. JONES (Bala).—We shall do our best. Our correspondent will understand that the annual meeting is most prolific in matter which must obtain priority of insertion in the JOURNAL.

VOLUNTEER MEDICAL EXAMINATION.

"AN OLD MEMBER" writes to us that he should have published the names of gentlemen who passed the Volunteer service examination before those mentioned in last week's paragraph. We shall be glad to do so, if "An Old Member" will forward the names to us. It is customary for the Director-General to furnish us with lists of those who pass the examinations in the regular army; but he does not appear to have done so in the case of Volunteers. We depend on private information for the Volunteer lists.

THE ANNUAL MEETING.

SIR,—Allow me to offer my grateful acknowledgments to all my kind and liberal medical friends in London for the unexampled profusion of hospitalities afforded to myself and to all the provincial members of this great gathering of medical men throughout Great Britain. Such liberality on such a grand scale will never be surpassed, and certainly it will never be forgotten by a grateful public. I wish this expression of thanks to be widely circulated, for the encouragement of future meetings of members of the Association. By your inserting this, you will oblige yours, etc.,
 HENRY HARRIS, M.D.

Redruth, August 26th, 1873.

* * * We have received numerous communications couched in the same friendly terms, and conveying hearty expressions of thanks to the metropolitan members.

THE DISCUSSION ON CHOLERA.

SIR,—I have just seen the last issue of the BRITISH MEDICAL JOURNAL, in which I find the report of the few words I said on cholera. I am aware that it is impossible to report in such an abridged form all that a speaker says; but I must call your attention to some errors. I did not say that "the patient was paralysed at the last", but that cholera is a state of asphyxia from beginning to end; that the elementary cells of the whole organism are affected; that cholera is cholera, and cannot in any way be associated with diarrhoea, as is demonstrated by the nature of the evacuations, etc.

I did not say that cholera travelled from one part of Asia to another, but that cholera is confined to geographical areas at each epidemic period.

August 26th, 1873. I am, etc., CHARLES SHRIMPTON, M.D.

MR. SKEE ON SEWAGE-FARMS AND TYPHOID FEVER.

SIR,—I think the following is a fair analysis of Mr. Skee's recent letters in the daily papers. 1. Some cows, when fed on sewage-grown grass, give milk that readily becomes decomposed. 2. Decomposing milk, if used as food, causes vomiting and diarrhoea. 3. Vomiting and diarrhoea are symptoms of typhoid fever: therefore feeding cows on sewage-grown grass is a cause of typhoid fever.

No one has asserted that the cows which gave the poisoned milk lately distributed in Marylebone were fed on sewage-grown grass; nor does Mr. Skee explain how his remarks are pertinent to the occasion. That is a small matter: the argument is the thing. The number of fresh cases has fallen everywhere, and the late storms must have flushed the sewers well.

I am, etc., A LOGICIAN.

We regret to see the following unseemly advertisement in the *Middlesex County Times*.

"Ealing Medical Institution (opposite Ealing Station). Physician—Dr. Boyd Musher (Univ. Lond), Member of the Royal College of Physicians, London; late Physician to the North London Hospital for Consumption; Physician to the Royal General Dispensary and the Jews' Hospital; formerly Resident Physician at St. Marylebone Infirmary. This institution is established to afford to the inhabitants of Ealing and its neighbourhood medical and surgical advice, by a highly qualified physician of standing and experience, at moderate charges. Particular attention is directed to nervous, pulmonary, and chronic diseases, and the affections of women and children. Consultations, from 10 till 12 and 6 till 8."

We are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Ipswich Journal; The Manchester Guardian; The Aberdeen Daily Free Press; The Bath Express; The Birmingham Daily Post; The Australian and New Zealand Gazette, August 23rd; The Bolton Chronicle, August 23rd; The Dundee Advertiser, August 21st; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Rumsey, Cheltenham; Dr. Wiltshire, London; Mr. Colman, New Beccles; Mr. Procter, Shifnal; Dr. J. Hughlings Jackson, London; A Member of the Association; Mr. Benson Baker, London; The Director-General of the Army Medical Department; A Registered Practitioner; Dr. Watt, Ayr; Mr. Reginald Harrison, Liverpool; Mr. T. E. Jones, Wrexham; Dr. B. R. Morris, Nottingham; Mr. C. Jeaffreson, Newcastle-upon-Tyne; Dr. Cassels, Glasgow; Dr. J. W. Moore, Dublin; Dr. Saunders, Exeter; Mr. H. Hick, Wakefield; Mr. Harris, Birmingham; Messrs. Jones and Bonham, London; A Navy Surgeon; Dr. A. Hollis, Dorchester; Dr. Brace, London; Dr. Dickinson, London; Dr. Winterbotham, Cheltenham; Dr. Flint, New York; Dr. Richard Norris, Birmingham; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Lawson Tait, Birmingham; Dr. Sibson, London; Dr. Hutchin Williams, Lee; Mr. D. Maconochie, London; Dr. Parsons, Dover; Mr. W. G. Davis, Heytesbury; Dr. Harris, Redruth; Mr. John H. Love, Wolverhampton; Mr. F. G. Wintour, Clifton; M.R.C.S.; The Military Secretary, India Office; Mr. Joseph Allen, Norwich; Dr. Farquharson, London; Dr. Ferrier, London; Mr. Churton, Erith; Dr. Shrimpton, London; Dr. Burdon Sanderson, London; Mr. A. Moffat, New Brunswick; Dr. H. W. Fuller, London; Mr. Fairlie Clarke, London; Dr. Steele, Liverpool; Mr. J. Streeter, Croydon; Dr. J. M. Wilson, Chatteris; Mr. W. Brown, Callington; Dr. T. More Madden, Dublin; Our Dublin Correspondent; Dr. Gairdner, Glasgow; Mr. J. Paul, Glasgow; Mr. Leeds, Burton-on-Trent; Mr. Skrimshire, Clydach; etc.

BOOKS, ETC., RECEIVED.

On the Connection of Bright's Disease with Changes in the Vascular System: with Illustrations from the Sphygmograph. By A. L. Galabin, M.A., M.D. London: Smith, Elder, and Co. 1873.
 Economical Cookery. By Lady Styles. London: Longmans and Co. Bath: William Lewis. 1873.
 On Defective Teeth as the Unsuspected Cause of Various Forms of Constitutional Derangement; with numerous cases. By Adam Parker. Birmingham: 1872.

OBSERVATIONS

ON

STATE MEDICINE AND PUBLIC HEALTH
IN IRELAND.*Presented to the Public Medicine Section at the Annual Meeting of the
British Medical Association, August 1873.*

BY

T. W. GRIMSHAW, M.D., and D. TOLER MAUNSELL, M.B.

THE question of State Medicine and Public Health in Ireland, its present state and future prospects, is one of much importance to the country generally; and, bad as matters are in Dublin, the only city of which we have much exact knowledge, thanks to the recent exertions of the Dublin Sanitary Association, they are worse elsewhere—in Waterford, for example. The large towns in Ireland contrast unfavourably, from a sanitary point of view, with similarly situated towns in England. The health of a community is usually in accordance with the sanitary conditions under which the members, especially the poorer members, of that community live. The degree of health has to be measured by the death-rate and the duration of life. As no complete registration of disease is carried out in any community, and the average duration of life is not always an useful standard, we must trust to the death-rate as the measure of health, and therefore of sanitary condition. The chief element in the death-rate effected by sanitary measures is the proportion of deaths caused by zymotic disease; therefore, the death-rate from zymotic disease will fairly measure the sanitary condition of any community. Again, the elements which constitute this measure are—first, the amount of prevalence of endemic diseases, and, second, the extent to which epidemic diseases prevail when once established.

In the matter of the prevalence of zymotic diseases, Ireland is somewhat better off than the sister countries; for, according to a Parliamentary return issued in 1870, the death-rate from zymotic diseases in the three countries, for the five years ending 1869, were—in England, 1 in 190 of the population; in Scotland, 1 in 194; in Ireland, 1 in 300. Now, from this return, it would seem that Ireland requires less sanitary amendment than England or Scotland. This is, to a great extent, attributable to the good system of Poor-law medical relief in Ireland, as compared with the other countries, and to the consequent reduction of the death-rate, from efficient curative measures; but especially to the fact, that the Irish population is more rural than the English or Scotch populations, and thus the low death-rate common to rural districts tends to counterbalance the usually high zymotic death-rate of Irish large towns. What points chiefly to the bad sanitary state of the country is the proportion of deaths caused by endemic zymotics, especially fever and diarrhoea: thus, of 87,366 zymotic deaths which are recorded in the return already referred to, nearly a fourth, or 21,895, were caused by fever, and about one-eighth, or 10,081, were caused by diarrhoea. It is scarcely necessary, with the late small-pox epidemic fresh in our memories, to refer to the question of the effects of epidemics in Ireland. Small-pox fell so heavily on our Irish towns that, in Dublin, the disease proved more fatal than in Liverpool, and nearly double as fatal as in London; and in Cork, a still higher rate of mortality was reached. Thus, the sanitary state of Ireland, as measured by the prevalence of endemic and epidemic disease, is not such as it should be.

If we now look to the amount of sanitary work really done through Ireland, we shall see that it is insignificant. There is no general sanitary organisation through the country, and but few, and these all insufficient, attempts have been made to provide local organisation—the imperfect organisation of Dublin being the best. The best proof of the miserable attempts which have been made at sanitary work, is derived from the insignificant expenditure under this head in every district in Ireland, as is shown in a return recently compiled and published for the Irish Poor-law Medical Officers' Association by Dr. Maunsell. From this return, it appears that the amount spent in Ireland on sanitary matters is at about the rate of one-eighth of a farthing in the pound on the Poor-law valuation. In Dublin, where a larger amount is expended than in any other district, it amounted to but the rate of 3½d. in the pound, or 2d. per head of the population. In 100 out of 273 sanitary districts in Ireland, not a single penny was spent in the year 1871 under the Sanitary Acts; of these hundred, 72 are urban districts,—in other words, 72 out of about 120 Irish towns are quite unprovided with any sanitary organisation. Of the remaining urban authorities which did make some attempt at sanitary improvement, five spent over £100 under the Sanitary Act. Those were—Dublin, £2,050; Belfast, £427; Newry, £578; Queenstown, £201; Athlone, £230; Kingstown, £173; and Mullingar, £140. Of the other towns, two spent from £50 to £100, ten spent from £10 to £25 each, and the remainder less than £10, during the year 1871, upon sanitary matters. Of these latter, one spent the munificent sum of 4s., in order to provide sanitary accommodation for over 4,000 people, and another provided for the sanitary wants of 1,600 inhabitants for the economical sum of £1 : 2 : 54. The sanitary work done by the rural authorities seems to have been more general than by their urban brethren. We have shown there is almost a total want of sanitary organisation in Irish urban, and certainly there is but very little in Irish rural, districts. The total expenditure on sanitary matters for the whole of Ireland was but £9,756 : 13 : 4 for the year 1871. Now how does it happen that sanitary matters are so much neglected in Irish towns, and even more so than in rural districts? The answer is simple: as a rule, these towns are quite too small, both in population and area, to constitute urban sanitary districts, and should therefore be included in the rural district in which each may happen to be situated. Thus, according to Dr. Maunsell's report of the 120 urban districts, all, except Belfast, Cork, Dublin, Limerick, Londonderry, and Waterford, are but small portions of dispensary districts. Of the urban sanitary districts, there are only two with populations over 100,000—namely, Dublin and Belfast; one, Cork, with a population of nearly 100,000; five with populations from 20,000 to 50,000; six between 10,000 and 20,000. Of the remainder,—all of which must be looked upon as small towns or villages,—there are thirty-one with populations of from 5,000 to 10,000. The rest consist of towns and villages with populations under 5,000, ten of them having less than 2,000 inhabitants. From this statement, it appears that there are only about fourteen urban districts with populations over 10,000, and but forty-five with populations over 5,000. In our opinion, it is only the class of towns having a population of above 10,000 inhabitants from which distinct urban districts should be constituted, and for which special sanitary staffs should be employed.

Having shown how much Ireland is in want of a sanitary organisation, we wish next to consider how the country is at present suited for the introduction of such an organisation. It is now a well recognised rule that the house must be the unit of sanitary work, and that, as the houses of the poor are those over which sanitary supervision is most required, those who have the largest dealings with the inhabitants of these houses must be their immediate supervisors; and, as these supervisors must of necessity have medical qualifications, it is manifest that the dispensary medical officers are the only persons suited for the duty of district health-officers. In the large majority of cases, they are as well qualified for the service as the generality of medical men are at present. We now meet with the first, and perhaps the only, serious difficulty with regard to the introduction of a sanitary organisation into Ireland; and that is, that, although the dispensary medical officers are naturally the best qualified and most suitable persons for district health-officers, yet their districts are in many instances not suitable. In extent of area, the districts are suitable, as the unit areas, for sanitary work, being nearly equal to fifty square miles (or about seven miles square).

The division of land in Ireland appears to be, for Grand Jury purposes, into townlands, baronies, and counties. Certain medical institutions are supported by Grand Jury grants from the county cess, and are therefore arranged according to these areas. There are county infirmaries, a few hospitals unconnected with unions, and the district lunatic asylums. For Poor-law purposes, the divisions are into dispensary districts, electoral divisions, and unions built up from the electoral divisions. The distribution into electoral divisions on the first introduction of the Poor-law system into Ireland in 1847, and their area and boundaries, were determined by the extent and form of the estates of the various landed proprietors in the country. This, no doubt, was done with a good object, namely, to induce landlords to take a special interest in the welfare of those living on their property. The result, however, has been unfortunate. All these property boundaries have been altered by the operation of the Incumbered and Landed Estates Courts, and the proprietors have each endeavoured to diminish the poor-rate in their own electoral divisions by an abortive attempt at driving the poor out, the result of which is the concentration of the population in small but overcrowded villages, one of which is found in almost every dispensary district. This evil can only be got rid of by adopting a system of union instead of electoral division rating.

Owing to the straggling nature of electoral divisions, the dispensary districts which may be said to be identical with these are of such shapes

as to be almost unworkable. Some are long, straight strips, twenty-five miles long and but a couple of miles broad; others are S-shaped, or, in form, fitted into one another like the pieces of a dissected map. Such districts, as existing on a larger scale in England, have recently been demonstrated by Dr. Rumsey in the *BRITISH MEDICAL JOURNAL* of June 28th, 1873, being the result of the absurd arrangement under the English Public Health Act. This interferes in every way with the working of every branch of the duties of the medical officer. A patient may have to send twenty or thirty miles back and forward for medical advice or medicine. As there are no apothecaries or dispensing druggists in Irish rural districts, the medical man has to travel similar distances to see his patients, thus making it impossible to visit each end as frequently as he could wish, and preventing the possibility of attending to two or more serious cases situated widely apart. This arrangement also effectually interferes with the registration of births and deaths, as, although the people will travel long distances to obtain medical advice in serious cases, yet they will not merely to register a birth or death—matters of no consequence to them, and of little consequence to the medical officer, who is badly paid for this duty, his fee being but 1s. for each registration. The certificate of registration of death is not required on burial, as in England, and therefore the friends of the deceased can gain nothing by having the death registered.

This want of equable and properly divided districts also obstructs vaccination to a serious extent. The people will not go the distances necessary to reach the dispensary to an irregularly formed district; they may have to go fifteen miles or so to the dispensary; they cannot go to a dispensary in a neighbouring district, although it may be but half a mile off, as the officer there will not be paid for the vaccination of a person out of his district, and will therefore not perform the operation. The remuneration is too low to make it worth the vaccinator's while to look up the cases and go to the persons requiring vaccination. The pay is but 1s. per case in Ireland under any circumstances, whereas in England the minimum is 1s. 6d., increasing to 3s., according to distance, with the addition of gratuities. These gratuities in England, in 1871, amounted to within a few pounds of as much as the whole sum spent on vaccination in Ireland.

Thus, throughout the whole country, an ample re-arrangement of boundaries and squaring of districts is required to make it fit for the reception of any proper system of preventive and curative medicine. Such alteration of boundaries may be accomplished under the provisions of the Act 35 and 36 Vic., cap. 48.

We now proceed to consider how the present state of things in Ireland may be improved; and we believe that an extension of the English Act to that country will not make matters much better than they are at present.

The English Act has not worked well in England, and, if extended to Ireland, would be a total failure, from the very different circumstances of the populations in the two countries. A great deal of the want of success which has attended the English Act must be attributed to the almost total absence of system in the English Poor-law medical service. The English Act, of necessity, had to deal with the sanitary conditions of many large towns, and hence urban sanitary districts received more than their share of attention from the law-makers. Thus, in England and Wales, 12,000,000, or about one-half the population, reside in large towns, while in Ireland the town populations have to the country populations a proportion of but one to seven. It appears that 223 appointments had been made in England and Wales under the recent Act; of these, 190 were to rural, 25 only to urban, and 8 conjointly to rural and urban districts. Now, in Ireland, we have but three towns which, in England, would be considered large; that is, having a population of about 100,000 or upwards, and only fourteen towns which, even in Ireland, can be treated as large towns; that is, with a population of over 10,000. Therefore, in Ireland, provisions for rural sanitary districts are much more important than for urban districts. In urban districts, the sanitary authority is the town authority (corporations or town commissioners); in rural districts, the Poor-law guardians are the sanitary authority. All these authorities are usually included under the generic term "local authorities." It is manifest that it would be out of the question for each union in Ireland to appoint a health-officer for the whole union. He must be a local practitioner, or else get a large salary to make him independent of practice. Such a salary could not be paid in each of the 163 Irish unions; and, if a practitioner were employed to go over the whole area, he must either neglect his private practice or his public duties; and, as the former will probably be the more lucrative, the latter will probably suffer. We, therefore, suggest that each dispensary medical officer should be the health-officer each of his own district; thus, each country union would have from four to six health-officers. In certain quarters, Poor-law medical officers are considered to be the proper persons; in other quarters, they are said to be

altogether unfit to hold sanitary appointments; and this latter statement is made by those very persons who have sent out, through England, non-medical inspectors, who have given ludicrous exemplifications of their unfitness by giving the most varied interpretation of sanitary law, sometimes in direct opposition to the dicta of the English Local Government Board. We trust that such scandals will be avoided when an attempt is made at sanitary legislation for Ireland, and that some other qualification besides that of being a scion of a noble house, supporting the government of the day, a briefless, though meritorious, barrister, or a half-pay captain who had no opportunity of gaining military glory, may be discovered as a test for fitness for office. We consider that the qualifications should be distinctly defined by Act of Parliament to be those which entitle the holder to be registered under the Medical Acts. There is, it must be admitted, some truth in the statement that medical men, as a rule, are unfit for public sanitary duties, in the highest sense of the phrase, but this is owing to the want of demand for such special service. Once the demand is established, the supply will be provided; and we have no doubt that, not only State Medicine diplomas, such as those now granted to the University of Dublin for specialists of a high class, will be established by all licensing bodies, but that soon a fair knowledge of this science will be demanded of every candidate who wishes to become a qualified medical practitioner. Each of these officers would superintend the health of a district having an average area of fifty square miles and an average population of 8,000, living in an average of 1,500 houses. As registrar of births and deaths, public vaccination, and dispensary medical officer, he must of necessity be conversant with the sanitary conditions of each and every part of the district and its inhabitants. These district health officers should only collect information, and report thereon to their dispensary committees at stated periods—monthly in rural, and weekly in urban districts, or as often as occasion requires, to the medical inspector of the district (an officer whose duties we shall define presently). It should not, in any case, be the duty of the dispensary medical officer, as health-officer, to enter legal proceedings against offending parties, as such action would frequently bring him into unpleasant collision with his patrons and employers. When legal proceedings are necessary, they should be taken under the direction of the medical inspector. In urban districts, the dispensary medical officers should still be the immediate district health-officers for making reports on the sanitary state of their various dispensary districts; but, in addition to them, there should be, for each urban district of large size, a chief officer of health, to whom (not to the medical inspector, as in rural districts) the district officers should report; and this chief officer of health should take all such proceedings, legal or otherwise, that may be necessary, and should weekly forward a summary of all reports received, and proceedings taken, to the district inspector, or direct to the Local Government Board and to the nuisance authority of the district. His action should be, to a great extent, but not altogether, independent of the medical inspector, and he might, in case of difficulty or doubt, call in the assistance of the inspector. It is of the utmost importance that all responsibility, after his report has been made, should at once be removed from the dispensary officer, as, if not, he would almost immediately get into hot water with his masters, the committee. For instance, it is but recently that the inspectors of the Dublin Sanitary Association had to insist on nuisances being removed and houses closed, which houses belonged to a person who was a member of the local authority. Such a case, as matters at present stand, and as they must remain for some time at least, would at once have brought the dispensary medical officer into collision with his masters. The urban health-officer should be well-paid, and, in large places, such as Dublin, Belfast, and Cork, should not engage in private practice, but should, if possible, be attached to a public hospital and medical school, in order to keep their medical knowledge *au courant* with that of the day. In towns of less size (of populations under 20,000), and consisting of two or more dispensary districts, the health-officer might be a private practitioner, but should not be a dispensary medical officer, although it is pretty certain that it is from the dispensary medical officers that the best chief health-officers would ultimately be obtained; but, on accepting such an office, he should at once vacate his dispensary appointment. We believe that only about a dozen urban chief health-officers would be required in Ireland; in all other cases, the dispensary officers, acting through the medical inspectors, would serve the necessary purpose. We have mentioned medical inspectors; these should be selected and appointed by the Local Government Board on account of special qualifications for the office. Such qualifications should be prescribed by Act of Parliament, namely, knowledge of sanitary science and of the duties of health-officers. We consider eight such inspectors sufficient for Ireland, and believe that a less number would not do. These eight inspectors should correspond with the eight registration districts into which Ireland has been divided

by the Registrar-General; each of these districts would contain from twenty to twenty-five unions, which, consolidated, would constitute one chief sanitary district, to be worked under a medical inspector or chief health officer for the whole, thus obviating the necessity for innumerable health officers appointed by each little urban authority, numbering 121 in all, in Ireland.

It may seem odd to some that we should not recommend counties or combinations of counties as suitable areas for the inspectors' districts. We have considered this question and find that, unless the boundaries of nearly all the Irish counties were materially altered, such an arrangement could not be carried out. A glance at a map of Ireland will shew how impossible it would be to constitute areas with the present county boundaries. The forms of the counties are quite too irregular to admit any such arrangement, and we consider that it would not be worth while to alter the county boundaries. The unions can, with little alteration, be easily combined with suitable districts. As already stated, the dispensary districts must be squared and their areas made more uniform than at present.

We consider that the public health inspector should also be the medical poor law inspector for the district in which he is situated. His jurisdiction should run parallel with, but not interfere with that of the non-medical inspector. All medical and sanitary matters should be transferred to the public health department of the Local Government Board, and conducted by the medical commissioner (whose office we trust will not be abolished) as its head. There are at present ten Poor-law inspectors. These might be reduced to eight, who should do fiscal duty only. Two of the medical inspectors (of whom there are now four) might be transferred to the new department, and six appointed in addition to make up the requisite number. Our proposed organisation will therefore stand thus:

1. A medical commissioner who should be, as at present, the head of the Public Health Department.
2. Eight district medical inspectors, who should have charge of the whole medical service, both preventive and curative, each in his own district.
3. District health-officers who should be the dispensary medical officers.
4. Special health-officers for towns over 10,000 inhabitants composed of more than one dispensary district.

The question of the constitution of an urban district into an urban sanitary district should be determined by the Local Government Board. How should these appointments be made? For our own part, we should like to see the whole service for the public prevention and cure of disease converted into a civil medical service appointed and paid by Government, with admission by competitive examination, and promotion by selection.

There are good grounds for being dissatisfied with the present system of making public medical appointments in Ireland, especially dispensary appointments. The usual qualification for a Poor-law medical officer is either religious or political; but, as politics and religion are almost inseparably mixed up in Ireland, we may say the qualifications are of a politico-religious character. The examples are notorious, where the best qualified men are ignored and those with the lowest qualification selected. It is an usual practice in many places, and almost always the practice in Dublin, for each political party to hold a meeting to select the party candidate. A first candidate is selected, and a second, and so on; those with small chances are requested to retire and wait their turn for the next election, when they may expect their share of party support. A regular political whip is appointed on each side, and the whole of the affair is managed on the same principles as a parliamentary election. We know of one candidate in the conservative interest who, from being third on the conservative list, gradually rose to be first, and should certainly have won the next election, but that an hospital appointment placed him in a better position than a city dispensary appointment could have done. A liberal magistrate of the city of Dublin recently received a notice, requesting him to attend a meeting (which he very properly refused to do) of the liberal party at a particular place, to select a suitable candidate on the liberal interest for the ensuing election. This was a close fight, and the liberal interest triumphed.

In another case, matters were so well arranged in the conservative interest that it was not thought necessary even to read the letters of application, or examine the papers of the candidates, as a well known conservative was to win, and did win. The other candidates had their papers returned to them, some unopened. We saw the package of papers sent in by one gentleman returned to him unopened, sealed with the candidate's own seal: this package contained his letter of application, testimonial, and certificate of registration. Yet twelve votes were polled for this candidate, the committee having no official knowledge

of his candidature, and many certainly being ignorant of his qualification.

A member of a dispensary committee informed a candidate in our presence, pointing to the hollow of his (the elector's) hand: "If you want my vote, there's my palm." These instances are all derived from Dublin; and if such things be done under the nose of the authorities, what may not be done in the country?

At one country dispensary election, party spirit ran so high that a large force of military and police had to be called in to prevent violence.

Instances are known of the votes of members of dispensary committees being influenced by pecuniary considerations, as in one instance by the purchase of a horse, in another by a promise to take a particular house if a favourable result followed.

In a recent case where a particular religious party was beaten at the dispensary election, a new dispensary was immediately opened by the defeated party; this no doubt will be an advantage to the public, but the object is to throw discredit on the appointed officer and those who selected him.

We need scarcely state that a system which admits such abuses should at once be modified. We believe that it is scarcely susceptible of improvement except by abolition. We believe that a Poor-law medical service as a branch of the civil service is much desired, not only by the Poor-law medical officers of Ireland, but by those in England also; the salaries to be entirely paid by the state instead of half only, as at present. The advantages of such a service for sanitary purposes is manifest, and need not alarm on account of its costliness. At present half the salaries of the medical officers and half the cost of the drugs are paid by government; the former amounts to about £80,000, the latter to £35,000 per annum, total £115,000; half of this, or £57,000, is paid by the State. As the medicine and medical appliances might with justness be supplied by the local authorities at their own expense, the difference between £57,000 and £80,000 would have to be made up by the State to the amount of £23,000, this is all that would be required at present to transfer the cost of the officers to the State, and of course the salaries on account of sanitary work would only appear in similar proportions and not to such large amounts.

With regard to admission by competitive examination, there are at present about one thousand Poor-law medical officers in Ireland, or about as many as in the army; the annual number of vacancies is somewhat greater than in the army, or from sixty to seventy *per annum*. Two examinations might be held in each year, to fill up say thirty vacancies at each examination. The successful candidates might have the choice of places in the order of merit of answering at the examination. This system would afford a fair guarantee to the public that qualified men were appointed, a matter of great importance in Ireland, where, with the exception of a few large towns, all the medical attendance of the community is in the hands of the dispensary medical officers.

This, however, cannot be done at once. As the local authorities practically pay the officers, they must have a voice in their appointment, as at present. The commissioner must, of course, be appointed by the Crown, and he, with his brother commissioner, should appoint the inspectors. The Crown should not meddle in this matter, as it is directly the interest of the commissioners to appoint efficient men, and they will best know how to find them; they would probably always be obtainable from the class of urban health-officers. The dispensary medical officers must be appointed as at present, if paid as at present; but, if they become health-officers, acting under sanitary authorities, they must, of course, be appointed by the sanitary authority of the district, whether urban or rural; in the rural, the appointment would rest, as at present, with the guardians, but in urban districts the appointment must be made in a totally different manner, which at once raises the question of the constitution of urban districts and their sanitary authorities. Upon this point, we consider that no urban district should be constituted for a town of less population than 10,000; and even in this case, if the town fall within a dispensary district, the dispensary district should be the area and the dispensary medical officer the only health-officer of the district of the sanitary district; when the whole or parts of two or more dispensary districts are included in a town, then these districts should, in combination, constitute the sanitary district. In reconstructing dispensary districts (which is an absolute necessity), this should be borne in mind with regard to the smaller towns. In the large towns, where there are suburban townships, the sanitary district should include all the townships and adjoining dispensary districts.

With regard to the constitution of the sanitary authority, we consider that that authority should be a Public Health Committee, composed of members elected by the several co-operating authorities. Thus, in Dublin, we should have two, if not three, unions concerned, together with at least six suburban townships co-operating with the corporation

of the City of Dublin, and possibly with the Dublin Ballast Board which has charge of the Port of Dublin. The question as to the constitution of an urban authority, and the area of its jurisdiction, should be determined by the Local Government Board (possibly by provisional order in large towns, and summarily in smaller places).

As to the expense of carrying out these proposals, we believe the total annual cost of the whole sanitary organisation, as proposed in the foregoing remarks, would amount to little over £100,000 a year. The commissioners at the head of the department should receive from £1,500 to £2,000 a year; the medical inspectors, about £1,000; the dispensary officers in rural and but sparsely populated districts, from £50 to £75 per annum, and in urban from £75 upwards to £200 or £300 for the smaller, and from £500 to £1,000 for the larger towns. We do not wish to suggest that our scheme is perfect; but no systematic organisation has up to the present been proposed, and we believe that, without a thorough, systematic, complete, and properly paid organisation to start with, no good result can be expected from further sanitary legislation for Ireland.

ON THE MODE OF DISINFECTING BY HEAT.*

By W. H. RANSOM, M.D., F.R.S., F.R.C.P.,

Physician to the General Hospital, Nottingham.

As it is my desire to treat this question as a practical one only, I assume your assent to the proposition that heat is a disinfecting agent of so much value as to justify public authorities in spending money to secure the necessary mechanical appliances. To this I venture to add, as an opinion which will, I think, receive your general assent, that heat is, for a certain group of things, the best and almost the only known trustworthy disinfecting agent. Nor can I here, without violence to the memory of an able man who has passed away—I mean Dr. Henry of Manchester—omit to point out that almost all our knowledge of the facts upon which we rest the proposition to which I have assumed your assent, is due to that gentleman. He alone, so far as I know, has had the courage to make the experiments so much needed; and he has apparently proved that a temperature of 200 deg. Fahr., continued for not less than one hour, destroys the activity of the virus of scarlet fever.

My attention was first drawn to this matter about eight years since, when, being asked by a public body to advise them as to the best form of hot closet for disinfecting purposes, I was unable to find any one in use which I could recommend. I therefore commenced some experiments with the view of suggesting a pattern to be tried; but the engineer who then kindly assisted me died, and the matter was put aside until 1870, when the occurrence of scarlet fever in my own family recalled my attention to this urgent public want.

Experiments made at home in 1870 with a hot closet, having a capacity of about twenty-five cubic feet, constructed upon the oven principle, heated by gas outside, and having its surfaces partly covered by a hot-air flue and partly backed with non-conducting material, led me to the conclusion that this form of hot closet could not be recommended. I was, however, enabled from these observations to form provisional opinions as to the temperature which might be safely used, the time that goods should be exposed, the need for ventilation in such a chamber, etc. I will not take up your time by stating in detail the results of these experiments, because, from the imperfection of principle in the closet, very few of the results were sufficiently exact. However, I found that clothes and bedding might be exposed to a heat of 250 to 260 deg. Fahr. for an hour and a half in such a chamber without much injury. As chambers made on this principle are much used, I will here briefly state the imperfections which were found out in working.

a. The chamber cannot be long maintained at a steady heat, however carefully you attend to the adjustment of the gas-tap; and, were it heated by coal, I cannot think it could be so well regulated as by gas.

b. The temperature varies enormously in different parts of the chamber at the same time.

c. Being imperfectly ventilated, its drying power is insufficient, and the heat therefore penetrates slowly into the interior of beds, etc.

I decided, therefore, to endeavour to construct a new one, which should fulfil the following conditions.

1. The temperature should at all times and in all parts of the chamber be within certain known limits; and it should be plain at a glance that they are not exceeded; the maximum being determined by the singeing-point of the materials of clothes and bedding, and the minimum lying as close as possible to the maximum, but always ten or twelve degrees above 212 deg. Fahr. Thus one might feel assured that clothing put into such a chamber really was exposed to a sufficient heat, and yet not injured by too much, which would seriously deter the public from using it.

2. The temperature should be easily maintained within the required limits, for periods of time sufficient to ensure adequate penetration of heat into the interior of bad conductors, such as beds, etc.

3. The chamber should have a current of heated air passing through it, so as to favour penetration of heat by drying.

4. It should be so moderate in cost and so simple in use, that small institutions might avail themselves of it, and a fairly instructed nurse manage it.

5. It should be self-regulating.

Accordingly, in the winter of 1871-2, a hot closet was erected, under my directions, at the General Hospital, Nottingham, which to a great extent did what was desired to be done. In this contrivance, the heat is obtained by burning gas with smokeless flames, and conducting the products of combustion, mixed with the heated air, by means of a short horizontal flue, into a cubical chamber through an aperture in its floor, and out of it by a smaller aperture in its roof. Fixed thermometers show the temperature of the entering and outgoing currents, which represent the maximum and minimum temperatures of the chamber. A self-acting mercurial regulator, adapted to this stove from Kemp's regulator, maintains the temperature of the entering current at any required degree. A thick jacket of felt and wood economises the heat, and makes it steadier. A valve at the outlet of the chamber, together with another at the inlet of the furnace, enables the maker to regulate once for all the speed of the current passing through the chamber—an item of great importance in the endeavour to keep the temperature of the outgoing current as high as possible. To this, if it be desired, may be added a conical short chimney at the outlet, in which three or four small fish-tail burners may be lighted. By this method, any active particles of poison which might, in the earlier moments of the operation, be carried up in the current, would be burned. Dr. Henry anticipated objections of this kind, and used in his apparatus a similar contrivance to that which is now employed in Fraser's disinfecting closet.

For about a year and a half this closet has been in use with but few interruptions, and, I think I may venture to say, has rendered important services to the hospital, especially during the recent prevalence of small-pox, when a number of cases were admitted to our fever-house. Whenever the fever-house is occupied, the hot closet is at work night and day, and ready at any moment for use. The sister in charge managed it without difficulty after a little instruction which I gave her. Although it has a cubic capacity of twenty-five feet only, and is chiefly used for the clothes of patients, it has sufficed to disinfect blankets and the contents of beds and pillows. Its average consumption of gas is nine cubic feet an hour, at a cost, assuming gas to be 4s. per 1,000 feet, of 6s. a week, counting seven days a week, and twenty-four hours a day.

Records of its work have been kept, showing the maximum and minimum temperature, the consumption of gas, and the pressure of gas at various hours. From these I am able to say that the heat can be maintained for weeks at a stretch without any greater diurnal variation than 5 deg. Fahr., which is usually due to the increase of pressure at the gas-works in the evening.

The average reading of the maximum thermometer is 250.5 deg. Fahr.; that of the minimum is 232 deg. Fahr., which I should like to see 10 deg. Fahr. higher. Nor do I doubt the possibility of making it so in any future closet which may be erected upon this plan.

Thus, it may be said, the five conditions stated as desirable have been fairly well fulfilled by this stove. When a large experience shall have taught us more, I do not doubt that much better results may be achieved by improvements in the details of construction of hot closets on the principle now described.

The chief advantages of this closet are, its moderate cost, its efficiency, cleanliness, constant readiness for use; its capability of being managed, without the cost of an engineer or stoker, by an intelligent nurse; and the facility which it offers for maintaining a steady known heat for the length of time necessary to ensure deep penetration into bad conductors.

The only disadvantages which I have noted are: a. The necessity of having occasionally (perhaps four times a year) the services of an intelligent workman to look at and adjust the heat-regulator if necessary;

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

6. The action, which, I think, is occasionally though rarely seen, of the acid products of combustion upon some of the most delicate colours. This I will show you, and you will see how trivial it is. It would not be difficult to overcome this objection.

Before proceeding to draw up a card of instruction for the guidance of the sister in charge, I thought it prudent to repeat observations by the acid of this chamber on the singeing-point of various textile fabrics, and on the time required for penetration of heat into beds, etc. First, as to the singeing-point; here are tables recording these observations, not yet complete. I will sum up the results, so far as I have gone.

White wool, cotton, linen, silk, and paper, may be heated to 250 deg. Fahr. for three hours without apparent injury, although the wool will show a faint change in colour, especially when it is new. Perhaps this change is not more than the change which new white flannel undergoes when it is washed. The same may be said of dyed wools and printed cottons, and of most dyed silks; but there is one kind of white silk which easily turns brown by this heat, and pink silks of some kinds are also faded by it. The same or even slightly lower temperature will, if continued for a longer period—seven or eight hours—slightly change the colour of, but not injure, white wool, cotton, silk, paper, and grey linen. A heat of 295 deg. Fahr., continued for about three hours, more decidedly singes white wool, and less so grey and white cotton and white silk, white paper, and linen both grey and white; but does not, I think, injure their appearance materially. The same heat, continued for about five hours, singes and injures the appearance of white wool and cotton, grey linen, white silk and paper, some coloured fabrics of wool, or mixed wool and cotton, or mixed wool and silk.

These observations confirm the conclusion drawn from previous ones—that 250 deg. Fahr. was the best and most safe maximum heat to use. It is interesting to observe here that Dr. Henry (see foot-note in *Phil. Mag.*, vol xi, p. 22) had ascertained that cotton would resist this temperature. I was not aware, however, of this until the spring of this year.

It is noteworthy that the singeing of any fabric depends not alone upon the heat used, but also on the time during which it is exposed; and is influenced by the presence of other articles in the stove capable of giving up moisture. The maximum temperature which I find best for general purposes—viz., 250 deg. Fahr.—does not weaken the strength of cotton, silk, wool, or linen threads, even when continued for about eight hours; neither does it, so far as my experiments go, lessen the strength of textile fabrics composed of these yarns. This statement, however, refers only to articles which have been left aside long enough to have reabsorbed their normal hygrometric moisture. A temperature of from 293 to 300 deg. Fahr., continued from three to five hours, weakens the strength of cotton-thread; probably also that of linen to a less degree—not silk, and not wool. But the fabrics composed of woollen yarn become dusty, and, I should think, would be weaker after washing. Neither they, nor yet linen fabrics, as in bed-ticking, are demonstrably weakened by this heat.

Turning now to the difficult question of securing the penetration of heat into the inside of beds, etc., I must again notice that Dr. Henry states that this is only a question of time; and so, in the main, I find it to be by observation. The accompanying table, abstracted from my notes, will show this. But the penetration of heat depends not only upon the time of exposure, but also upon the thickness of the bed, the amount of hygrometric moisture it contains, the nature of the materials of which it is composed, and perhaps also their degree of compression, as well as on the temperature used. These conditions have to be borne in mind in working any disinfecting chamber.

THE ACTION AND RELATIVE VALUE OF DISINFECTANTS.*

By J. A. WANKLYN, Esq.

If we heat the infectious material of, for instance, scarlet fever to a red heat, we destroy it. There can be as little doubt that, if we bring chlorine gas thoroughly into contact with infectious material, we destroy it likewise. If we boil it with oil of vitriol, or with permanganate of potash, we destroy it. Probably, too, if we soak it in concentrated carbolic acid, or treat it with excess of corrosive sublimate or arsenious acid, we render it inert. It is, indeed, highly probable that every kind of infectious material is capable of being rendered inert by thorough contact with any powerful chemical reagent.

But if the heat be only gentle, and if the chemical reagent be dilute, there is absolutely no reason for believing that, by the employment either of the one or of the other, we are so much as contributing towards the destruction of infection. There is a difference not only in degree, but even in kind, between the action of the same chemical when concentrated and when dilute. Concentrated sulphuric acid will convert cane-sugar into a lump of charcoal, but dilute sulphuric acid transforms it into dextrine and glucose, and, curiously enough, fits it for undergoing septic changes. So, again, very dilute bleaching powder has actually been found to favour the development of certain low forms of life; and Pettenkofer, as is well known, has found that germs whose development had been arrested by carbolic acid, start into life when the carbolic acid is still further diluted.

In the practical employment of disinfectants, the fact that dilution frustrates the action of a disinfectant has been very generally lost sight of. Attempts have often been made to disinfect the atmosphere. It is even said that, during the panic occasioned by the cattle-plague, the Commissioners endeavoured to disinfect the general atmosphere of the agricultural districts by turning cattle adrift with towels soaked in carbolic acid attached to their horns. I need not insist on the futility of such a proceeding; or, indeed, on the necessary futility of any effort to eliminate anything by chemical means from the general atmosphere covering our fields or occupying our streets. But it will probably not be quite needless to insist upon the impracticability of attacking the very limited atmosphere of a dwelling-house by chemical means. Certain very simple considerations will, however, suffice to throw the utmost doubt on the utility of endeavouring to purify air which has suffered contamination.

In a well known official memorandum, drawn up, I believe, by Professor Rolleston of Oxford, directions are given for the disinfection of a room with sulphurous acid. So much sulphur (the quantity proportionate to the size of the room) is to be burnt, and doors and windows are to be shut; and the memorandum winds up with the statement that, if a man be able to abide in the room for one instant whilst the disinfection is being carried on, then the disinfection is not to be depended upon. In other words, it is admitted that, not until you have put so much sulphurous acid into the air as to make it totally unfit to breathe, have you disinfected that air. The same certainly holds generally in regard to other agents; and, in short, we cannot hope to purify the air of a room by any chemical means without spoiling the air. It is, therefore, useless to try to disinfect the air. This is strikingly illustrated in reference to printed directions relative to the practice of disinfection. See, for instance, Dr. Wilson's little card, "Disinfectants and how to use them."

"Chlorine gas, poisonous and irritating to the lungs when in excess. For an occupied room, close fire-place, windows, etc., as directed under F. Pour over a-quarter of a pound of black oxide of manganese in a dish placed high half a pint of muriatic acid (spirit of salt), and leave for six hours. It bleaches, and is apt to make white-limed walls sweat—useful for cabs."

Now if we take a room, say 13 feet by 13 feet and 13 feet high, or of a capacity of about 39 cubic metres (and that is not a very large room), and if we calculate what proportion by weight the chlorine liberated by the quarter of a pound of oxide of manganese will amount to, we get about 3 parts of chlorine in 1,000 parts of air. In point of fact, however, the proportion of chlorine in the atmosphere of such a room would never reach anything like 3 per 1,000, inasmuch as walls are not impervious, and during the six hours the air would have changed, and 3 parts per 10,000 would probably be nearer the true

No.	Name, thickness, and condition of sample.	Heat used. deg. F.	Time heated.	RESULTS.		
				Heat of inside. deg. F.	Loss of Weight.	Singed or not.
1	Horse-hair pillow, 5 in. thick; normal moisture	251-262 2 operations	8 hours	247	1-10th	Not
2	The same, nearly dry	247	2½ "	221	1-40th	A little; not injured
3	White blanket folded in 24 layers. ½ in. thick; moist.	248	6¾ "	214	1-12th	
4	Feather pillow, 5 in. thick; moist	241	7¾ "	232	1-10th	Not
5	Flock pillow, 5 inches thick; moist	237-245 2 operations	23 "	252*	1 10th	Not
6	Horse-hair pillow, very moist, 5½ inches thick	293	3¾ "	178	1-8th	Singed; injured
7	The same, much dryer	296	4¾ "	296	1-17th	Ditto
8	Flock pillow, 5½ inches thick; moist	293-300 2 operations	10¾ "	280	1-10th	Ditto

* Perhaps an error in instrument. The inner and outer thermometers in this case may be taken as equal.

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

proportion. But this is the room not fit to inhabit by reason of the presence of chlorine. The minuteness of the dose of chlorine which the inhabited room receives may be left to your imaginations. To me it seems that the wisdom of the physician who places his little saucer with bleaching powder and muriatic acid in the chamber of his patient, is comparable with that of the cattle-plague commissioners who tied the carbolised cloths to the horns of the cattle.

Experience confirms that which an appeal to first principles suggests; and we are informed that, during the Franco-German war, although the hospitals stank of carbolic acid, yet wounds were not healthy. Although I believe that the purification of air which has once been defiled is a hopeless task, yet it by no means follows that disinfectants have nothing to do with purity of atmosphere. It is open to us to abstain, in a very large degree, from rendering the air impure.

By the efficient application of disinfectants to foul surfaces, we may hinder defilement of the atmosphere of our dwellings. One of the main functions of a serviceable disinfectant is that it shall be antiseptic; that it shall postpone decomposition and putrefaction until a convenient season. A good disinfectant should not itself defile air, neither should it be dangerously poisonous or corrosive. There is a very common substance which has long been used to hinder putrefaction. It does so only in a concentrated form. It has no smell; it is not poisonous. It can hardly be said to be corrosive. Its name is common salt. I hold that this substance and its analogues—the chloride of calcium and the chloride of magnesium—are the most available general disinfectants.

A SAFE METHOD OF INDUCING PREMATURE LABOUR.*

By BEVERLEY R. MORRIS, M.D., Nottingham.

It is not my intention to enter upon the general subject of the induction of premature labour, or of abortion, as the case may be; nor of the rules, as to the amount of deformity, or of other causes, which may justify any operative interference. I will suppose that it has been decided to operate; and the question which then naturally arises is, What is the safest method of producing the expulsion of the fetus? The ordinary means have usually been either the rupturing of the membranes, thereby causing the death of the child, and its ultimate expulsion as a foreign body; or the separation of the membranes from the uterus to a greater or less extent; or galvanism, but how applied I am not aware, except that is external.

The rupture of the membranes or their separation is, without doubt, attended with considerable risk to the mother. The fatal cases are, I believe, over 6 per cent.; while the mortality of the children is 40 per cent. in the later months, and, of course, 100 per cent. at the earlier dates. This serious mortality, even in the most skillful hands, must make us anxious to lessen the danger to both mother and child, if it be possible. I fully believe that this may be done. The indication seems to be to imitate the natural process of parturition as closely as possible; while, at the same time, the means used must be available, with certainty, whenever it may be thought desirable. I think that all this may be effected by the means which I am about to submit to the section.

The process that I have to describe is an adaptation of the third method of inducing labour—that is, by galvanism; but, as far as I am aware, by an entirely different application of the principle from any before attempted. The principle involved was introduced by Mr. Dancer of Manchester many years ago, for the purpose of arresting *post partum* hæmorrhage, and this it undoubtedly effected satisfactorily; but the apparatus was so cumbersome, that few practitioners could carry it about with them, and, probably from this cause, I do not think it was ever generally used. The instrument invented by Mr. Dancer was so arranged that one pole of the galvanic current could be introduced into the uterus, while the other was applied over the abdomen; it was so constructed that either a continuous or an interrupted current could be applied. The instant effect was a powerful contraction of the uterus, and a consequent cessation of hæmorrhage.

The application of this principle to the induction of premature labour was made by Mr. John Varley, surgeon, of Nottingham, through whose kindness I am enabled to exhibit the instrument as modified by him. The mode of using this instrument is to insert the metallic point within the os uteri, and then, placing the other pole to the abdomen, pass a slight continuous current through the uterus for ten minutes or

a quarter of an hour. This induces a dilatation of the os, which is further increased by substituting a larger conical point, and again continuing a gentle current for a few minutes. In each case in which this method has been used so far, labour has followed in two or three days; but, should this not be the case, it will only be requisite to apply the current daily until it does. The safest way is to expose the os uteri by a speculum, and then insert the point of the instrument through the speculum, which may then be withdrawn over the instrument. The great portability of the instrument and battery will allow it to be readily carried in the pocket, and it is always ready for use at a moment's notice; and the induced current seems to me amply sufficient for the purpose. The arrangement for giving a continuous or broken current is very simple, and entirely and instantly within the operator's power.

The instrument consists of a metallic sound, covered, except at the point, with a non-conducting material, and having a metallic connection at the handle, and so arranged as to be either broken or continuous by a touch of the finger. This intermediate part is connected with one pole of the battery; while the other pole is attached to a metallic tube or conductor for external application, either direct, or through the hand of the operator. The extreme portability of Gaiffe's battery led Mr. Varley to this adaptation, which, I trust, will soon be widely used, and lead to a safer and more efficient method of inducing uterine contraction than any at present in use. It is manifest that there are other cases in which it may be most usefully applied, as, for instance, in sluggish or atonic labour, and other similar states.

CASE OF TWIN PREGNANCY COMPLICATED WITH HYDROCEPHALUS.

By ARTHUR S. UNDERHILL, M.B., M.Ch.T.C.D., M.R.C.S.

ON the morning of June 1st, I was summoned to attend, in her second pregnancy, Mrs. B., aged 28, a handsome, well-developed woman. It was stated that she had been in labour all night, the pains recurring at intervals of every five minutes. On examination, I found the os uteri to be fully dilated, and a hand, funis, and foot, presenting. I ruptured the membranes, brought down the foot, and delivered, the placenta coming away in about ten minutes. The child was well formed, rather above than under the usual size of a single birth. I was some time in restoring vitality, as the funis had been necessarily compressed during delivery. On placing my hand externally, the abdominal tumour seemed to be very little lessened, the uterus feeling hard and resisting. There being little hæmorrhage, I examined for a second child, but could detect no definite presentation. As the parts were exquisitely tender, and the perinæum very deep, I determined to employ friction externally to the uterus, and to wait. In about an hour's time I gave tincture of ergot in tea, with a little brandy, which brought on some feeble contraction. This I repeated in about another hour, after which, feeling no presentation, I introduced my left hand, and found a globular mass blocking up the upper outlet of the pelvis. I could feel no bone and no suture; and, not being quite certain whether I had to deal with an abnormally sized vertex, or a buttock, I considered it advisable to wait another hour, at the end of which time, as the woman was very faint, and uterine action had entirely ceased, I attempted version; but, finding it exceedingly difficult to pass my hand round the mass, I applied the long forceps. On employing gentle traction, I felt that the blades of the instrument were slipping off, so I applied them again, with a similar result. I then tried them in the oblique diameter, again unsuccessfully. By this means I had brought the mass down a little lower, so that I could feel the edge of a parietal bone. With a long pair of tailor's scissors I now punctured the head by the side of the parietal bone, when a large quantity of fluid and brain-matter escaped. The head collapsed, and was shortly afterwards expelled. On examining the child, I found that, complicating the hydrocephalus, were a large spina bifida, double talipes equino-varus, general flexion of all the muscles, and the lower extremities very much shrivelled.

The case is an interesting one, particularly as it was a twin pregnancy. The talipes was evidently due to reflex action from the spinal lesion, and not from position. The concurrence of hydrocephalus with hydro-rachis is not uncommon, since the anatomical relations of the brain and spinal cord allow the cerebro-spinal fluid to communicate. In searching through many records of obstetric cases, I have not been able to discover any similar to this one. It is interesting also, from the fact that no hæmorrhage followed the birth of the first child. This has an important bearing on the plan of treating some cases of placenta prævia, by removing the placenta first, as recommended by the late Sir J. Simpson.

* Presented to the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

FORTY-FIRST ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

PROCEEDINGS OF SECTIONS.

SECTION A.—MEDICINE.

DISCUSSION ON BRIGHT'S DISEASE.

On Chronic Bright's Disease. By T. GRAINGER STEWART, M.D. (Edinburgh.)—The author first insisted upon the fact that the term chronic Bright's disease in reality includes three different processes and their combinations; although from the latency of symptoms and the chronic course which it usually follows, the term is specially applicable to the cirrhotic, gouty, or contracting form. He referred to one instance of waxy disease which he had watched for eleven years, and to one of inflammation which he had watched for seven years, besides others which, though not so prolonged, were unquestionably chronic. A granular condition of the kidney—*i.e.*, unevenness of surface—occurs in all the forms of Bright's disease if the cases be sufficiently prolonged. Dr. Stewart then discussed the pathology of the cirrhotic kidney, described and commented on the theories of Gull and Sutton and of Johnson, and that maintained, among others, by Dickinson and the author himself. After satisfying himself regarding the exact appearances to which Sir W. Gull and Dr. Sutton had applied the term "hyalin-fibroid" formation, he examined carefully the vessels of the pia mater in twenty-three cases, and found in a considerable number the appearance to which they referred; he found also that a similar appearance may be artificially produced by soaking in glycerine or acidulated fluids. The thickening of the outer coat, however, bore no special relation to cirrhosis of the kidney, being absent in some cases, and present in others in which the kidneys were healthy. Thickening of the middle coat was present in a large proportion of his cases of chronic Bright's disease, whether cirrhotic or inflammatory. The appearances described by Dr. George Johnson admirably corresponded to what he regarded as the third stage of the inflammatory form; but in true cirrhosis he had never failed to find increase of connective tissue. He therefore believed in the correctness of the views advocated by Dr. Dickinson and other writers. In speaking of the clinical history, he founded his observations upon two tabulated statements; one, giving the complications which existed in each of thirty-six cases examined after death; the other, showing the leading clinical features of a series of twenty cases which he had examined closely during life. From these tables he showed that the disease—*i.e.*, true cirrhosis—is essentially chronic; that it specially affects the male sex; that it is most common between the ages of forty and sixty, but occurs not unfrequently between twenty and thirty, or even at an earlier age; that it is specially connected with intemperance, while the other forms of Bright's disease are not; that it is also associated with lead-poisoning and with gout; that its origin is insidious, marked by no definite symptoms, and its course very chronic; that it is unattended by dropsy, unless in advanced stages or when inflammation is superadded; that the quantity of urine is at first natural or small, although frequently greatly increased in the advanced stages; that the specific gravity is generally low, and the quantity of urea diminished, while a few hyaline and granular tube-casts may usually be found on careful examination; that, as the disease advances, the heart becomes hypertrophied, the arteries thickened, their muscular coats increased; that hæmorrhages are common, especially from the kidneys, the nose, and the uterus; that there is a marked tendency to gastric derangement and sometimes to diarrhoea; that bronchitis, congestion, œdema of the lungs, are frequent results, and often prove fatal; that among the nervous symptoms neuro-retinitis, convulsions, severe headache, and coma, are frequent results, delirium and acute mania more rare; that the disease often exists for years unsuspected, and is only discovered when important complications, especially those of the nervous system, occur.

Dr. SUTTON remarked that Dr. Grainger Stewart said that he had found the outer coats of the arterioles thickened by fibroid material, but he had failed to find this change in the vessels of the pia mater in some cases where the kidneys were granular and contracted; and he had found the vessels in this manner diseased where the kidneys were not contracted and granular. Dr. Sutton had also observed that the

arterioles of the pia mater were not thickened in some cases, where the kidneys were granular, but the capillaries seemed altered and thickened by homogeneous or fibroid material; and in some of these cases where the vessels of the pia mater were seemingly healthy, he found hyalin-fibroid changes in the arterioles of the skin and other parts. In some cases, the only part of the body microscopically examined was a small piece of the pia mater. It was therefore possible that the vascular disease existed in other parts and escaped notice. In by far the majority of the cases in which hyalin-fibroid vascular changes were found, the kidneys were granular and more or less contracted. In some, the kidneys were healthy, but the heart was hypertrophied, as in Bright's disease; and in two cases, this vascular disease was found in connection with atrophy of the brain, whilst the kidneys were healthy and the heart but little or not at all hypertrophied. These facts led to the conclusion that the fibroid changes might be local or general; and taking into consideration the clinical, etiological, and histological facts of the disease, it seemed that this morbid state, for which the term "arterio-capillary fibrosis" was suggested, might begin in the kidneys, the pia mater, brain, lungs, or other parts. It was apparently a common morbid condition after the age of fifty; and persons in whom the vessels were undergoing these fibroid changes, might die not only of kidney-disease, but of other local affections. Dr. Sutton further said that there were other questions in Dr. Grainger Stewart's paper to which he would have an opportunity of referring in a communication which Sir William Gull and he proposed soon to place before the profession.—Dr. DICKINSON generally assented to the views expressed in the paper, but wished to remark upon one or two points. He understood Dr. Grainger Stewart to express the opinion that the kidney sometimes acquired a granular surface from disease limited to the tubes. He had seen many instances in which the kidney had wasted in consequence of disease thus limited; but believed that granulation of surface, restricting this term to the production of alternate elevations and depressions, did not occur except as the result of intertubular fibroid thickening with subsequent contraction of the interstitial growth. This fibroid thickening was common in the ordinary form of granular degeneration, and was found also in lardaceous change. He believed that nodulation of surface, in which sense he used the term granulation, was always dependent on excess of fibroid growth. This, no doubt, sometimes took place in kidneys primarily affected by disturbance limited to the tubes—the change in these cases had extended from the tubes to the interstitial tissues. As a general law, granulation—limiting the term to superficial nodulation—implied fibrosis, though this fibrosis might spring from different causes. When the kidney had shrunk from simple destruction of the tubes, the surface, though not always perfectly even, was never affected as described. The greatest interest at present attached to the relation of the thickening of the arteries to renal disease. He had no doubt that these vessels were, under renal disease, thickened throughout their whole structure, in their fibrous coats as well as in their muscular. He had satisfied himself that the fibroid thickening described by Sir W. Gull and Dr. Sutton was a pathological fact, and not the result of reagents. He considered the change in the arteries to be of a complex kind—hypertrophy associated with alteration and degeneration of structure. The question next arose as to the relation of this arterial change with renal disease. Dr. Bright considered the hypertrophy of the heart found with granular degeneration of the kidney to be due to a change in the blood, which caused it to pass with increased resistance through the capillaries. Dr. George Johnson attributed the thickening of the vessels to efforts which they made to keep the blood out of the tissues, while the heart became hypertrophied by its endeavours to force it in. Thus the heart and the arteries were hypertrophied by mutual conflict, as if animated by antagonistic volition—a view which presented nature in an inharmonious attitude. Between the heart and the arteries, we could not tell which to encourage or to which to wish success. At the same time, though he did not accept Dr. Johnson's explanation, he gave him full credit for his observation of the arterial thickening. With regard to the view of Sir W. Gull and Dr. Sutton, according to which the heart and the kidneys were affected simultaneously, but independently, as the result of general fibrosis, further observations were needed. Some objections could be urged to this view, especially the general absence of fibrotic change, save in the kidney and the arteries. The liver was rarely cirrhotic in the cases in question. Then, again, the arterial affection was occasionally found where there was reason to suppose that the kidney had suffered in consequence of a purely local change, such as obstruction caused by a stone. He was disposed to look upon the arterial change as consequent upon the renal, rather than as connected with it only as having a common origin. He thought the renal condition was primary, the arterial secondary, the hypertrophy of the heart tertiary. A less degree of the arterial alteration was sometimes found

with kidneys affected otherwise than with granular degeneration. When granular degeneration existed, the arterial change was, as far as he had seen, always present. Two cases of this disease, fatal under the age of 14, had come under his notice; in both, the arterial change was marked. In such cases it was not easy to recognise any influence allied to senility. Any conclusion on the subject, however, he regarded as only provisional; not that the subject involved any special difficulty, but because problems were involved which required time for their solution. —Dr. W. ROBERTS (Manchester) said he was hardly prepared to take part in a discussion which turned wholly on pathological facts. His attention had been called more especially to the clinical aspects of the malady; nevertheless he was quite prepared to say that the reception which Sir W. Gull and Dr. Sutton's paper had met was hardly justifiable. He had listened to the paper and the remarks on it with great interest. —Dr. GAIRDNER (Glasgow) said that, like the last speaker, he was scarcely entitled to take part in a purely pathological discussion, as his opportunities of continuous study, from the anatomical and histological point of view, had of late years been few, and most of the disputed facts referred to were beyond his personal knowledge. He had, however, listened with great interest to Dr. Grainger Stewart's paper, and was disposed to concur in many of his conclusions. There was obviously a difference of opinion as to the use of the term "cirrhosis" in the case of the kidney; and this encouraged him (Dr. Gairdner) to remark that, in his own early studies upon the subject, he had been by no means convinced of the occurrence of *primary* intertubular changes in these cases; being rather of opinion that the apparent excess of the fibrous element was usually, if not always, the result of atrophic changes in the other elements, and of retrograde metamorphosis in the tubular and vascular tissues. The granulations, so-called, were simply the still pervious, or, at all events, turgid tubules with their contents, surrounded and demarcated from each other by masses of shrunken and atrophied convolutions, in which fibroid tissue represented the remains of all the other elements that had in great part disappeared. Dr. Grainger Stewart appeared to recognise this as, at least, one way in which kidneys might become granular; but he argued for a distinction from this of what he called "true cirrhosis;" the latter being always dependent upon intertubular changes, as described by Virchow, and also by Dr. Dickinson, who, however, thought that all cases of nodulation or of granulations proper were due to primary intertubular changes. It was necessary to remark that the word granulation is often used equivocally, the yellow opacities, so well figured by Dr. Bright, and which we now know positively to be dependent upon degenerative changes within the tubules, being as often as not called granulations; while Dr. Dickinson's use of the word referred entirely to the nodular condition of the surface, which was undoubtedly atrophic, and had no necessary connection with the other. Notwithstanding the high authorities to whom he had referred, he (Dr. Gairdner) was still not entirely convinced of the intertubular origin of granulations; but, if Dr. Stewart should succeed in establishing the pathological distinction and mode of origin of his "true cirrhosis," then the clinical history he now gave of it, and the view so clearly presented of its complications and pathological associations, would be fruitful in valuable results. To him (Dr. Gairdner) it had always appeared that the majority of cases of chronic Bright's disease were not of *intertubular*, but of *intratubular* origin, and their true analogue was to be found in the various forms and stages of chronic capillary bronchitis, in which we find—(1) A leakage of the albuminoid elements of the blood, followed by (2) various degenerative changes in the epithelium, etc., extending over the interior of the ultimate bronchi, air-vesicles, and intercellular passages; (3) Atrophic changes, leading, in some cases, to over-expansion; in others, to an almost entire disappearance of the textures of certain lobules, with correspondingly impaired function; (4) A frequent appearance of fibrous overgrowth, both in the emphysematous and the condensed and atrophied parts, between the remaining active lobules. In one point he was able personally to corroborate Dr. Grainger Stewart's clinical observations on the atrophied or cirrhotic kidney. It was a surprising fact, but still no less a fact, that a kidney in this condition might continue secreting an over-copious though depreciated urine, long after it had apparently ceased to contain almost any sound secreting structure, and after its actual bulk had been reduced probably by two-thirds. —Dr. J. M. FOTHERGILL (London) said that some time ago he held several conversations with Professor Traube of Berlin as to the changes in the vascular system which followed upon chronic Bright's disease. Traube held that there were two forms of change—1, a degeneration of the coats; and 2, a true hypertrophy of the muscular walls of the arterioles. According to Ludwig and himself, this latter change was brought about by repeated spasm in these small vessels, from the action of the products of histolysis in excess in the blood upon the vaso-motor

centre. This change in the arterioles caused obstruction to the blood-flow, and hypertrophy of the left ventricle followed; and the action of the two hypertrophied muscular ends of the arterial system against each other led in turn to overdistension of the elastic tubes connecting them, and so to atheroma. Thus rupture of a vessel in the heart was common in these cases. As to Dr. Grainger Stewart's remark, that in time all kidney-disease tended to cirrhosis, he thought we should not overlook the effect of sustained hyperæmia in leading to an excessive growth of connective tissue. Such growth occurred in the brain, lungs, liver, and spleen, after prolonged hyperæmia; and its presence in the kidney under similar circumstances was but what might be expected. —Dr. GEORGE JOHNSON said that to discuss in a crowded room questions based upon minute points of anatomy, without the opportunity of appealing to specimens actually present, was in a high degree unsatisfactory. He would not occupy time by entering upon the disputed question of the intertubular character of the changes in the small granular kidney. He was prepared at any time to demonstrate by the aid of numerous specimens that the chief and the essential changes were intratubular; and he remarked, that those who adopted Virchow's doctrine did not even attempt to explain the striking appearances presented by the tubes which have been deprived of their epithelial lining—appearances which many years ago had formed the subject of a friendly controversy between Mr. Simon and himself, with reference to the minute anatomy of renal cysts. He was glad to hear that Dr. Grainger Stewart recognised the reality of hypertrophy of the minute arteries. Dr. Johnson, however, wished to say emphatically that the arteries of the pia mater, which had been chiefly examined by Dr. Stewart, were less constantly and decidedly hypertrophied than those in the kidney, in the skin, and in the mucous membrane of the intestines. Hypertrophy of the arterial walls implied a proportional overgrowth of all the tunics, of the external fibres as well as of the middle muscular. Dr. Johnson admitted the existence of atheromatous fatty, calcareous, and lardaceous degeneration of the arterial and capillary walls. He admitted, as did all pathologists, that inflammatory and tuberculous exudations often occur abundantly in the fibrous tunic of the minute arteries; but, after a careful examination of the specimens exhibited by Dr. Sutton the day before in the museum, he saw in them nothing pathological. Three specimens of pia mater arteries mounted in glycerine had the fibrous tunic of the arteries distended and rendered hyaline; while in a fourth specimen, preserved in strong spirit and water, the arterial tunics were all corrugated, and the external tunics rendered coarsely fibrous; the changes being all artificially produced. —Dr. SIMON remarked that the discussion had been carried on by six of the men who had done more than any others to advance our knowledge of this important question. Although some of the speakers held strong and original views, yet each evidently aimed not at the triumph of his own views, but at the discovery of truth. Indeed, all felt that, if any two of the speakers, however apparently opposed in opinion they might be, came together quietly, as Dr. Johnson had suggested, with specimens and microscopes before them, they would, without difficulty, ascertain the truth and come to a common opinion. It was evident, from the important communication of Dr. Grainger Stewart, containing a great body of facts bearing on the subject, and the discussion that ensued, that two different conditions of the artery were under examination. One of these conditions was degeneration of the walls of the small arteries, which was apt, like atheroma, dilatation, and aneurism of the aorta, to take place in spirit-drinkers, which might be present with contracted kidney, that kidney-disease being also caused by spirit-drinking, but which might be, and often was, present without contracted kidney. The series of cases occurring in the Edinburgh Royal Infirmary, and observed and brought forward by Dr. Grainger Stewart, conclusively supported this view. The other condition was thickening of the muscular structure of the artery, which was present in the majority of cases of contracted kidney, though absent in a considerable minority of them, which was generally associated with thickening and enlargement of the left ventricle, and which was seldom observed in cases in which the kidney was not contracted. As a clinical worker, the speaker had for years observed, and carefully recorded, the effects of contracted kidney on the condition of the heart and arteries. In those cases he generally observed, though not always, tension of the arteries, evidenced by feeling, not the pulse, but the radial artery itself, tight and full under the finger, and capable of being moved backwards and forwards, and yet not presenting the hard, beaded surface of atheromatous artery; the pulse being, at the same time, very feeble and soft, and in marked contrast to the tight condition of the artery. The sphygmographic tracings of the pulse gave evidence of the great arterial tension. The ascending aorta presented the signs of great tension and enlargement. The first sound was very feeble, often quite absent, owing to the blood being gradually

injected into an artery already tense with blood, and the second sound was loud, ringing, and extensive, especially to the right of the upper sternum. The impulse of the enlarged and tense artery could, in some cases, be felt beating in the second right spaces; and in these and other cases in which the pulsation of the artery could not be perceived, sphygmographic tracings were obtained by placing the sphygmograph and, on some occasions, the modified cardiograph over the ascending aorta. In some instances, the size of the aorta increased to such an extent, that a diastolic aortic murmur was audible, owing to slight regurgitation from insufficiency of the aortic valve; and, in one case recently observed, the diastolic murmur appeared and disappeared on several successive occasions, the alternate appearance and disappearance of the murmur being evidently associated with the alternate increase and diminution of the tension and size of the arch of the aorta. The left side of the heart was, at the same time, in these cases, enlarged and beating over a large area, and with increased force, and doubling of the first sound was audible over the interventricular furrow, and sometimes over both ventricles, the *finer* first sound due to the closure of the contraction of the right ventricle, the second *finer* sound to the delayed closure of the contraction of the left ventricle, owing to the difficulty with which it emptied itself into the tense arteries, and the increased time therefore required. The tension of the arteries, the thickening of their walls, the enlargement and thickening of the left ventricle, were all due to one common cause—the difficulty of sending the poisoned blood, poisoned owing to the kidney-disease, through the smaller vessels. The paper read by Dr. Grainger Stewart, and the discussion, had done much to make this difficult, and apparently contradictory, question clear, and to show that we have to do not with one, but with two conditions—one, degeneration of the arteries; the other, thickening of their muscular fibres. The thanks of the Section were eminently due to Dr. Grainger Stewart, and to the gentlemen who had taken part in the discussion, for this important contribution to our knowledge of disease.

SECTION D.—PUBLIC MEDICINE.

Thursday, August 7th.

How Parliament provides for the Purification of Rivers. By WILLIAM HOPE, Esq., V.C.—Mr. Hope commenced his paper by commenting on the manner in which the diffusion of epidemic disease is promoted by the practice of conveying sewage into rivers and streams. Notwithstanding the great expenditure of energy and money in inquiries and reports on the subject, nothing better than Permissive Acts and other imperfect measures had been the result. As to medical officers of health, he did not think that they had real practical power to develop a policy of primary prevention. They were powerless against river pollution; and the only real officers of health as regarded rivers were the judges of the Court of Chancery, who issued peremptory orders in cases where complaints were made to them. He believed that the hands of the Local Government Board required to be strengthened, and the public to be educated and made to understand the importance of this department. The Association could do much towards this object by showing how little real power medical officers of health have, in what a complete state of confusion the sanitary laws are, and how utterly unfitted ordinary corporations and local boards are to be entrusted to do anything but carry out the most precise instructions from central authorities who alone can be expected to understand and appreciate the expensive, but invaluable, investigations of Royal Commissioners and skilled experts. As additional legislative anomalies, Mr. Hope alluded to the following.—1. By the Metropolis Local Management Act of 1855 and its Amendments, the ratepayers of London are heavily rated for the purpose of pumping the sewage of London into the Thames. By the Thames Navigation Act of 1870, the same fortunate body of ratepayers are made to pay for dredging it out again. 2. Local Boards are encouraged by the Government to obtain land and apply their sewage to it for farming purposes. No farm, whether a sewage farm or not, can ever pay unless it be sufficiently stocked and supplied with sufficient farming capital, yet local boards are not allowed to raise this necessary capital of 10s. or 12s. per head of the population, except by means of a direct rate.—3. By Section XLIX of the Public Health Act of 1848, municipal bodies are compelled to receive into their sewers; practically, all the refuse that it may suit the inhabitants to turn into them. But the Court of Chancery grants injunctions, whenever called upon, to restrain towns from polluting rivers, or the sea, with the filth which Parliament compels them to receive into their sewers; but, although power has been conferred upon the Local Government Board to compel town authorities to construct sewers, it has no power to compel them either to make the connections between the

houses and the sewers, or to dispose properly of the sewage when collected. 4. In compliance with the Act of 1848, the town of Birmingham, with a population of 350,000, has duly polluted the river Tame. Mr. Hope then gave an account of the proceedings which took place some time ago in Parliament and in the Court of Chancery respecting the pollution of the river Tame by the sewage of Birmingham.

Mr. LIDDLE (Whitechapel) said that medical officers of health were not so well supported by local boards as they should be; and it could not be expected that the latter could feel an interest in scientific inquiries. If medical officers of health were thoroughly in earnest, they might do a great deal in promoting the public health; but they must act thoroughly independently; and so long as they were under the authority of the local board, they could not do so much as he hoped they would be able to do. He was a little amused at the ignorance displayed by a guardian of the connexion between cesspools and wells. They had rather an intelligent gentleman connected with their board, who had nothing to do with sanitary matters. He had his well and cesspool; and he told them very plainly that, whenever his cesspool was full, the well was full; and therefore it was important for him to have his cesspool always full. He hoped some means would be adopted to compel persons to have not only an adequate supply of water, but an adequate supply of proper water. The science of the day had gone to that extent; but it seemed satisfactorily to prove that the emanations from cesspools, and especially where those cesspools were used for the receiving of excrement of patients having typhoid and other epidemic disease, would produce the diseases from which those persons were suffering.—Dr. SHRIMPTON said that, as an individual, the medical officer never would have power. He would always have difficulties with the local board. The only means of giving him power was to establish a powerful medical hierarchy, to which he might appeal, and which would support him.—Dr. THURSFIELD (Wellington) said that, with regard to Mr. Hope's paper, he thought an infinity of trouble was introduced. Special bodies to make returns and arrange with the registrars of districts to make returns at intervals sufficient to keep him informed of the sanitary state of the district—that arrangement giving an infinity of trouble—had been knocked on the head by the Local Government Board refusing to sanction the payment to the registrars for those returns. The whole thing had dropped to the ground. He might say that the returns of deaths by the registrars to medical officers of health were essential for keeping them informed as to the condition of their districts. He had introduced the matter to the sanitary authorities of his district; and the Local Government Board within the last week had refused to sanction the payment for those returns, and therefore this most important means of knowing the health of the district had been taken away from him.—A MEMBER said that in his district there had been no medical officer of health; but some sanitary officer had been appointed, who had been round, and was supposed to attend to matters; and no doubt he did as well as he could. In an isolated part of his district, there were five or six cottages built very lately upon a piece of chalky ground, and in every one of these cottages typhoid fever raged; there were twenty cases and three deaths. It was difficult to make out, in cottages so new, how this could be, unless the arrangements were defective. He (the speaker) called the attention of the authorities as to what he conceived to be the occasion of this. The entrance to these cottages was at the back; and dipping from the backs of these houses were out-buildings, and cesspools attached. He imagined that the smell was the cause of the fever. He mentioned this, to call attention to the utter powerlessness of such an officer.—Mr. CARTER (Liverpool) said he was very much disturbed by Mr. Hope's contention that the medical officers were quite powerless to prevent disease.—Mr. HASTINGS (Chairman) understood Mr. Hope to say that medical officers were quite powerless to prevent disease by the pollution of water.—Mr. CARTER supposed the medical officer to make a house-to-house visitation. He made visits to hundreds of houses. In cases where the passage of pipes from baths into soil-pipe, and from the overflow-pipe to cesspools, caused the water to become contaminated, notice had been given to the landlord; and, in every case where no attention had been paid to the notice, the landlord had been summoned, and, without a single exception, the matter had been set right. Whether house-to-house visitation fell within the province of a medical officer of health under the Act, he did not know; but he did not see otherwise how the objects of the Act were to be carried out.—Mr. HASTINGS said that the members were exceedingly obliged to Mr. Hope for embodying his views in the very interesting paper which he had read.—Mr. E. CHADWICK said that he had looked over the various returns of health, particularly in the metropolis; and he found that they differed so materially in form as to make any statistical exposition very difficult. He suggested that, to make them generally useful, they should be made in one form, with

the omission of non-essential portions. It was the duty of the Local Government Board to do that; and, if they did not do it, it would be a great object to be attained by the medical officers collectively.

Hospital Out-patient Reform. By ALFRED MEADOWS, M.D.—Dr. Meadows gave an account of the work of the Hospital Out-patient Reform Association, with an abstract of the replies to their circular received from the various metropolitan hospitals. He said that he had not had time to prepare a paper, but would say a few words as to what he had been doing since the Hospital Out-patient Reform Association was formed. He had no claim to speak on behalf of the Association, except in his official capacity as chairman of the Association. Although he had worked for the last fifteen years among the out-patients of metropolitan hospitals, and had some practical experience of the abuses of hospitals, the subject was not one to which he had directed very much attention. He was on a committee of hospital physicians and surgeons, three years ago. Since then the subject had been worked more or less by that committee, and by the Association which was formed in January of this year. The Association was formed of general practitioners, who felt that the present system of out-patient administration in our metropolitan hospitals and dispensaries, effected a very grievous wrong on the great mass of general practitioners. A committee was appointed, and the committee drew up three propositions, which were carried almost unanimously, at a meeting held at the Medical Society's rooms, in March last. The committee was requested to communicate those resolutions to the governing bodies of several hospitals. They selected all the larger hospitals to which schools were attached, and some to which schools were not attached. To forty-eight applications they received only thirty replies. The results of these replies were as follow. Of the thirty, fifteen of them had replied specifically to the several resolutions which had been drawn up as recommendations for the basis of the reform of the out-patient system; the remaining fifteen replying generally. Three of the fifteen, who did not reply specifically, had simply acknowledged politely the receipt of the application; five more had referred the matter to some committee for further consideration, and he had not been favoured with the results of their deliberations; and five more replied that they did not consider any of the proposals of the Association applicable to their case; one said that reforms of some kind were in progress; and the other said that they were quite willing to act, provided that other hospitals would do the same. With regard to the other fifteen who replied specifically to the first resolution, "that each out-patient should be seen personally by one of the medical or surgical staff, and that no unqualified student be permitted to prescribe," twelve said that this resolution was in force, and that no patients were seen except by qualified men. Regarding the second resolution, "that a lay officer should be appointed to each hospital," thirteen had replied that this was distinctly in force. That was a very important statement, because it was certain that, until the last year or two, no such officer was appointed, and it indicated a very important reform of the out-patient system. Regarding the third proposition, "that patients should no longer be tempted to crowd hospitals by the offer of medicine gratuitously," they were not so fortunate. They thought that no medicine should be given gratuitously, and upon this resolution they had been signally defeated. By ten it was rejected absolutely as a thing not to be entertained, that no medicine should be given. In two others (St. Peter's Hospital for stone, and the Hospital for Epileptics), the medicine was paid for. He confessed, speaking for himself, and expressing also the opinion of the Hospital Reform Association, that they did not feel at all satisfied with the amount of work which had been done. They still felt that there were great abuses in the out-patient rooms in the various hospitals; and they felt very strongly that some reform was absolutely necessary. They thought that the governing bodies of the hospitals had hardly realised the gravity and enormity of the abuse which existed. There were some hospitals, he knew, who felt that the larger the number of patients that they could get—the larger the statistics, the greater the success of the hospital as a charitable work. He did not think it was creditable that they should have 100,000 in the course of a year. The number of out-patients who attended hospitals had been computed in a paper published in *Macmillan's Magazine*, by Mr. Fairlie Clarke, who was a careful and accurate observer, and would not make a statement unless he had very fair grounds for doing so. Mr. Clarke stated that 816,000 distinct applications for medical relief were made during the course of the year at the various medical hospitals of the metropolis. In Manchester the question was being agitated, with great probability of success. The medical profession and the lay governors had very lately become convinced that there was a great abuse, and they had determined to find some means by which these abuses might be remedied. Manchester was very prominent in the work of reform; and he hoped this would not be a failure. He could not point to any town where such energy was being developed

as in Manchester. He had private information that there was an almost unanimous opinion in favour of a large adoption of the provident system. Whether the provident system was capable of meeting all the requirements of the case, was a point upon which he felt somewhat doubtful; but he thought the provident system was one which would remedy, in a large part, the abuse with regard to the out-patient system. The provident system was by no means free from objection. There might be just as great evils in the provident system as in the free system, and, unless they very carefully guarded against abuse, the provident system would be just as great an evil for the medical profession as the free system was at present. But the abuses under the provident system would be of a more flagrant kind. He had had some experience of the working of the paying system among out-patients, and also with regard to the paying system of in-patients, and he had seen such abuses arising out of the paying system that he hesitated about its adoption in hospitals. He had no doubt that it could be hedged around with safeguards, but, unless great care was taken, the abuses would be quite as great as those which it was desired to remedy. There were only two ways by which the abuse of the out-patient system could be remedied; one being that to which he had referred, namely, the adoption of the provident system. Although that was liable to considerable abuse, still he should like to see it widely developed. He thought it would be of great advantage to London as to Manchester. The abuse was that, under the cloak of payment, the patients would demand as a right that which was now conceded, not as right, but as charity. The only other remedy for the abuse of the out-patient system was by the most careful scrutiny, conducted in the same way as that of the Charity Organisation Society. If careful inquiries were made in the out-patient rooms of our hospitals, it would be found that a large number would be unfit for gratuitous attention. He had seen much of out-patients, and this was a statement which could be substantiated. To institute this inquiry there must be a paid lay officer, for it would not be a proper thing to put it in the hands of a medical officer. Every applicant that came to him should be seen, and it should be his duty to satisfy himself of the justice of the applicant's claim. This involved a certain expenditure of the hospital funds; but that would be more than brought back by the saving of the cost of drugs. Then this lay officer should be thoroughly qualified for his work, and know not only the locality, and the circumstances of the patient, but there should be diligent inquiry before gratuitous medical relief was given.—Dr. ROYLE (Manchester) could not endorse the high opinion of Dr. Meadows with regard to provident institutions as a means of remedying hospital abuses, or of advancing the true interests of the medical profession. It was now generally admitted that there must be a vast amount of deception and abuses on the part of the public with respect to charitable medical relief. The working classes were never so prosperous, socially, politically (in fact they were masters of the situation), and financially, as they were at the present day; and in some of the reports which had been issued from gentlemen representing committees charitably disposed, they had fallen into great blundering in estimating the wages of the working classes. In the north of England, men of the artisan class would earn 38s. or £2 per week. That was the wage of the head of the family. This money was supplemented very often by the earnings of the wife and the children; so that in many of the working class habitations of the country, there was a larger amount of money than was got by many a hard-worked medical man, and also by many a hard-worked curate. The simple fact remained, that one-fourth of these were paupers so far as medical relief was concerned. A man with half an eye could see that this was a monstrous—he would use a gentle term—deception. Taking the population of Manchester and its neighbourhood as something like 500,000, he found that the amount of money (the result of private beneficence and public subscriptions) was something like £70,000 or £80,000 a year, irrespective of the vast amount that was spent in Poor-law relief and the relief which was given to the pauper class specially. It was shown that there were 90,000 people receiving relief in the hospitals, and about 20,000 paupers attended to by the Poor-law surgeons; so that they had 110,000 of the people in receipt of medical relief. And of the remaining part of the population of 400,000, it was computed that 300,000 would come properly as the members of district provident societies, and the others would be able to pay the medical men in the fair ordinary way. Such a computation showed at once the chance the medical profession could have, or would have, of maintaining their position; in fact, their means of getting a living at all would be perfectly Utopian. Dr. Meadows had said that some of the governors had replied that they could not refuse to give medicine gratuitously. The charities in London were largely supported by bequests; and it was a gigantic abuse of the trust not to charge people who could afford to pay. They had no right to use the income for the purpose of a scheme of medical relief in opposition to the

that this can, under any circumstances, be productive of typhoid fever. Even granting that the grass has, just before being cut, been flooded with recent sewage, and that the specifically diseased elements of typhoid fever have attached themselves to the blades of the grass, they would, after undergoing the processes of digestion and assimilation, have to re-appear in the fluid secreted by the lacteal glands, in a state unaltered, as far as their power of producing disease is concerned. But these stages involve both bad farming and a series of physiological processes, which, to say the least, are novel; and knowing, as we do, that the value of sewage-grass as a food for cattle is now becoming generally recognised, we cannot but regret that, on grounds both unscientific and trivial, an attempt has been made to alarm the public mind, and to throw discredit on the produce of sewage-farms. Whilst we see every reason why sewage-farms, and the vegetation they produce, should be subject to the strictest scrutiny, especially when they appear to be in any way associated with conditions which are injurious to health, we would urge that no grounds of complaint should be laid against them, unless they are based on a careful and scientific investigation. If, however, sewage-farms are to remain free from suspicion, they must be properly managed; and we ought not to hear of nuisances arising from them, of grounds so supersaturated that the sewage lies about in offensive ponds, for, under such circumstances, their produce must almost necessarily be rendered unfit for consumption, and, if given to cows, will be calculated to affect the quality of such a secretion as milk; but the abuse of a sewage-farm is, as of anything else, no argument against its proper use.

We are glad to state that the accounts of the state of health of M. Nélaton are rather more satisfactory.

THE Russian lady medical students have been refused permission to study medicine at the Universities of Strasbourg and Giessen by the authorities of those institutions.

M. PAUL RAGIER, who died at Belley on January 24th, has left to the cantonal hospital of Geneva the whole of his fortune, with the exception of 171,000 francs bequeathed to other charitable institutions.

SINCE the Adulteration of Food Act has been carried into effect in St. Pancras parish, only one article has been sent by a private purchaser to the analyst for examination, and that was a pint bottle of pale ale with the brand of a well known brewer, and with it a fee of half a crown was paid by a teetotal vestryman. Dr. Stevenson, the analyst, certified that the article was not adulterated.

MR. JOHN STUART MILL has bequeathed £3,000 to any one University in Great Britain or Ireland that shall be the first to open its degrees to women; and to the same University a further sum of £3,000 to endow scholarships for female students exclusively.

DURING the week ending August 23rd, there were only 164 cases of medical outdoor relief in Marylebone parish, against 226 in the corresponding week of last year. A week or two ago, in the return of one of the assistant-registrars, there was no death registered, and he received a letter from head-quarters asking for an explanation, the fact being that no death had occurred.

DR. VON MUNDY has been invited by the Austrian War Ministry to take charge of ambulances, with from fifteen to twenty army surgeons, on the Franco-Spanish frontier for a period of six months. He performed a similar duty with much zeal during the war between France and Germany.

THE Metropolitan Police report that in the metropolis (exclusive of the City) 118 persons were run over and killed in the streets in 1872; 10 by

cabs, 13 by omnibuses, 1 by a tramway car, 6 by carriages and broughams, 18 by light carts, 19 by waggons and drays, 30 by vans, 2 by horses ridden, and 19 by heavy carts. The total is below the six preceding years' average. But the number of persons maimed or injured in the streets in 1872 was 2,677, a number much above the average. The injury was done in 591 instances by cabs, in 145 by omnibuses, in 12 by tramway cars, in 322 by carriages and broughams, in 869 by light carts, in 127 by heavy carts, in 106 by waggons or drays, in 398 by vans, in 6 by fire-engines, in 96 by horses ridden, in 4 by velocipedes.

MORE FATALITY FROM CHLOROFORM.

THE deaths which it has been our painful duty to record during the last quarter have certainly not been less numerous than usual. We referred the week before last to the death from this agent of a lady in Brighton. We now regret to hear from the *Cincinnati Clinic* of the death of a young and apparently healthy German, who presented himself to a medical man in the city to have a machinery-wound of the fingers attended to. Chloroform was administered; and, before full narcosis was established, the patient was seized with convulsions and died.

THE CHOLERA IN GERMANY.

FROM August 21st to 28th, 91 cases of cholera occurred in Berlin; making, from the commencement of the epidemic, 220 cases, of which 144 were fatal, and 63 remained under treatment. There were 28 deaths from cholera in the week from August 15th to 21st. A committee of inquiry into the cholera has been lately sitting in Berlin; its proceedings were adjourned on August 23rd, but the result of its deliberations is not yet known. One of the members, Professor Hirsch, has gone to Bromberg, to study the course of the disease in the province of Posen and East and West Prussia, especially in the neighbourhood of the Vistula. Professor von Pettenkofer, another of the members, has returned to Munich, where, up to August 18th, there had been 332 cases of cholera, with 124 deaths. In Königsberg, from August 17th to 23rd, there were 315 cases and 146 deaths. In Warsaw, there were 209 cases and 69 deaths on August 14th and 15th. Since the outbreak of the disease, there had been 1898 cases, of which 651 proved fatal. The disease has attacked not only the garrison, but all classes of the inhabitants.

ATTEMPT ON MARSHAL MACMAHON'S LIFE.

AN individual was arrested on Monday last, as he manifested an intention of taking the life of the President of the Republic. On medical examination, he was found to be the subject of mental aberration.

DIPSOMANIA.

WE gather from a notice of the Annual Report of the Superintendent and Physician of the New York State Inebriate Asylum, Binghamton, New York, for the year 1872, in the *Boston Medical Journal*, that this report is largely taken up with the consideration of inebriety as it appears in those who have lost all self-control in the use of alcoholic beverages. It is assumed—1. That intemperance is a disease; 2. That its primary cause is a constitutional susceptibility to the alcoholic impression; 3. That this constitutional tendency may be inherited or acquired. 4. That it is curable in the same sense that other diseases are. In other words, as a disease, inebriety has its cause, diagnosis, prognosis, and treatment as clearly marked and as well defined as are those pertaining to other diseases. To support these propositions, the report cites at considerable length the opinions of Drs. Christison, Rush, Woodward, Parker, Flint, Anstie, Druitt, and other recognised authorities of this country and Great Britain, and asserts that "the fact that the inebriate is suffering from an actual disease which deprives him of the power of self-control should for ever do away with the supposed disgrace and mortification attendant upon such a condition; and there should be no more social disgrace in seeking a cure for this malady, than there is in being taken to an hospital for the treatment of a fractured limb." As to the time required, the report advocates that

patients should, as a rule, remain at least six months under treatment. Several have become inmates of the institution who were addicted to the excessive and habitual use of opium. In the treatment of such cases, the "weaning process" is advocated, "letting the patient down by degrees with comparatively little suffering." The number of patients admitted during the year was 249; discharged 253; remaining at the close of the year 81.

THE TYPHOID OUTBREAK IN MARYLEBONE.

WE regret to learn that a considerable number of relapses have occurred amongst the unfortunate persons who became affected during the recent outbreak, and that the type of the disease has proved to be of a severe character. We fear also that the mortality has been much above that of many epidemics. Many of the sufferers fed on milk, which is ordinarily the staple of support in typhoid fever, were the unsuspecting recipients day by day of the very poison which first struck them down; and it is not improbable that the intensity of the attack and the occurrence of relapse may be explained from this circumstance. The following are the statistics, up to this date, of the number of families known to have been affected by the milk-supply:—In Marylebone, 65; St. George's, Hanover Square, 31; Paddington, 20; and other parishes, 4—total, 120.

MILK AND TYPHOID FEVER AT WOLVERHAMPTON.

SIXTY cases have in all occurred in the borough of Wolverhampton, all or nearly all from the contaminated milk. Four deaths have already taken place; but we are glad to say that the other patients, including the milkman's own children, are mostly improving. Mr. J. P. Love, the medical officer of health, informs us that the spread of the disease has been, he believes, arrested; and that proper sanitary measures have been adopted to reduce to the minimum the danger to the public health.

ASIATIC CHOLERA AT HAVRE.

THE epidemic of Asiatic cholera at Havre has assumed a serious character, and has caused much excitement in the population. Of 21 civilians treated in hospital, 9 have succumbed soon after admission with grave symptoms. Of 12 soldiers attacked during the week, 5 have died. In the fatal cases the rapidity of the onset, the short duration of the affection and the violence of the symptoms have been remarked. The concealment of the general civil mortality, which is considerable, causes increased alarm. The cholera was imported by ships arriving from infected ports in Germany. Montvillier and Harfleur and the suburbs have been equally affected by the epidemic, but details are wanting. The disease has also appeared in Rouen; where, according to a letter in a French medical journal, on August 25th, there had been 74 cases, with 39 deaths, in the two hospitals.

THE INJURED AT THE METROPOLITAN RAILWAY ACCIDENT.

WE are informed by Mr. Thrupp, House-Surgeon, that the three persons admitted into St. George's Hospital are doing well. They presented on admission extreme symptoms of nerve-shock from the violent concussion, of which they had been the subjects. James Day had received also a cut in the face, and James Bowyer a bruised knee. Two other cases, one of fractured forearm and the other an injured knee, were also attended to at this hospital, and are progressing favourably.

EMBALMING BY SUPERIOR POWER.

AMONG the embalming processes of M. Marini, which constitute one of the curiosities of the Vienna Exhibition, is one by the deposition of insoluble salts in the tissues by an electric current, which is called the "process by petrification". M. Thalberg, says the *Temps*, has been embalmed by M. Marini, by order of the widow, and is preserved "in the fresh state" in her *salon*. Recently, M. Marini was called upon to embalm M. Daffito, a former prefect of Naples. The process of petri-

faction requires the prolonged use of the electric current; and, to avoid the necessity of prolonged attendance at the cemetery, he arranged an electric bell which tinkled so long as the current passed, desiring that he should only be summoned if it ceased to sound. The popular imagination was excited by this peculiarity, and in Naples it is believed that it was the devil in person who was ringing the bell of extreme unction in the ears of the former prefect; for M. Daffito died without confessing, and had a civil interment.

OPEN APPOINTMENTS IN THE DUTCH MEDICAL SERVICE.

WE are authorised by the Consul-General of the Netherlands to state that the Government of the Netherlands has agreed its willingness to employ British Surgeons for service in the Netherlands East Indian army on the following conditions. The applicant must lodge with the chief of the medical staff of the Netherlands army at the Hague his name and address, along with satisfactory certificates as to character. He must be under thirty-five years of age; and he must be able to speak either Dutch, French, or German well enough to be able to pass a short *visû voce* examination. This engagement will be for five years, and may be prolonged. Successful candidates will rank with first lieutenant on the staff. The pay will be 2,230 guilders (about £185) *per annum*, with prospects of promotion. The Netherlands Government will grant a first-class passage to the seat of war, and a premium of 4,000 guilders (about £300).

A MILITARY SANITARY CONFERENCE.

DR. WITTELSHOFER and Professors Mundy and Billroth have issued invitations to a private conference, to be held in Vienna on October 6th, for the purpose of discussing subjects connected with military hygiene and with the voluntary aid of the sick and wounded in time of war. Among those who are expected to attend are Beck of Karlsruhe, Esmarch of Kiel, von Langenbeck, Löffler, and Virchow of Berlin, von Stromeyer of Hanover, Demarquay and Ricord of Paris, and the Presidents of the French, German, and Swiss Societies for the Aid of the Wounded.

THE SANITARY MILK COMPANY.

WE are glad to hear that the proposed milk company alluded to by us last week promises to be successful. The Sanitary Milk Company is being formed to establish dairies, for the supply of milk to the metropolis, on a system such as will not only prevent adulteration, but ensure the proper sanitary supervision of the dairy and that the cows yielding the milk shall be efficiently protected from foot-and-mouth-disease, pleuropneumonia, and other contagious affections. To ensure the comprehensive and efficient promotion of the undertaking, a considerable amount of capital is required. The importance of the scheme will no doubt, however, secure the requisite funds very speedily, and obtain the recognition and support of medical men, who particularly recognise the value of a reliable milk-supply.

PROJECTED AQUARIA.

IN a letter addressed to the *Rappel*, M. Nicole announces a projected aquarium in the Champs Elysées destined to rival those of Sydenham, Brighton, Berlin, Hamburg, etc. The project, as stated, savours of the kind of confusion of ideas which has shipwrecked more than one promising project of the kind. It is a great error to class in one sentence these different aquaria. The aquaria of Sydenham and Hamburg are excellent models; those of Brighton and Berlin are full of errors to be avoided; and a majority of the continental aquaria have failed by reason of similar errors. The faults of construction of the Brighton and Berlin aquaria have been sufficiently exposed in some articles in the *Times* and *Pall Mall Gazette*. They have been constructed by architects who were ignorant of natural history, who thought chiefly of making a show, who spent large sums on trivial decorations and grotto-endavours to obtain a childishly realistic impression of sea-work, and who were unacquainted with the vital

building lined with iron was used, in which also disinfectants were used; for he never trusted to heat alone, but always used sulphur. In using sulphur in rooms, the bed should be taken down and put upon chairs, and the blankets and mattresses placed on end, so that the whole might be as fully as possible exposed to the disinfectants. Care must be taken, in setting fire to the sulphur, that it did not burn the things. The sulphur to be burnt should be put into a pan, and this in a vessel of water; so that, if the sulphur happened to overturn, it went into the water. He agreed with Mr. Wanklyn that, if they used common salt and sulphate of iron, they would not have to go further for disinfectants.—Dr. BOND (Gloucester) said he had considered how to provide an apparatus for disinfection. Being anxious not to put the authorities to much expense, he had made an apparatus which very closely resembled Dr. Ransom's. He was glad to see that Dr. Ransom had had his in operation for some time. It struck him that, wherever gas was available, it provided all that was necessary; and he should be glad to know whether there was any objection to make a disinfecting apparatus portable, because it was exceedingly desirable that it should be taken to the house where the clothes were to be disinfected. He had roughly designed a form of portable apparatus which would answer certain other purposes. It was very important, in order to save expense, to combine several objects. It struck him whether it was not necessary to have an ambulance for removing the sick, a means of disinfecting clothes, and carrying disinfectants. He did not understand how common salt was to be used for the disinfection of clothes.—Mr. WANKLYN said that the only way of disinfecting clothes effectually was by burning them. Something might be done by exposing them to the weather, and to water and heat. He did not believe that liquids could be disinfected.—Dr. RANSOM said that the cost of his apparatus, of which only one had been erected, and the drawings of another were prepared, was £50. If it came into general use, it would cost about half this sum. He thought that heat was the best disinfectant for clothes; but still he was inclined to think, with Mr. Wanklyn, that they could hardly be disinfected. As to the sulphurous acid, it destroyed the paper and bed-hangings.—Dr. TRIPE said that he did not use the word disinfectant in its strictly chemical sense. He used it to mean the prevention of the reciprocal action between the virus and the body upon which it might have acted.—Dr. SYSON said that his opinion was, that the best thing to do was to destroy the article. By disinfecting with water, money and time would be wasted, and certainly the disease would be driven elsewhere; it was merely picking the germs to be unpicked for the use of some one else. Sulphate of iron could only exercise a certain influence. His practice had always been to do a thing well, or not do it at all, rather than get into a feeling of false security by only half doing it. He should be happy to hear of Dr. Ransom's apparatus being thoroughly effective. As to the cost, it should not be reckoned against human life.—Dr. GRIEVE (Hampstead) had had practical experience of disinfection at Hampstead. They had received 12,000 cases of small-pox; and they disinfected the patients, and gave them, on leaving, the same clothing they had on when they entered the hospital. These patients had been traced, and there were no signs of their having carried the infection with them. The mode was to use heat combined with sulphur and sulphurous acid. It was found that they could be used in a chamber at a temperature of 230 degs. Fahr., without damaging the clothes. The buildings, which were of iron, were now occupied by pauper imbeciles. The plan recommended by Dr. Tripe was followed. Sulphur was burnt in the buildings; and, to make assurance doubly sure, every inch of the surface was washed with carbolic acid, and well watered with the fire hose. The buildings were thus prepared, and there were now between 300 and 400 inmates, and not a single case of small-pox had arisen. Disinfection could not have been put to a more crucial test.—Dr. FARR (London) said that what was wanted to be known was, whether disinfection was effectual against other diseases as well as small-pox.—Dr. TRIPE said that he never knew of an infectious disease spreading after the application of sulphur at a temperature of 230.—Mr. HASTINGS said that, at the meeting of the Social Science Association, to be held at Norwich in the beginning of October, there was to be an exhibition of sanitary appliances; and he would suggest to Dr. Ransom to exhibit there the actual model, so that it might be seen, if necessary, in operation. Thus a more accurate idea would be arrived at as to how far it would be desirable to erect it in other places.—Dr. RANSOM said that he was obliged to dissent from the sweeping proposition of Mr. Wanklyn. He had the evidence of Dr. Henry of Manchester, who proved the easy destruction of the activity of vaccine by exposure to a temperature of 140 degs. Fahr., for an hour. The close analogy between that and small-pox, made it exceedingly probable that the virus was destroyed by heat at a moderate temperature. With regard to scarlet fever, the object had been attained; for the clothes worn by those suffering from that disease had been subjected to the

treatment, and were afterwards worn by others, and no harm had arisen from it. That was recorded in the *Philosophical Magazine*, volumes 10 and 11. With regard to the destruction of clothes, that was practically impossible. Nothing would persuade people of a certain class to destroy their bedding and furniture (which relatively to their income were very valuable), and nothing would induce the ratepayers to pay for them. If it could be shown that clothing could be disinfected tolerably safely for a small sum, many people would take advantage of it. His object had been to remove the difficulty in the way of applying heat; and he trusted that in the course of time his suggestion would remove some of those evils.—Mr. WANKLYN said there were two ways of getting rid of infectious material. All organic matter was destroyed by a red heat, or by powerful chemicals. Many infectious materials were comparatively easily destroyed; he believed that the matter of small-pox perished as infectious material below even the boiling point of water. There was another way, and that was by extreme dilution. The material was a chemical substance, and at a certain point it ceased to be poisonous. By extreme dilution germ-poison could be destroyed. A certain quantity of water destroyed these germs, as far as development was concerned. With regard to the disinfection of clothes by heat, he thought that Dr. Ransom had furnished the answer. Flock must be heated twenty-four hours before the whole mass got the temperature. He did not think that it would be practical to disinfect the ditches; but he believed that something might be done to the drains and sewers. If there were an abundant supply of water, he did not believe that any disinfectant was needed. It was only when the surface was getting dry that he believed that sulphate of iron and other things were necessary. He utterly disbelieved in the use of carbolic acid for this purpose.—Mr. HUNTLY (Jarrow) said that he came from a town where the atmosphere was pervaded with chlorine. They could not pass through the streets, without having their noses tickled with it, and their eyes filled with it. If this chlorine were disinfectant, epidemic disease ought to be altogether absent; but he was sorry to say that this was not so. Jarrow had suffered from small-pox as severely as most places; and, from time to time it was visited by various diseases.

Bertillon's Statistics on the Comparative Mortality of the Married and Single. By C. R. DRYSDALE, M.D.—Dr. Drysdale remarked that the statistics furnished by Bertillon (*Acad. de Méd.*, 1871) from data collected in France, Belgium, and Holland, showed most strikingly that, both in males and females, single life was unsafe and opposed to longevity. In men it seemed that from 25 to 30, 1,000 husbands furnished 6 deaths; 1,000 single men 10; and 1,000 widowers no fewer than 17½ deaths; and so on for all higher ages of life in males. But it seemed that young men marrying before 20 were apt to die younger than single youths in France; for, whilst the deaths of 1,000 unmarried young men were only 7 annually, the mortality rose to 50 in the married. Hence it was clear that single life after the age of 20 was unsafe for the male sex. Dr. Drysdale thought that bad habits of all kinds were more common in single men, such as alcoholism, narcotic poisoning, and masturbation. These accounted for the extra mortality of single men and widowers; and for their more frequent insanity in many instances. Women, after the age of 25, died less rapidly when married than when single; from 50 to 55, 1,000 married women showed 15 deaths, and 1,000 single women 26 deaths; and widows of 45 were less sickly than spinsters of that age. Members of either sex marrying at 20 had five years longer to live than if they had remained single. Crimes and insanity were less common in the married than in the single. Dr. Drysdale concluded, from these statistics, that modern emigration, as it took away many males, was injurious to the health and happiness of females in Europe and of males in the colonies. Marriage should be almost universal in adults; and when hygiene was more studied, it would be seen to be one of the requisites for a healthy mind as a healthy body. At present, owing to the rougher and more glaring evils of want of sufficient food and good air among large masses of the poor being paramount, the question of sex was neglected; but, in reality, it was perhaps the fundamental question, since on marriage depended the great question of over-population, confessed by all scientific writers to be the origin of most of the evils of the race.

SECTION F.—PHYSIOLOGY.

Wednesday, April 6th.

AN introductory address was delivered by the President, Professor HUMPHRY, M.D., F.R.S. It was published at page 16 of the JOURNAL for August 9th.

The Constrictor Action of the Intercostal Muscles. By A. RANSOME, M.D. (Manchester).—The object of the paper was to show that the ribs alter in their chord lengths during forced breathing—a fact proved

both by stethometric measurements and by means of callipers suitably constructed. The forces producing this alteration of shape are still doubtful; but since the change takes place in the true sternal ribs as well as the diaphragmatic ribs, it must be effected by intrinsic thoracic muscles. The widening diameters of the rib circuits will enable the intercostals to draw inwards in forced expiration, when the lower ribs are fixed in, and the oblique direction of their fibres acting upon curved elastic bones will also tend to increase the curvature. Other constrictor muscles have a similar arrangement of fibres. This view does not exclude the other actions of the intercostals. This inbending of the ribs has important practical bearings.

On Currents occurring in Fluids kept in Closed Vessels, and their bearing on Endosmosis, Diffusion, and Cyclosis. By G. RAINY, Esq.—This paper described certain apparatus, by means of which the existence of continued currents in fluids kept in closed vessels was demonstrated. The movements were attributed to the joint influence of cohesive attraction and gravitation; the influence of temperature upon them was noted and explained. Their continuance was held to be explained by changes in the direction and intensity of the attraction of gravitation produced by the rotation of the earth, etc. The principles here obtained were applied to the explanation of the several well-known natural phenomena mentioned in the title.

Researches on the Physiological Action of Light on the Retina. By J. G. MC KENDRICK, M.D.—Dr. Mc Kendrick gave an account of recent researches made in conjunction with Mr. James Dewar. He described the mode of experiment, and generally the results obtained.

The Cause of the Secondary Waves of the Pulse as drawn by the Sphygmograph. By A. L. GALABIN, M.D.—The author described a combination of elastic tubes, by the attachment of which to the heart of a sheep, and to an artificial heart of India-rubber, counterparts of the most typical varieties of pulse were obtained. He discussed the cause of the "first secondary" or "tidal" wave; and reviewed the present conflictive theories, especially those of Dr. Burdon Sanderson, Dr. Anstie, and Dr. Balthazar Foster; afterwards giving what he considered to be its true explanation. The dicrotic wave he regarded as not solely due to recoil from the closure of the aortic valves, for it occurred when they were entirely absent.—Dr. HUMPHRY remarked that the use of the sphygmograph illustrated the difficulty of explaining, by physical laws, the action of physical apparatus designed to register natural phenomena. No one had been better trained than Dr. Galabin for the investigation of such physical questions.—Dr. RUTHERFORD agreed with Dr. Galabin in rejecting the percussion wave, and also the dicrotic wave, more especially as the latter was generally the result of the action of an elastic spring.—Dr. ORD referred to the question of the fulness and emptiness of arteries as affecting the character of a tracing.—Mr. F. A. MAHOMED attributed more to percussion than the other speakers, and stated that, in certain cases, dicrotism was produced by increased pressure.—Dr. GALABIN believed that dicrotism was associated with a state of low arterial tension.

On the Occurrence of a Supracondyloid Process in Man. By JOHN STRUTHERS, M.D. (Aberdeen)—In the course of his paper, Dr. Struthers showed numerous specimens to illustrate the importance of the supracondyloid process in surgery, anatomy, morphology, and development. In conclusion, he stated that the occurrence of these processes could only be explained by the theory of hereditary descent or evolution.—The PRESIDENT made a few remarks agreeing generally with Dr. Struthers. He did not, however, think that the question of evolution was by any means so near a settlement as many supposed.—Dr. RUTHERFORD referred to Dr. Struthers's previous labours in this field.—Dr. SLADE (Boston) inquired whether the process occurred uniformly on both sides.—Dr. STRUTHERS replied that it did not.

*On the Physiological Effects of *Aethusa Cynapium*.* By JOHN HARLEY, M.D.

On the Action of the Ciliary Processes, Ciliary Muscle, and Iris in Accommodation. By A. T. NORTON, Esq.—The object of the paper was to show that the ciliary processes are the immediate agents in the function of accommodation, the ciliary muscle acting as an erector of the processes; also that the existence of an iris is not necessary for the process of accommodation, but that rapidity of accommodation is dependent upon the iris.—Dr. G. HARLEY set aside the idea of the action of the ciliary processes alone, and agreed with Mr. Norton in attributing the changes of accommodation to changes of vascularity in the ciliary processes.—Mr. PRIESTLEY SMITH (Birmingham) questioned if the flattening of the lens was a passive process.—Dr. LAIDLAW PURVES thought that the rapidity of movement in accommodation was too great to be consistent with erection.—Mr. NORTON replied, and pointed out that the use of the iris was not to cause, but to quicken accommodation.

Friday, August 8th.

General and Microscopical Examination of the Decidua, Chorion, etc., in a recent specimen of a Gravid Uterus which contained a perfect Ovum between the fifth and sixth weeks of Development. By ROBERT J. LEE, M.D.—The difficulty of obtaining specimens of the uterus containing an early ovum was assigned as the cause of the difference of opinion amongst physiologists on certain anatomical and microscopical details connected with the subject of foetal development. The specimen under consideration enabled the author to determine by examination in the fresh state the character of the fluid which fills the decidua cavity; also to ascertain that the villi of the chorion are covered with ciliated epithelium before they attach themselves to the inner surface of the decidua reflexa. The period of gestation is divided into one which precedes the formation of the placenta, when all the villi are free, and that when the placenta is perfectly formed. The presence of a space between the decidua reflexa and the villi of the chorion, full of maternal blood, in which the ciliated villi are immersed, assists in the explanation of the functions performed by them. The rest of the communication contained remarks on the views entertained by embryologists on the structure of the decidua, the hydroperic fluid, and the function of the vesicula umbilicalis; also the condition of the embryo, as far as regards the means by which it is nourished and changes in the blood are effected, is compared with that which obtains in the later period of gestation. The practical importance of the subject in relation to the pathology of the ovum, particularly of the diseases to which the chorion is liable, was briefly stated.

Crystallisation of Nitrate of Urea from Urine. By J. W. MOORE, M.D. (Dubl.)—In this paper, the author reviewed the different determining causes of crystallisation of nitrate of urea from urine which had not been subjected to previous artificial concentration by evaporation, under four headings: 1, nature and density of the acid employed in the experiments; 2, temperature of the air; 3, natural concentration of the urine; and 4, influence of morbid states of the urine. The paper was based on the results of 280 experiments on as many specimens of urine having a mean specific gravity of 1019.2, and examined at a mean temperature of 53.7 Fahr. In 103 cases, or in 36.8 per cent. of the total number, crystals of nitrate of urea were formed on the addition of nitric acid simply, no preliminary steps of any kind having been taken, beyond the removal of albumen in albuminous specimens. Of the 280 experiments, 128 were performed in the summer six months, and in 27.4 per cent. of this series of experiments, at a mean temperature of 59 deg., nitrate of urea was obtained without artificial concentration of the urine. The remaining analyses, 152 in number, were made in the winter six months; and in 44.7 per cent. of this series of experiments, at a mean temperature of 46.5 deg., nitrate of urea crystallised out from the unconcentrated urine. The excess or apparent excess of urea was associated with a deposition of urates or of uric acid in 49 cases, with oxalate of lime in 34 cases, with the presence of albumen on 12 occasions, with an excess of earthy phosphate in 8 specimens, with the presence of sugar on 4 occasions. The results of the experiments seemed to justify the conclusion that in Ireland crystals of nitrate of urea may, as a rule, be obtained without evaporation of the urine, where the following conditions are fulfilled. The density of the urine should be about 1025; the temperature of the air should be moderate, about 50 deg. Fahr.; the urine should be non-saccharine, and, if albumen be present, it should be removed by heat and filtration; lastly, the acid employed in the experiment should be of sufficient strength, pure, and added in proper quantity—namely, in almost equal volume to the portion of urine experimented upon; the acid most suitable for the purpose being the "*Acidum Nitricum*" of the *British Pharmacopoeia*, 1867, of specific gravity 1.42, and free from nitrous acid.

The Passage of the White Corpuscles through the Capillaries. By W. LAIDLAW PURVES, M.D.—The author said that no stomata are found in the endothelium of the capillaries either before or during inflammation. The white corpuscles make their own openings, which close after the passage of the corpuscles. The white corpuscles were never seen to pass through the body of the cell. They make their exit between the cells, and often where three cells border on each other. Except at the time of passage of the white corpuscle, there is no trace of change either in the cell-walls or in their nuclei.—Dr. NORRIS (Birmingham) pointed out the agreement between the arguments of the paper and his own discoveries.—Dr. J. EDMUNDS quoted Hancock's experiments with chewed India-rubber, and the passage of shot through India-rubber, in illustration of the healing of tissues after perforation.

The Physiological Influence of Alcohol.—By JAMES EDMUNDS, M.D.—In concluding his paper, Dr. Edmunds submitted the following propositions. 1. Alcohol, if a food, is the most absorbable and rapidly diffusible food-substance with which we are acquainted, and one, more-

over, which is utilisable without effort from the digestive organs, but in these respects a weak solution of sugar has nearly the same advantages. 2. A considerable portion of the alcohol is excreted from the body unchanged, and, therefore, the use of alcoholic beverages must involve fruitless wear and tear of the excretory organs, as well as a total waste of the excreted alcohol. 3. The utmost possible good value of alcohol must be less than that of the sugar from which it is manufactured; and, therefore, its use as an ordinary article of food must, at the present relative prices of sugar and alcohol, be a vast monetary extravagance. 4. Alcohol, if a food, stands apart from all other foods in its want of innocency in its other relations to the tissues, and a large portion of the degenerative changes which lead to disease and early death grow out of the use of alcoholic beverages. 5. The presence of alcohol in the blood retards the oxydation of effete matters, and gives a putrescent tendency to the system. 6. In large doses, alcohol is a substance which narcotises all animal tissues, and invariably destroys life if administered in sufficient doses. 7. The so-called stimulating effects of alcohol in small doses are really finer shades of narcotisation, disguised by efforts on the part of the system to excrete the injurious substance and to compensate for its disturbing influence. 8. All alcoholic beverages are ordinarily taken for the alcohol which they contain, and would not be taken were their alcohol abstracted. 9. The non-alcoholic constituents of these beverages may all be obtained in their most advantageous condition, and at a fractional cost, in common-place articles of food.—Dr. RUTHERFORD thought that alcohol was a stimulant to the circulation.—Professor BINZ (Bonn) criticised the paper, and gave the result of his own investigations into the subject. He classified alcohol physiologically with quinine.—Mr. MAHOMED regarded alcohol as a specific drug, neither a stimulant nor a narcotic alone.—Dr. WADE (Birmingham) had observed the beats of the pulse in fever cases to be reduced by a small dose of alcohol. He recommended a more careful investigation of the effects of varying doses.—Dr. EDMUNDS replied to the remarks of each speaker.

The Action and Sounds of the Heart. By GEORGE PATON, M.D.—The author remarked that Dr. Hope, in his experiments on the denuded heart of an ass, found that a sound was produced by the blood recoiling against the sigmoid valves and closing them. But he believed that this took place during the diastole of the ventricle, and was produced by a column of blood in the aorta and pulmonary artery falling back when the propelling force of the ventricle was withdrawn. This would have been the case if the ventricle had impelled the blood along rigid and unyielding tubes. But the aorta is distensible and elastic, and on being distended by the ventricle instantly reacts, and forces the blood back against the valves and closes them, as it impels the wave along the arch, the ventricle being still contracted. And the view, that the elasticity of the distended aorta forces the blood against the valves and shuts them during the ventricular diastole, is opposed to the fact that the pulsation of the aorta is synchronous with the contraction of the ventricle, and shortly precedes the pulse at the wrist and extremity of the arteries, which can be felt before the second sound commences. The question to be decided was, when are the times of disease of the sigmoid valves? In all his experiments on the heart, whether in cold or in warm-blooded animals, Dr. Paton had perceived, that the distended aorta instantly reacts, forcing the blood against the valves, and closing the orifice in impelling the wave onwards. The blood could not be propelled in successive waves along an elastic tube like the aorta, without closing the aortic valves as the arterial systole commences. For, if the valves were not closed when the distended aorta reacted, it would force a portion of the blood back into the ventricle as it impelled the wave onward. Consequently, the second sound of the heart cannot be produced by the closing of the aortic valves, as this takes place at the commencement of the arterial systole, and not at its termination. The order of the phenomena was stated to be as follows: the ventricular contraction, the aortic impulse closing the valves, and the pulse produced at the wrist and extremities, after which the second sound commences. The mistakes that physiologists have made, and to which they still adhere is, Dr. Paton said, in believing that the ventricle is dilating when the arterial systole takes place. But the ventricle has just finished its contractile impulse, distending the aorta, and is still contracted, when the aorta reacts, forcing the blood against the valves, and closing them as it impels the wave along the tube, and the sound produced by the closing of the aortic valves terminates the first sound of the heart. The first sound is produced by the force with which the blood is propelled through the aortic foramen and recoils against the valves, closing them. The first sound, according to Müller, precedes the pulse-beat of the facial artery by one-thirtieth of a second, and precedes the second sound by one-fifth of a second, which corresponds to the time of the contraction of the auricles. As regards the hooking back of an aortic valve, producing a regurgitant murmur and changing

the second sound of the heart, Dr. Paton said that the same thing occurs in disease of the aortic valves when they are rendered incompetent. But this murmur does not represent the second sound of the heart, but the termination of the first, as it takes place at the commencement of the arterial systole or aortic reaction, and in consequence of a portion of the blood regurgitating into the ventricle, the pulse-wave is imperfectly formed, constituting the pulse of impelled arteries. Dr. Paton thus summed up his doctrine:—1. The distended aorta reacts in immediate connection with the ventricular systole, crossing the sigmoid valves as its impulse is imparted to the wave. 2. The sound produced in closing the sigmoid valves terminates the first sound of the heart. 3. The second sound is produced by contraction of the auricles, as they propel the blood with force through the auriculo-ventricular foramen, distending the ventricle. It appears to follow the first sound as an immediate sequence, but represents the commencement of a new beat.

On the Changes which the Biliary Canals and Vessels undergo in Cirrhosis of the Liver. By V. CORNIL, M.D. (Paris.)

The Ossicula Auditūs in the Mammalia and their Representatives in the Ovipara. By W. K. PARKER, F.R.S.—After referring to the views of Reichert, Huxley, and others, on the development of the skull, Mr. Parker stated the results at which he had arrived. He held that the mammalian skull, in an early embryonic condition, is strictly comparable with that of an osseous fish, a frog, or a bird, at a like period of development, consisting of—*a.* A cartilaginous basicranial plate embracing the notochord, and, like it, stopping behind the pituitary body; *b.* Paired cartilaginous arches, of which two are præoral, while the rest are postoral; *c.* A pair of cartilaginous auditory capsules; *d.* A pair of cartilaginous nasal capsules. He further pointed out that, in the mammalia, as in the other vertebrata, the development of the skull of which has been examined, the basicranial plate grows up as an arch over the occipital region of the skull, and coalesces with the auditory capsules laterally, to give rise to the primordial skeleton of the occipital, petiotic, and basisphenoidal regions of the skull. The trabeculae become fused together, and, uniting with the olfactory capsules, give rise to the præsphenoïdal and ethmoidal parts of the cranium; and the moieties of the skull, thus resulting from the metamorphosis of totally different morphological elements, become united and give rise to the primordial cranium. He then described the formation of the ossicula auditūs, as observed by him in the embryo of sections and dissections of the heads of pig-embryos scarcely two-thirds of an inch in length. These, when coloured, some by carmine and others by chromic acid, gave very definite results. Besides the lacrymal cleft between the two præoral bars and the great completed mouth-cleft, there were four postoral clefts with corresponding thickenings of the facial walls intervening. Only three of these tracts become chondrified behind the mouth, namely, the first, or mandibular bars, the second, or hyoidean, and the third, or mere rudiment, which becomes the "cornu major" of the mammalian hyoid bone. The mandibular, or first pair of postoral visceral arches, are stout, continuous rods of cartilage, which lie in the first visceral arch behind the mouth. The ventral or distal ends of these arches are not yet in contact; the dorsal or proximal end of each is somewhat pointed and sharply incurved, pushing inwards the membrane which closes the first visceral cleft, and is the rudiment of the membrana tympani. The hyoid, or second pair of postoral arches, are in this stage extremely similar to the first pair, with which they are parallel. They are stout sigmoid rods of cartilage, which are separated at their distal ends, present an incurved process at each of their opposite extremities, and are not segmented. In the second stage, in which the embryo was an inch in length, Mr. Parker found that the proximal end of the mandibular arch had become somewhat bulbous, and was recognisable as the head of the malleus, whilst the incurved process, or organic apex of the bar, still more prominent than before, had become the manubrium mallei. The rest of this arch is Meckel's cartilage; outside this a mass of cartilage appears, which is converted into cartilage, rapidly ossifies, and eventually becomes the ramus of the mandible. The proximal end of the hyoidean arch, similarly enlarging and articulating with the corresponding part of the mandibular arch, becomes the incus, the incurved process attaching itself to the outer surface of the stapes and becoming the long process of the incus. The incus, thus formed out of the proximal end of the hyoidean arch, becomes separated from the rest of the arch by conversion of part of the arch into fibrous tissue, and by the moving downwards and backwards of the proper hyoid portion of the arch. A nodule of cartilage left in the fibrous connecting band becomes a styloform interhyal cartilage, while the proximal end of the detached arch becomes the stylo-hyal (processus styloideus). In an embryo pig one inch and a third in length, the mandibular arch and the rudimental ramus have become solid cartilage, and the latter is ossifying as the dentary or mandibular ramus.

The distal part of each mandibular rod unites with its fellow for some distance. The hyoid arches are each fully segmented as incus with its orbicular head, interhyal, stylo-hyal, and cerato-hyal (cornu minor). On the cartilaginous auditory sac there may be seen, in the first stage, two lateral elevations; the interior of these is the smaller, and to it the apex of the hyoid arch attaches itself; the larger eminence is the promontory. In the second stage, the smaller elevation is becoming detached as the stapes; it is then an oval mass of cartilage, and the apex of the second arch expands on its surface like a leech's mouth, to become the orbicular. At this time the stapes has two roundish elevations which are bridged over by soft indifferent tissue. Afterwards, this soft bridge becomes hyaline cartilage, and thus the apex and fenestra of the stirrup-bone are formed. Meckel's cartilages shrink, and their proximal rudiment persists as the processus gracilis of the malleus. The mandible or lower jaw is entirely composed of the large fast-growing extravisceral cartilage. In man, the distal part of Meckel's cartilage ossifies, and becomes part of the lower jaw, as in the frog. This bone Mr. Parker had termed the mento-Meckelian. Also in man, cartilage is, as far as Mr. Callender's researches go to show, only developed in the articular region. In the second arch the leech-mouth-shaped apex becomes separately ossified as the os orbicular; the interhyal nucleus becomes a small rod, first of cartilage, and then of bone, and eventually becomes ankylosed to the neck of the stapes, running parallel with the tendon of the stapedius muscle towards the stylo-hyal, which coalesces with the auditory capsule close in front of the exit of the portio dura nerve as it passes out of the stylo-mastoid foramen. The new apex of the hyoid arch ossifies above as the tympano-hyal, and, further down, as the true styloid bone; in man there is a long membranous tract between the stylo-cerato-hyals (styloid process and cornu minor of the hyoid bone), but not in other large herbivorous mammalia. In birds and reptiles, the first postoral arch does not form a malleus, but the pier of the arch is separated as an os quadratum, and the rest becomes the articulo-Meckelian rod, united with several membrane-bones, of which the foremost, the dentary, is the homologue of the mammalian lower jaw. In these types (Saur-opsida) the top of the hyoid arch grafts itself upon the stapedia region of the ear-sac, and does not again become dislocated; no separate os orbicular is found, and the stapes and incus remain as one compound, (columella auris). In the frog, the primary mandible keeps its function as the lower jaw, but the hyoid arch develops a distinct incus, and a large separate cartilaginous orbicular, which articulates with the brick-shaped stapes. In the salamanders and their allies (Amphibia Urodela) a thick stapes is formed, but the hyoid arch is not metamorphosed into an incus above. In fishes there is no stapes; the membranous fenestra fills in, but does not open out again. The hyoid arch, variously metamorphosed in the different types, does not in the least specialise itself in relation to the organ of hearing, any more than the mandibular. This latter arch, in the osseous fishes, lets down its pier, which, as well as the hyoid cornu, is carried on an immense suspensorium, the morphological equivalent of the mammalian incus.

On the Relations existing between the Specific Gravities of Albuminous Liquids and the Development and Growth of Bacteria therein. By W. AINSLIE HOLLIS, M.D.—The author deduced from numerous experiments that albuminous liquids having a specific gravity of 1040 and upwards are less liable to develop bacteria during their decomposition than those of lower specific gravities. On the other hand, albuminous liquids with a specific gravity of 1005 and lower more rapidly pass beyond the stages of bacteria-formation in their decomposition than those of higher specific gravities.

Slips of the Tongue. By WILLIAM M. ORD, M.B.—Slips of the tongue were investigated with special reference to their sensorial origin. They might be due to fault of the brain, coming then clearly under the head of aphasia. Such faults might be actual disease, or weariness or disorder of attention, such as absence of mind, excitement, intemperance, or confusion. They might be, secondly, of sensorial origin—morbid conditions of the parts concerned in speech interfering with the guiding sensations upon which fluent speech depends, distracting the higher brain, and throwing thought and articulation out of step with each other. Thirdly, they might be of motorial origin, where any circumstances hindered free movement of the lips, tongue, or fauces.

A Case of Fibrous Tubercles of the Peritoneum, with Remarks on the Structure of Tubercle. By JOSEPH COATS, M.D. (Glasgow).

Method of determining the Focal Distance of Single and Combined Lenses. By W. LAIDLAW PURVES, M.D.—Two cylindrical lenses (convex and concave), of exactly the same focal distance, are chosen, mounted as a Stokes' lens, and the powers obtained by rotation accurately and copiously found. Against this a diaphragm pierced by five small apertures, one-and-a-half millimetres apart from centre to centre, is placed, the apertures standing slightly obliquely to each other. On

placing the lens whose focal distance it is desired to determine against these apertures, and looking through them at a distant point of light, two of the five lights will be seen to come into a line drawn horizontally or vertically through the central aperture. The rotation which has caused this is the power required to neutralise the axis examined.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 6TH, 1873.

CRITICAL REFLECTIONS.

WE notice some further plaintive groans of the *Lancet* on the subject of the success of the British Medical Association and its JOURNAL, chiefly for the purpose of correcting a tissue of errors and misstatements into which the gentleman who composed the dirge has fallen. The whole grief is once more plainly stated in threnodic wise. The Association, on the showing of Mr. Husband, conducts "a commercial enterprise" in publishing its own JOURNAL; and this is most distressing to the feelings of the professional proprietors of the *Lancet*, who conduct "a commercial enterprise" of the same kind. It would, it is suggested, be peculiarly painful to the feelings of the late Sir Charles Hastings, the respected founder of the Association. But, as Sir Charles Hastings was also the founder of the "commercial enterprise", and as he perhaps more than any one rejoiced to see it growing in strength, influence, usefulness, and prosperity, there is no reason to suppose otherwise than that its steady advance would have been as gratifying to his feelings as it is flattering to his foresight. There are several other medical bodies which this writer honours with approval on noteworthy grounds. The Royal Medical and Chirurgical Society, for an annual subscription of three guineas, provides a library, meeting house, and *Transactions* for its members. The Pathological Society, for a guinea; rents a room for fortnightly meetings, and provides an annual volume of *Transactions*. The College of Physicians, for sums varying from twenty guineas upwards, provides a house for meeting and a theatre for the delivery of lectures. What is noticeable, then, is that, for sums mostly very large, these societies contribute to the promotion of science by holding meetings in one place, and by publishing and diffusing the information obtained. Comparing, then, the work of such societies with that of the Association, it is apparent that, for subscriptions mostly very much heavier, they achieve a small part only of the work of the Association. They arrange for meetings of the profession in one place, and at intervals; the Association provides for meetings over the whole of the country in fifty or sixty different centres, and brings the aid of combination, discussion, and publication, home to the door of every practitioner in the three kingdoms. They publish annual volumes of *Transactions*, highly valuable in their way, but procurable only once a year, books for the shelves of the few, and useful for reference rather than for reading. The Association, commencing with the same form of publication, soon found that its development and the concurrent necessities of its organisation had outgrown this, and that it could venture with a probability of success upon a weekly publication.

Here lies the grief. An annual professional publication is an honourable and laudable mode of promoting science; a monthly publication is tolerable; a weekly publication is, in the eyes of the proprietors of another weekly publication, intolerable. It is highly desirable, and a great benefit to science, that sub-

scribers of a guinea a year should exhaust their funds in a place of meeting and a yearly volume; but it is quite intolerable, and "all sack and no bread", that they should procure for themselves the means of publishing them weekly for their own greater convenience and advantage. When these gentlemen, banding themselves together, find themselves able to obtain a complete weekly JOURNAL; when the Association rises to power in the State, to a position in the profession, and to an active, ethical, scientific, and social influence in all public and professional affairs; when it numbers nearly six thousand members, and to attract the respectful and admiring attention of the whole medical profession and medical press throughout Europe and America; and when the subscription still remains only two-thirds of that of an ordinary weekly journal like the *Lancet*, then it is evidently true that all this should be changed. The BRITISH MEDICAL JOURNAL should be stopped, for it has been pointed to by every recent authority at home and abroad as a main agent in propagating and sustaining the activity and influence of the Association, the cement which binds its stones together in a firm edifice, the organ which supplies the branches and the members with constant means of communication; while also it discloses the secret that, by uniting in "commercial enterprise", ten shillings a year are saved to every member of the Association in that respect only. The Association must avoid politics, for it is not unanimous—despite last week's denial, these are the very words used. Denied the right of publication and the right of influencing professional opinion politically and socially, the privilege of intercommunication and the authority to express its opinions and desires in its weekly organ of publicity, the Association is to be allowed only to vote away its funds to a laboratory, such as that of Kew. This wholesale confiscation of its funds would very speedily reduce the Association to insignificance, in power and in numbers. It would make it dumb, and reduce it to a state of perennial hibernation with periodical revivals; and in this languishing listless state it would the more easily receive edicts from Bedford Street, and the more largely contribute to the coffers of the *Lancet* the superfluous funds which abound in the profession. The proposition that the difference between the Association subscription and the *Lancet* subscription would of itself make a large fund for scientific purposes—perhaps £3,000 a year—meets with no favour; and the suggestion that the scientifically minded proprietors of that journal should back their editorial enthusiasm for laboratories by contributing for the purpose some portion of that surplus, is equally passed over in silence. The total income of that journal, supposing the number of its subscribers to be anywhere near that of the members of the Association, must be about £14,000 a year; supposing it to be a thousand or more less, the income must be about £12,500; and if the subscribers to the *Lancet* are, as we believe, about two thousand fewer than the number of members in the Association, the income must be about £10,000. Here, then, is an "intolerable amount of sack" and no bread at all; all "commercial enterprise" and no science; all receipts, and no return to a much contributing and patient profession. Surely this rage against the Association for choosing to conduct its own little "commercial enterprise" is a little beyond the limits of prudence and propriety. It provokes comparisons, which might else willingly be left aside.

A word more as to some other serious misrepresentations. The Association, says the incautious writer, is governed too much by small committees with power to add to their number.

The Association is in truth entirely governed by two committees; the General Council, which is a representative body consisting chiefly of delegates from each branch of the Association in proportion to the number of members in each Branch, and contains about two hundred members; and the Committee of Council, which consists of the honorary officers of the Association, those gentlemen who have filled the office of president, a secretary from each branch, and twenty members elected by the General Council in its meeting, and which numbers about sixty members. Of the standing committees for particular purposes, the Parliamentary Bills Committee is similarly constituted of representatives of the branches, and of members nominated in general meeting of the whole Association, and numbers upwards of fifty members; and the other occasional committees are of the most open character possible; so much so, that we believe it may be stated, without any fear of exaggeration, that no one in any way fitted for the post, who had any desire to serve on a committee, ever experienced the least difficulty in being nominated. The statement, therefore, is monstrous and without a shadow of foundation; it is, indeed, so utterly opposed to the facts, that it is only charitable to suppose that the person who wrote it and those who publish it are entirely ignorant of the truth, or they would never have consented to put forward so absurd a fiction.

The suggestion that the Association will be called on to make up a deficiency in the sum subscribed by the metropolitan members for the expenses of the annual meeting, betrays the same entire misapprehension of the spirit and conduct of affairs and of the history and prospects of the Association, as does the rest of the article. The writer may calm all his apprehensions on this subject. The members of no Branch have ever left any deficit in the reception fund to be met from the resources of the Association; nor is it in the least degree probable that the metropolitan members will do so. Such a suggestion as that made by the writer in the *Lancet* is just a sorry insult addressed to the metropolitan profession, and savours of an attempt to find a blot in the success of the meeting.

The list of the achievements of the Association is equally monstrous. The writer of the *Lancet* article evidently knows nothing of the work of the Association in connection with the medical profession. He cannot have read the addresses of Mr. May and Dr. Shettle of Reading, and of Dr. Quain, giving brief historical retrospects; he is ignorant of the relation of the Association to the ethical, political, and social advancement of the profession; he is unacquainted with its past and present labours for Poor-law medical reform, for the improvement of the position of medical officers in the Army and Navy, for the amendment of bills in parliament affecting medical interests, and for the promotion of sanitary work. He ignores its great achievement in procuring the Royal Sanitary Commission, and is quite unacquainted with the work now in hand. This is not surprising; for it has been the policy of the *Lancet* for years to suppress all reference to the work of the Association throughout the year. This may be natural, but it is weak; and when this writer professes to summarise the work of the Association in half a sentence, he becomes disingenuous. We gladly dismiss the subject; it is only necessary to notice it, because that journal makes it its business periodically to diffuse misrepresentations calculated to injure the Association, and to give to those who have not yet joined its ranks entirely erroneous and unfounded impressions.

Having brushed aside these cobwebs, we may continue to

pursue the great work which the Association has in hand, and which is this year not less important than heretofore. Among the questions awaiting solution, are those of Medical Reform; the establishment of a State Medicine Qualification; the amendment of the Public Health Act and the improvement of its administration; the amendment of the last Army Medical Warrant; the assistance of the Militia Surgeons and Poor-law Medical Officers to obtain redress of their grievances; the regulation of midwives; the registration of disease, etc. These are all questions in the hands of the Association and of various committees. It cannot pretend to be alone in their solution; but it can give more powerful assistance in this direction than perhaps any other body; and we do not doubt that it will.

The question of the best means of obtaining additional funds for the encouragement of scientific research is in good hands. It has already been more than once discussed. Handsome votes have been made, and a special subscription was started a few years ago for the Edinburgh Committee; and a grant was ready for that committee this year. Dr. Burdon Sanderson and Dr. Sibson will no doubt devise some practical plan for furnishing a permanent fund for the purpose, which is one to which it has always been our belief—as we have many times stated—that a large proportion, and probably all, of the members of the Association would willingly contribute. There is more than one way of arranging such a contribution; and we rejoice to be able to give to this subject a present prominence which will facilitate its future discussion.

THE ADDRESS IN MEDICINE.

In simple and clear language, Dr. Parkes recalled to the minds of his hearers, in the Address in Medicine delivered by him at the annual meeting of the Association, the principal changes which medical science and art had undergone since the time when he first entered on the pursuit of that profession, of which he has proved himself to be one of the most worthy followers. In its general character, the address was such as might have been expected from Dr. Parkes, had it been known beforehand that the progress of medicine was to be his theme. Generous in his recognition of the good work done in the treatment of disease by men of a now past age, who had not the advantages which the modern practitioner enjoys; just in his appreciation of the value of the labours of those to whom the progress of medicine is due; hopeful as to the results likely to accrue to medicine from some of these labours, and cautious in expressing an opinion as to the probable effects of others; and without manifesting that he was not merely acquainted with, but had thought deeply on, the several subjects which he passed in review; he said much so well, as to cause regret that the limitation of time prevented him from saying more.

No more striking illustrations of the advance made in medicine from chaos to comparative order can be adduced than those first alluded to by Dr. Parkes—the results which have followed the investigations and discoveries with which the names of Laennec and Bright are associated. Many there must be who, like Dr. Parkes, remember the transition stage in the diagnosis and treatment of diseases of the heart, lungs, and kidneys, and can follow him in his contrast between the indefinite, undecided, confused ideas of the ante-Bright and ante-Laennec period, and the definition and certainty which have taken their place. Great, however, as the change is, medicine has not yet derived the full benefit. Laennec, indeed, brought auscultation to such excellence that he left little to be added, and failed only when he went beyond his depth in attempting to explain pathological details. Bright, on the other hand, confined himself to the observation and interpretation of facts as he saw them; and, if his work was less complete than that of Laennec, this was, as Dr. Parkes says, “inevitable from the very nature of the case.”

What he did, was to place renal pathology on a foundation on which others might continue to build; or, to use the simile adopted in the address, he discovered a new country, which has since “been separated into provinces, surveyed, classified, and enumerated.” Even at present, the survey is in progress; and observers have not arrived at an agreement as to what they see or how they should interpret it. Yet there is reason to hope, with Dr. Parkes, that the time is not far off when, for the all-important purposes of practical medicine, the work will have arrived at a fair state of completion. The labourers in this work are many; and they work, it may be with temporary differences of opinion as to details, but with lasting unity of purpose as to the main object.

We can do no more than direct the attention of our readers to the brief but highly pregnant remarks of Dr. Parkes on the value of the discoveries relating to thrombosis and embolism, and the diseases due to the presence of entozoa and vegetable parasites, and to the degenerations to which the tissues of the body are liable. Nor can we do more than make a very brief allusion to the next subject of which he treats—inflammation. In speaking of this process, Dr. Parkes endeavours to reconcile the doctrine of “crasis,” once taught by the Vienna school, and the cellular pathology of Virchow. “It is quite possible,” he says, “that it” (the blood-albumen) “may sometimes be so degraded as to justify the idea which underlaid the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules.” While on this subject, Dr. Parkes takes the opportunity of doing an act of justice to our countryman, Dr. William Addison, who, as long ago as 1839, observed the transition of the white corpuscles through the walls of the capillaries—a phenomenon of which the discovery has been ascribed to Cohnheim, whose description a few years ago “stirred the world of pathology to the depths,” and formed the starting point of much valuable investigation. It is interesting to note, with Dr. Parkes, how closely the modern doctrine of inflammation has approached to that held by some of our most distinguished pathologists a quarter of a century ago, notwithstanding that in the interval the “cellular pathology” of the illustrious Virchow has had its reign. “The chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside vessels was not known.”

In treating of his next subject, pulmonary phthisis, and the relation to it of tubercle, Dr. Parkes speaks with caution; and indeed the conflict of the views held at present on the relation of tubercle to phthisis (the exposition of which at the debate in the Pathological Society must be fresh in the memory of our readers) allows at present no room for anything approaching to an absolute *dictum*. Dr. Parkes contents himself with showing how Laennec made of tubercle “an entity of what may merely be a form”; how Thomas Addison and Elliotson still held to the old doctrine of the connection of phthisis with inflammation; how C. J. B. Williams brought into prominence the intimate connection between inflammation and tubercle; how Reinhardt shook Laennec’s theory by asserting that there was no difference between tubercle and common inflammatory products; how the lymphoid tissue in the lung has been found implicated in the most common form of tubercle; and how the infective character of tubercular inflammation has been proved by Villemin, Simon, Andrew Clark, Burdon Sanderson, and Wilson Fox. He is, as we have already said, very cautious in giving an opinion. “Tubercle . . . perhaps, is merely a form of these common changes which are most conveniently grouped as inflammatory, with this addition, that the presence of a special structure” (the lymphoid tissue) “impresses on it a special form.”

What effect has all this controversy, all this variety of opinion, had on the important subject of the treatment of phthisis? Some, says Dr. Parkes, that is favourable; some that is unfavourable. From the idea of phthisis being the indication of a weak and morbid nutrition, has arisen the use of cod-liver oil and other means of improving the general health; while, on the other hand, the idea of the specific nature of

tubercle, carried perhaps to too great an extent, has discouraged the use of anti-inflammatory measures, and so far, in the opinion of Dr. Parkes, and we doubt not of many other practical physicians, has done harm. "On the whole," says Dr. Parkes, "the last thirty years have done much for the treatment of phthisis, but it was not all unmixed gain, and the amount of future progress is uncertain."

"I can confidently appeal to those of my contemporaries who studied in fever hospitals before 1840, to bear me out when I say that few points in practical medicine were more unsatisfactory than the diagnosis and treatment of continued fevers." Thus speaks Dr. Parkes in proceeding to notice briefly the vast and highly important changes which have taken place in the doctrine of fever since the year above mentioned. And here we must express our opinion that the words of Dr. Parkes, in his address as published, scarcely do justice to the labours of Dr. Stewart, to whose letter in another page we would direct the attention of our readers. It is clear that, so long ago as 1840, Dr. Stewart pointed out, as the result of careful research, that typhus and typhoid fevers are distinct diseases—a fact which probably had come in hazy outline before the minds of others, but had never taken a distinct form. But Dr. Stewart's discovery, like that of Dr. William Addison to which we already alluded, was one for the due appreciation of which the time had not yet come; and it was not until the classic works of Jenner appeared in 1849 and 1850, that the distinction between the two diseases was recognised in its practical bearings.

In reference again to the subject of fevers, Dr. Parkes calls to our recollection a much forgotten work—the treatise of Robert Williams on *Morbid Poisons*. To him is due the merit of first stating in distinct language the idea that the epidemic and contagious diseases must own separate and specific causes—each its own poison. This doctrine is now generally accepted; but beyond this little advance has been made. The morbid agents have as yet eluded search—their "recognition is evidently a task more difficult than to seize and decompose the light of the planets or the dim luminosity of the nebulae."

The summary of progress in the investigation of disease, which Dr. Parkes placed before his hearers, shows that medicine has not been standing still during the last thirty or forty years. In fact, more has been done in that time than would have amply satisfied a century or two in past ages. But we have to ask, whether the advance in pathology and the improvement of diagnosis have been attended with a corresponding advance in therapeutics. Dr. Parkes believes, and, as we think, rightly, that both the art of cure and the art of prevention of disease have made great progress; though this progress has not always followed closely on pathological discovery, and a great deal of our treatment is still empirical. But, in general, our diagnosis is improved; and therefore we are more likely to treat the disease successfully.

We agree heartily with Dr. Parkes in his generous remarks on the practice of men of the old school; men to whom the stethoscope was an unknown thing, and albuminuria an unheard of mystery. They treated diseases, for the most part, according to the prominent symptoms, and according to the general condition of the patient; and their treatment was fairly successful. "A vast deal of good was done by men," says Dr. Parkes, "whose diagnosis we should now look upon as very incomplete." These men acted according to the light which they had, and did much good; it is for their successors of the present age so to use the improved means at their disposal, that the reader of the Address in Medicine at a meeting of the British Medical Association some forty years hence may be able at least to speak of them as generously as Dr. Parkes has spoken of the practitioners of forty years ago.

MEDICAL AND PHARMACEUTICAL RESPONSIBILITY.

A CORONER'S jury at Ramsgate has censured, and we think very justly censured, a chemist of that place for declining to make up a prescription for a patient suffering from delirium tremens because it contained a very large dose of digitalis. Some attempt has been made to confuse the subject at issue. No one doubts that it is a chemist's duty not to make

up a prescription containing an unusually and, to his mind, dangerous dose without ascertaining, by reference to the prescriber, that there is no error involved, and that he accepts the definite responsibility of his prescription. But it is clearly the duty, and it is ordinarily the practice of the chemist under such circumstances, to lose no time in communicating with the prescriber; such communication should be immediate and, if possible, entirely private. The chemist in this case failed in this duty; the medicine ordered was not dispensed, and the patient died; the chemist was justly censured, and ought to feel that he deserved it. In our opinion, it is not his case which calls for sympathy, but that of the unfortunate patient. It is very desirable, however, that dispenser and prescriber should have a thorough understanding with each other, on such important matters; and that the third person, the one who is prescribed for, should have the fullest guarantees for security, and the utmost immunity from the effects of error or carelessness. A suggestion which we observe in the *Pharmaceutical Journal*, of August 23rd, from Mr. Greenish, appears to us to be calculated to promote this object, and we commend it to attention. Mr. Greenish writes:—

"I would here direct attention to the laws which govern the practice of pharmacy in Germany. The *Pharmacopœia Germanica* of 1872 contains the following table:—

— "*Tabula A.*

"*Exhibens doses medicamentorum maximas in usum adulti, ultra quas medicus ne prescribat ad usum internum nisi addito signo (!).*"

"Eighty-six articles are enumerated in this table, and one of them is:

"Grammata.
Pro dosi. Pro die.

"*Tinctura Digitalis* 2.0 6.0."

"It will be observed that the pharmacist is here protected, not only as regards the single dose but also the quantity to be given in the twenty-four hours, and I know it to be the practice on the part of the profession to attach the sign (!) when under exceptional circumstances an unusual dose is ordered. They thus signify that they are aware of it, and accept the responsibility. Without this symbol no *apotheker* in Germany would dispense the prescription, and the law would justify the refusal. I do hope that the attention of the medical profession may be directed to this subject, and that some such plan may be voluntarily adopted by them, or, in default, that another *Pharmacopœia* may extend that protection to the English dispenser which has long been enjoyed by his colleagues in Germany."

We may add that we are of opinion that the signature of a prescription by initials only has always seemed to us an irrational practice, and that it would certainly always be proper, on writing a prescription of any potent or unusual character, that the prescriber should sign it with his name, and not with his mere initials.

THE DAIRY REFORM CORRESPONDENCE.

THE correspondence, which we publish in another column, between Sir William Jenner, Dr. Murchison, Dr. Whitmore, and the Dairy Reform Company, speaks for itself; and that at some length, thanks to the diffuse argumentation in which the Company indulged at a moment when it was in our opinion, alike their interest and their duty to act with promptitude, in accordance with the official summons of the medical officer of Marylebone and with the weighty and decisive representations of the most eminent medical authorities in this country. The letters of the Company have been not inaptly, though not very courteously, described as a farrago of nonsense; and of this sort of nonsense they appeared to have an interminable supply on hand. Nor do we find their excuses much more ingenious than their course was humane. As Dr. Murchison incisively reminded them, the lives immediately and plainly hanging on their decision were not those of cattle, but of human beings; and the question of compensation, which they prominently from the first put forward as a prior and preliminary consideration, might have been humanely and prudently postponed to a secondary place, and reserved for later deliberation. The view which the Milk Company took of their responsibilities is very pithily summed up by their manager in a few words.

"We are sure, sir, that no one, on a complete statement of the case,

would consider for one moment that, either at this stage or at any latter stage in the history of our proceedings, we were called upon to adopt any other course of action than the one we actually followed. No one will pretend that it is the duty of persons conducting any sort of business to suspend it summarily, at any cost to themselves, and at any inconvenience to others, simply because some medical man says that, without presuming to express any opinion, he still thinks that the business ought to be stopped."

It is only necessary to compare this with the actual correspondence and with Dr. Murchison's first letter, to form a judgment. In that letter, he informed the Company that, of thirty-six families in the district known by him to be suffering from typhoid fever, thirty-four had as the only condition in common, that they were drinking their milk; and that Sir William Jenner and himself had been brought to the conclusion that the milk was the source of the fever, and that its sale should be suspended. To this opinion they immovably adhere. The Company attempt to ride off upon the excuse that these gentlemen connected the outbreak with the presumed derivation of the milk from the sewage-farm of one of the directors. There is no reason whatever for arriving at such a conclusion; for no such hint is afforded by any line of Dr. Murchison's or Sir W. Jenner's letters. Dr. Murchison has expressly disclaimed it; and, moreover, the Company well knew, and were informed by the editor of this JOURNAL personally in the course of this correspondence, that this was not the ground of suspicion, and that a number of the facts gave point and force to the bare statistical conclusions. Their fault undoubtedly was, that they strenuously argued against the facts, instead of investigating them, and were as exacting in demanding the exclusive and complete proof of the noxious quality of their milk, as if they were conducting a physiological experiment in the laboratory, or working out an abstract problem in logic; and, even on that supposition, they were indolent and unwary in investigating the evidence. It seems to us, we must confess, that Dr. Murchison's indignation is far from being excessive, and that the excuses of the manager place the conduct of the Company in a far worse light than it would have appeared in without them. It is a good specimen of the danger of half-knowledge, and of the mischief of allowing ingenious and half-enlightened persons to expend their ingenuity in argument and opposition to the advice of those who are known to be highly informed.

The matter is one of great moment; for, if the vendors of articles infected with zymotic poison can with impunity plead that they are not bound to desist from their sale when summoned by such authorities, and with such force as was this Company by Sir W. Jenner and Dr. Murchison and by the medical officer of the district, and if they can plead that they may disregard without blame or responsibility such summons as the worthless "opinion of some doctor", it is clear that the protection to the community in such respects is likely in the future to be much delayed and much weakened.

One result which occurs to us as the moral of this correspondence is, that the local medical health-officer of any district should be empowered summarily to suspend the sale of any article of diet believed by him, on grounds which he should formally state, to be the vehicle of poisons dangerous to the public health.

The question of compensation, prominently urged by the Dairy Reform Company, we shall leave to the lawyers to discuss. It evidently cuts both ways; and, if a company refuse to suspend the sale of an article of diet which is alleged to be poisonous or injurious to the health of unsuspecting purchasers in the community, it is probable that this may suggest to the minds of those who have suffered in person and in purse, that they are possibly entitled also to some compensation for negligence in the first instance, and subsequently, after the warning has been given and disregarded, for wilful negligence. The compensation due in the latter case might prove to be, in the opinion of the judges, much more costly, although in any case it must be inadequate to repair the injury.

The latest contribution to the discussion by the Dairy Reform Company, is a letter published this week, in which they treat Sir William Jenner and Dr. Murchison as mere "amateurs" on the scene; their advice as unreasonable and excited; and their conduct as "absurd". This is a very singular comment on the fact that Sir William Jenner and Dr. Murchison were physicians whose patients were sickening and dying from the poisonous milk; that their advice was right in every particular; that following it saved the Company from a yet more fearful catastrophe, and Londoners from a yet more extensive disablement and destruction than have occurred; and that, if it had been followed earlier, some hundreds of persons would have been saved from the most imminent danger, to which it is not at present possible to say how many have succumbed. As to questions concerning the nature and extent of the warning received by the Company, it is within our knowledge that Dr. Murchison is entirely accurate in his statement, and that the contradictions put forth by Mr. Maconochie for the Company are seriously inaccurate.

SEWAGE-GRASS.

THE discussion which has recently taken place with reference to the propagation of typhoid fever by means of sewage-grass, associated with the fact that the mode of dealing with the sewage of towns which at present finds most favour, is by irrigation, renders it important to ascertain whether the evils alleged to result from sewage-farms are founded on fact, and, above all, whether the spread of zymotic diseases can be traced to sewage-farms. Two outbreaks of typhoid fever, which appeared to have some connection with sewage-farms, have somewhat recently been carefully inquired into by Dr. Buchanan, on behalf of the Local Government Board. One occurred at Ecton, where the new Northampton sewage-farm is situated, and where persons employed in agricultural pursuits were seized with symptoms of typhoid fever and diarrhoea after drinking from a brook which was alleged to have received the effluent water from the farm. But in this case other persons in Ecton were suffering from typhoid fever besides those who had worked in the neighbourhood of the farm; the sanitary conditions of the dwellings of the sick were, as regards excrement nuisances and foul water, precisely such as are usually met with where this disease prevails. It was further ascertained to have been extremely doubtful whether any effluent water from the farm had, at that date, reached the brook, and it was known that its contents had been fouled by the overflowing of the River Nene, which then received nearly all the town sewage, including the bowel discharges of typhoid fever patients. More recently still an outbreak of the same disease at Barking was attributed to the sewage irrigation of Lodge Farm; but here, again, though several of those attacked had been occupied on the farm, yet some of them resided amongst "all manner of nuisances from privies and drains," and the outbreak of the disease amongst some of the sufferers was associated, at least in point of time, with the use of water from a well, the contents of which, besides being essentially derived from the sewage with which the farm was irrigated, were exposed to contamination by excrement from some adjoining cottages. In both these instances, it was found impossible to identify the farm as the cause of the disease; and the same may be said of the cases of typhoid fever which, in 1868 and 1869, occurred in the proximity of the land irrigated by the Croydon sewage. It is also quite impossible, in the present state of our knowledge concerning scarlet fever, to see how the outbreak of that disease, which occurred in 1870, can in any way be attributed to Croydon sewage. But here we would most distinctly state that, however pure the immediate effluence of a sewage-farm may appear when examined by any known method, whether chemical or otherwise, it should certainly not be resorted to for drinking purposes.

As regards the use of the milk of cows which have been fed on sewage-grass, there is an utter absence of any evidence tending to show

great bodies of the profession. The only fair and legitimate remedy was to say, "No; we are the guardians of this money; it has been left for certain specific purposes; and we shall see that it is properly distributed, and not create another abuse, far more gigantic, by the institution of provident dispensaries." The proper plan was to have a real and *bonâ fide* inquiry into the circumstances of the patients. If that were done, and they found special cases requiring special advantages, then these would be legitimate cases for assistance, and thus a proper distribution of the funds of the charities would be secured. When these charities were instituted, there was not the same provision for the poor. The Poor-law Board had put down a skilled medical practitioner in their midst, who was equal to the highest medical man in the profession; and the poor could have his advice without fee or reward. In large cities, they should have thousands of beds under the control of the Local Government Board. The abuses of the charities in Manchester had been shown up through the independent exertions of a member or two of the press; and the abuses of hospital relief were so glaring that they could not be contradicted. It was for the medical profession to take care that the hospitals were not abused so far as they were concerned; and if the public choose to establish a great scheme by which the medical profession would be pauperised, it was for them to prevent such a thing. It was not for the public to dictate on what terms they should work, or what remuneration they should have, or what magnificent sum they should risk their lives for. He had put himself in communication with Northampton, Leicester, and other places; and he could assure them that the medical men in connection with those dispensaries condemned them as lowering the position of medical men; and some of them could not get a living where they had been born and bred, owing to the working classes of the town having been put under a provident relieving system. If these societies were established all over the country, the medical profession would be handed over to them at the magnificent rate of payment that a working man and his wife should have attendance and medicine for one penny per week, and every member of his family at one halfpenny per week; so that they would see the amount that medical men would receive. When the promoters of this provident movement called a meeting of laymen and medical men, he carried a resolution against them. He called together the whole of the medical profession in Manchester, and they had a meeting of the largest number of medical men that had met there for any purpose. The result of that meeting was to pass resolutions condemnatory of the provident system. Medical men were not reluctant to treat their patients with the utmost generosity; but if a scheme of this kind were to be established, all those tender relations would be broken in upon, and a hard and fast line would have to be drawn, to guard against deception on the one hand and improvidence on the other.—Dr. FELCE looked upon the system of allowing unqualified persons to attend to patients as one of the greatest evils of the present system. He knew that it was a hardship to the general practitioners. He belonged to the governing body of a London hospital; and when the subject was brought forward, they were always met with the cry that this was a question brought forward by the medical profession from interested motives; and the lay governors pooh-poohed the matter, and nothing was done. The Charity Organisation Society was taking up this matter; and in doing so they were very likely to accomplish good work. They were conducting the public to a knowledge of the fact that they were doing harm by pursuing this indiscriminate system of out-patient relief. There was a very great deal of waste of public money; and he confessed that they were to blame when they sent out-patients to the general hospitals who were able to pay. Those who knew anything about hospitals knew of the vast number of cases that were gone through, at the rate of three or four patients per minute. So long as that continued, there must be great waste. He should be very glad to see the provident system extended. It was open to the abuse dwelt upon if they were not very careful, in order that the abuse might be minimised as much as possible.—Dr. STEWART looked upon this question as one that did not concern the profession alone, but the whole body of the public. The great question of pauperism had begun to excite more attention than it had done since the passing of the Poor-law Amendment Act about thirty years ago. Since that time there had been nearly twenty Poor-law Acts, several of which were new Acts altogether, showing to his mind the hopelessly vicious principle of public Poor-law. He thought this lay at the root of all the mischief in regard to medical and other reliefs. The public mind was by a slow, but steady and sure, process, going on through centuries, becoming thoroughly demoralised; and during the present century there were dreadful evils engrafted upon this system. Our principal object should be to retrace our steps, and try, if we possibly could, to emancipate men from the degrading notions which they had of looking through a vista, and saying to themselves, "Let the

worst come to the worst, there was a public provision for them." The scriptural injunction was: "If a man will not work, neither shall he eat"; but our Poor-law said, "Whether you work or not, you are provided for against starvation." It was no wonder when such principles were taught by legislation, that people should think that they had a right to public relief whatever their character or conduct. That lay at the root of the evils of medical relief. His great countryman, Dr. Chalmers, said there was nothing could be abused so much as medical relief. He said: "A man might qualify by making himself ill, and thus by dissipation and intemperance they had made themselves patients and kept themselves patients; and by getting as much medical relief they would always be patients, and they would only be making them worse by giving them relief. The credentials for medical relief were used for the purpose of extracting money from other quarters." Now the remedy was confessedly for one class of persons. There was one class who, from untoward circumstances, were unable to pay; but many more, from their own vices, could not pay; and there was a third class, and a very large class, who could not pay the full fees of medical practitioners, whom they wished to prevent sinking into the lowest class of pauperism. He had watched the process going on steadily before his eyes, of persons coming to the free dispensary with hesitation at first, but very soon losing their reluctance, and coming with "the sturdy air of a masterful beggar", and demanding as a right that which a few days before they even asked for with apologies. The provident dispensary was not a perfect system; but it was a well meant attempt. There should be a full, proper, and complete inquiry about those persons applying for admission. Was not Dr. Royle perfectly well aware that there were those who came to them meaning honestly to pay their doctor, running up long bills and giving them an enormous amount of trouble and expense, and who after all never paid a farthing? The medical profession suffered very much from bad debts from this very class. That very class, by the provident system, might be converted into a fruitful source of gain to the general practitioner. If the system were wrongly organised, if there were too few medical practitioners appointed, then let the number be enlarged; and if the system of inquiry were not sufficient, it could be made more efficient. His opinion was that this provident dispensary system was that which afforded the most hopeful means of getting out of the difficulty. Dr. Royle had said that those persons who could not afford to pay their medical man would be attended upon for nothing; but that was another part of the great abuse. That demoralised the recipient. They wanted to keep up their independence, and therefore they must pay something. The provident system would meet such cases.—Mr. GRIFFITHS (Sheffield) said that, when he looked into the returns of wages in his district, he found that the earnings of the majority of working men averaged over £3 5s.; and not one-half of these men ever pay their medical man, or made any provision for doing so. This was not an isolated case, but it existed in kindred towns where coal and iron were found. "Once a pauper, always a pauper" was true; once go to a provident dispensary, always go there. How was this to be remedied? He believed, if he were a little disguised, he could obtain an order without any previous investigation, binding the medical officer to attend him morning, noon, or midnight. In the early part of his career, he had been called out five and six times in a night to attend cases that were little less than an imposition. Medical men would bear him out when he said that a large number of persons had simply to send for a medical man to attend upon them, and he was bound to go. Many a time, when he had attended, he had found people perfectly comfortable, and he had had to ring the bell several times before he could get them awake. Should it not be urged that the public officers should do their duty more effectually than they do, and that the union medical officers should be better paid? There was a great mistake made between the poor and the deserving poor. They could understand an elderly man or woman, having led a somewhat active life, suddenly coming to poverty; such deserved consideration. But there were plenty of instances of men refusing to do anything because they knew that there was a workhouse or some asylum behind them.—Dr. ROYLE said his objection to the provident system was, that it would breed pauperism. He had never said that he would attend a patient for nothing. If he were called to attend a poor woman, who said that she should pay him some day, he was at perfect liberty to say whether he trusted her or not; but that was a very different thing from attending persons for nothing who could pay something.—Mr. HARDY said that the Association had done some good, for it had exposed the evils attendant upon some of our London and provincial hospitals. It had told the patients that, instead of being seen by properly qualified men, they had been seen by unqualified students. It had told them that their charity had been abused by persons not fit objects of their charity. For instance, if the governors of St. Bartholomew's Hospital were told that 100 patients were seen in an hour,

that would be a sufficiently grave accusation to meet in some way. It was against this abuse that he endeavoured to unite the profession in London. Having had to do with this movement, as far as he understood the working of the Hospital Out-patient Association, it was not their work to establish provident dispensaries; and no document connected with the Hospital Reform Association advocated the establishment of more provident dispensaries than already existed.—Dr. HEYWOOD SMITH thought it would be a great mistake to do away with provident dispensaries. They ought to help the people, to let them see that they were willing to do something for the commonwealth, and thus the people would be encouraged to work themselves out of their connection with any provident dispensaries.—Mr. LIDDLE said the abuse of hospital charities was a thing that came under their notice, but it was another point whether they, as medical men, should state their approval of provident dispensaries. He thought, when they went to that point, they were going beyond their province. Let those persons who combined do what they liked, but it was clearly not the duty of medical men to recommend to the public the introduction of provident dispensaries. Would not the fact of persons going two or three miles, and having to wait for an hour or two for their turn, and then have a minute's observation passed upon them, do them more harm than good? When they had a proper provision made by the Poor-law for those who could not pay, they should set their faces against allowing the out-patient system to those who could afford to pay. He would not object to the hospitals—and many of them would prefer going to the hospital for relief themselves—but, when it was so abused, the sooner they attempted to abolish the out-door relief system the better.—Mr. TREND said that a great deal of the out-patient system arose from the physicians and surgeons being anxious to have an interesting case. Not only was the medical practitioner mulcted of his fees for visits, but the assistant-surgeons also lost handsome fees. He thought the managers of hospitals should exercise something like courtesy, and consult with the medical practitioner who had been attending upon the patient beforehand.—Mr. SCATLIFF said that a large number of subscribers for a guinea or two per annum had the privilege of presenting a patient, and there was nothing to prevent such persons being admitted. It was generally understood that persons admitted to hospitals were in needy circumstances, but that did not follow. He knew that some of them came to the Consumption Hospital, and they took lodgings in the neighbourhood for six or seven weeks, and had nurses to wait upon them. Some of these he had attended, and charged the fees.—Dr. GIBBON agreed that the hospital system was much abused. He was called in to attend a Scotchman, foreman of some glass-works, who was a subscriber of £10 per annum. He told the Scotchman that it was very charitable of him to subscribe; upon which he said, "Not at all; it is a matter of business. When I came here, the firm paid £300 a year for a doctor; and I got them to subscribe £10 a year, and we now do without a doctor." Here was a saving of £290. This was one of the abuses of the system. In another case, a ship-captain came to him, sent by his masters for treatment gratis. The captain actually refused to carry away some medicine, asking if he could not have it sent. He (Dr. Gibbon) then asked him if he could afford to pay; the captain thereupon pulled out a handful of sovereigns, and he (Dr. Gibbon) at once took him to the governor of the hospital. The result was, that the captain paid him forty guineas for attendance. The only remedy was to refuse to give their services to any other than the poor.—Mr. HASTINGS, in summing up the discussion, said he entirely agreed with Dr. Stewart as to the intimate bearing this question had on the great question of out-door relief. That was a matter in which he had to take some active part; and the same principle of out-door relief lay at the bottom of this question. As long as they held out to any class that, without any exertion or return on their part, they were entitled gratuitously to receive something, whatever it might be, whether medical or pecuniary relief, they would find a large class taking advantage of that evil privilege, and consequently there would always be manufactured paupers. That was really at the bottom of the whole question. With regard to the out-patient system, it seemed to him to be full of abuses, and as far as he had been able to look into it, much more so than out-door relief. But the application of the principle was much wider than out-door relief. They had officers bound to inquire, and they had some inquiries made; but with regard to the out-patient system in London, at any rate, it was almost entirely without the check of inquiry. A person had only to go to a hospital, and he became an out-patient, receiving gratuitous medical relief. He would mention this fact, that in the hospital at Worcester, to which his father was physician, and for which he had been acting on the managing committee, they were obliged to exercise the most rigid care. They had only a hundred beds; and it was with the greatest possible trouble—going through the names of persons who asked in any shape for

medical or surgical relief—that they were able to find out who were and who were not able to pay; and those who could were made to pay. Yet, for all that, that hospital had been abused during the last five or six years. If that was so with a small hospital well looked after, what must it be with a very large hospital with no inquiry at all? As to the provident dispensaries, a little too much had been made of it. Whether bad or good, did not help it. However bad, it was quite clear that it was not so bad as the out-patient system. It was not so bad to give relief for a small sum as it was to give it gratuitously. And, with regard to the question of remuneration of medical men in provident dispensaries, he must remind them that this was a matter in the hands of the medical profession itself. If it were found that these provident dispensaries did not pay as much as they ought to pay, then let their medical officers say so, and refuse to serve without adequate remuneration. He only wished that every medical practitioner would not give his services for less than they were worth. He did not think that provident dispensaries should be attacked on that ground, because the medical profession ought to take care that it was well paid, and see that they were paid sufficiently for what was afforded to the public through their aid. He must say that it was a most important subject; and he was only sorry that, coming on so late in the day, he was obliged to close the discussion perhaps before every one had been able to express his opinion. But he believed there was one general and unanimous expression of opinion that the system of out-patient relief, as practised in the London hospitals, was subject to much abuse.

Friday, August 8.

The Sanitary Statistics of Different Metropolitan Districts for the Years 1861-70. By J. W. TRIPE, M.D.—Dr. TRIPE stated that he had carefully corrected the population and death-rates for deaths in hospitals and workhouses, by which the death-rates printed in the Registrar-General's reports were considerably altered. He showed that on an average the death-rates for the ten years 1860-70 in each of the twenty-eight superintendent registrars' districts varied to a great extent according to the number of persons to an acre. The mean death-rate for the fourteen least crowded districts, with an average of 40 persons to an acre, was only 20.9 per 1,000, whilst for the fourteen most crowded districts, with an average of 155 to the acre, it was as great as 24.8, or 20 per cent. in excess; in districts having the greatest percentage of servants, the least over-crowding and the fewest paupers, the rate was only 18.2 per 1,000 inhabitants, against 22.8 per cent. for all London, after due allowance had been made for deaths in hospitals. The districts having fewest servants and being most crowded, had a death-rate of 25.7 per 1,000 inhabitants. He, therefore, concluded that the death-rate *per se* was not sufficient to prove that any given district was very healthy, but that other causes should be considered.

Cases illustrating the Endemic and Non-Infectious Character of Diphtheria. By W. CARR, M.D., F.R.C.S. Eng.—The object of this paper was to support the following inferences. 1. When diphtheria breaks out in a family, attacking one or more of its members, the cause will be found in some local sanitary defect. 2. The family should at once remove from the infected house—a measure at once obligatory and preventive. 3. Imported diphtheria does not, as interpreted by the cases, spread in a family. Comparing the well-known histories of the spreading, by importation, of scarlet fever, etc., with diphtheria, we are forced, resting our conclusions on the cases narrated in this paper, to accept the teaching that diphtheria is neither infectious or contagious, but strictly a preventable endemic disease, whose extermination will be, in due time, one of the victories of sanitary science.

The Action and Relative Value of Disinfectants. By J. A. WANKLYN, Esq. [This paper is published at page 275.] *The Methods of Disinfection by Heat.* By W. H. RANSOM, M.D., F.R.S. [This paper is published at page 274.—Dr. TRIPE (Hackney) said he entirely agreed with Mr. Wanklyn that it was not necessary to use the host of disinfectants that had been lately introduced to the public. There was one point with which officers of health would have to deal, viz., the sewers. In order to use disinfectants properly, such as chlorine, they must not be used so strong as to be rendered dangerous. The first time that he used some chlorine, he almost poisoned one or two persons. In using carbolic acid of the strength recommended, if something were got which was not carbolic acid, it would produce injury of the lungs. Care must be taken to get true carbolic acid. As to chloride of lime, so far from removing the smell from sewers, it very frequently aggravated it. Disinfection by heat was most important; but special regard must be paid to the amount of moisture. To disinfect clothes, beddings, etc., the heated air must be made to pass entirely through them. If they were put up in mass, the inside was often found not to be dried. Flock he found to be very difficult to disinfect; it was often burnt, and new was given in the place of it. In his district, a brick

animals. The great problem of the builder of aquaria should be to obtain the best possible means of accommodating and displaying to advantage the largest number of marine creatures. Grotto-work, stalactites, and such costly puerilities, indicate a childish carelessness of the real object of the building, and lead to an unremunerative waste of capital. The most successful builder of aquaria in Europe—the only man, indeed, who has shown a thorough well-grounded and practical knowledge of the subject—is Mr. Lloyd, of the Sydenham Aquarium, who is a thoroughly practical marine naturalist, and builds his aquaria out of love to their inhabitants. He has secured a return of 25 per cent. on the capital of the shareholders, and has everywhere provided a rich treat to the pleasure-loving and to the science-loving public. We desire to see aquaria succeed, and hence we caution those who are interested in the projected French aquarium to avoid the costly errors of Brighton and Berlin, and to follow the successful plans adopted at Sydenham, Hamburg, and now at Naples.

THE CHOLERA IN AUSTRIA.

A VIENNA contemporary writes, on August 29th: The outbreak of cholera in Vienna has this week shown the same character as it did last week. The cases occurred nearly in equal proportions in the districts, and the first district alone was remarkable for the small number of patients. The daily numbers of new cases, outside and within the hospitals, were respectively the following: on August 20th-21st, 34 and 32; on August 21st-22nd, 40 and 20; August 22nd and 23rd, 18 and 36; August 23rd-24th, 27 and 31; August 24th-25th, 45 and 29; August 25th-26th, 43 and 35; August 26th-27th, 30 and 24. In the General Hospital, which has been almost free from cholera since the outbreak of the epidemic, ten of the nurses were attacked last week, and several of them fell victims to the disease. The explanation of this lies partly in the circumstance of their visiting, on the days when they were not on duty, their private dwellings in the suburbs which were infected with cholera; partly in the arduous nature and faithful performance of their duties. The directors of the hospital have taken measures to prevent the further extension of this calamity; and have been so far successful, that only isolated cases have occurred during the last few days. The course of the cholera in the General Hospital has been very peculiar. It first attacked the porter; then it spread to the managing department, and then visited some of the individual departments, everywhere causing a death, but none among the hospital patients. It was the attendants that it visited most severely. In the immediate neighbourhood of Vienna, the disease makes almost no progress, notwithstanding the many unsanitary conditions of the suburbs; even in the large suburban districts, the daily number of cases ranges between 2 and 18. The cholera has broken out with remarkable severity in several parts of the flat country, among the brickmakers. On August 25th, it suddenly attacked seventeen persons in one street in Brunn, and caused twelve deaths in a few days. This outbreak was traced to the drinking water used by the inhabitants of the street, which was found charged with filth. Among the brickmakers in Brunn, Inzersdorf, and Rothensiedl, the disease continues to spread in spite of precautionary measures, and carries off victims almost daily. There have also been a number of cases in the parts of the district of Kremser lying on the right banks of the Danube; and here too, the disease has been traced to the use of foul water. The epidemic prevails also in several other sanitary districts.

SANITARY CONGRESS IN FRANKFORT.

THE programme of the first meeting of the German Sanitary Association, to be held in Frankfort on September 15th and 16th, has been issued. On the first day, discussion will take place on the following subjects: Freedom of combined action in reference to the preservation of the Public Health; and the Organisation of the Sanitary Service of the State. The second day will be occupied chiefly with the demonstration of plans, drawings, models, apparatus, etc., having reference principally to the sewerage, water-supply, and school and hospital buildings of Frankfort.

DUST-BINS.

THE art of "how not to do it" has, says the *Pall Mall Gazette*, certainly been brought to perfection by vestries. If there is a nuisance which requires removal more than the vestries themselves, it is the dust and refuse which breed so much fever in the metropolis. Yet the vestries systematically turn a deaf ear to the repeated remonstrances addressed to them on the subject, and persistently manage to avoid enforcing the penalties to which the dust contractors are liable for non-performance of their duty. At a late meeting of the Kensington Vestry, Dr. Daniel called attention to the state of the dust-bins in the parish. It appeared to him (as, indeed, it appears to every one who is not a vestryman) that at this time of the year especially they should insist upon the dust contracts being carried out in a proper manner. Dr. Daniel said he had carefully perused the contract deeds, and found them to be most carefully prepared, and they clearly showed that any contractor who wilfully neglected any part of his contract was liable for every offence to a penalty of £5. If all the penalties were enforced, the fines would amount to at least £1,000. It would be thought that custodians of the public health would have at once after this statement proceeded to enforce the penalties referred to. They might have pitied the dust-contractor—even wept, if they were personally acquainted with him; but a stern sense of duty would have compelled them to bring down the sword of justice on his head, or at least quicken his movements by the application of its point. Nothing, however, of the kind occurred. "Some discussion ensued on the subject, but no action was taken in the matter." Surely, the time has almost arrived when some penalty should be inflicted on vestries who thus neutralise by their inaction the best efforts of sanitary reformers.

CHOLERA IN PARIS.

OUR correspondent writes that there have been only a few cases of sporadic cholera in Paris, from which there have been four deaths in the hospitals in August, the last having occurred on the 29th of that month. There are several cases of cholera, which has been fatal among children, but from which adults generally recover. Typhoid fever is rather prevalent just now. There were five deaths from it in the hospitals on September 2nd.

TREATMENT OF AORTIC ANEURISM BY GALVANO-PUNCTURE.

AT University College Hospital on Tuesday, Mr. Marcus Beck operated by galvano-puncture on a very rapidly growing aneurism of the descending aorta. The patient, a man aged about 40, had only suffered from pain and dyspnoea about a month, and a pulsating tumour had appeared in the lower dorsal region a few days only before admission. During the short time the patient had been in the hospital, the tumour had been daily increasing in size, the neighbouring ribs becoming rapidly eroded. Mr. Beck introduced the wires about an inch apart through the most prominent part of the tumour, and passed the current between them for about an hour and a quarter. The immediate effects of the operation were decidedly encouraging. The pain was much diminished, and the expanding impulse also lessened. The improvement still continued this (Thursday) morning. There was rather less bulging of the lower part of the chest, as well as diminished thrill. We shall report the further progress of the case next week.

LONGEVITY.

THE report recently issued by the Registrar-General relating to the year 1871 contained further testimony on the subject of long life. In 1871 the following deaths were registered in England, the ages (like other particulars) being taken on the statement of the relatives or other persons supplying information of the death. There were 27 persons registered as dying at the age of 100 years, 17 at 101, 10 at 102, 5 at 103, 3 at 104, 2 at 105, 2 at 106, 1 at 107, 1 at 108, 1 at 109 years. The last three should have special mention: a man in the district of Sevenoaks was registered as dying 107 years old; a man in the district of Ledbury, 108; a woman in the district of Chester, 109 years old.

Seven centenarians died in the metropolis, and seven in Lancashire. Of the whole 69, 25 were men, and 44 were women. From 1861 to 1871 the deaths of people registered as being 100 years old or more averaged 78 a year; 21 men and 57 women. The Registrar-General mentions, as the only known instance of an insured life reaching 100 years, that of Jacob William Luning, who died in 1870, at the age of 103 years. His age was clearly established by documentary evidence submitted to the Registrar-General, and published by him in his weekly return. An American correspondent writes on this subject:—

“The *Human Longevity* of Mr. Thoms has excited a deal of comment in this country. It is felt to be pretty conclusive in reference to the cases given; but our newspapers teem with recent instances of men and women who have reached a hundred. Of course, there are many mistakes made; but a note of all that is said leaves behind the impression that a century of life is not so rare as Mr. Thoms thinks. I will give a few of those recently talked of, that have been brought forward since Mr. Thoms' book first appeared. They may serve him in his inquiries, if he still pushes them in that direction, as doubtless he does. Seven have recently died: Joseph Miller, of Coatesville, Pennsylvania, aged just 100 years; Jane Kirk, Carrersville, Bucks County, Pennsylvania, aged 101; Stephen Philbrick, Tamworth, New Hampshire, 102 years 1 month and 20 days; Beulah Hunt, Randolph, Massachusetts, 104; Mrs. Shelley, Pesasanville, Suffolk, England, 104; William Burns, La Salle, Wisconsin, and Nancy Harvey, Baltimore, 117. Ten are reported to be still living: Phoebe Thompson, Wilmington, Delaware, 103; John Bullock, Bristol (?), 104; John Williams, Providence, 105; Abner Huntley, Cuba, New York, 106; Count de Waldeck, Paris, France, 107; David Stiles, St. Paul, Minnesota, 108; Jack Noble, Arkansas, 110; Robert Smith (a mulatto), Cincinnati, Ohio, 112; John Owens, Granada, Mississippi, 115; and, older yet, and less definite in particulars, Mr. Robinson, Minnesota, 122. These cases are not given as history, but to exemplify the passion to know of centenarians in America.”

MANSLAUGHTER BY A CANCER-CURER.

A CORONER's warrant has been issued for the apprehension of a chemist of Branton named Goss, who had been for some time treating a Mrs. Elizabeth Yeo at Barnstaple for cancer. The woman died suddenly while using as a local application impure sulphate of zinc.

THE ASHANTEE WAR.

MOST unfavourable accounts are being received regarding the health of the troops. By the latest accounts, out of 112 who left England for Cape Coast Castle in time to take part in the action at Elmina, all but twenty were invalided and sent back to England. Eleven died on the passage home, the others being sent to Haslar Hospital.

WATERED MILK.

WE hope that the example of Mr. Partridge, at Southwark, will be followed by other magistrates in the kingdom in putting a stop to the disgraceful adulteration of milk, which is assuming extravagant and incredible dimensions. On Monday a milkman was summoned at Southwark, under the Adulteration of Food Act, for selling milk containing three-tenths of water, besides being greatly deficient in fatty matters. The defendant offered the strange excuse that it was not intended for sale, although he had sold the article proved to be watered to the assistant sanitary inspector. He was most properly fined £4 and the costs, amounting to £1:3.

DENGUE IN AMOY.

WE have received a valuable and interesting report on an epidemic of dengue in Amoy, drawn up by Drs. Müller and Manson. We should be glad to decant the entire report into our columns, but must remain satisfied with referring to a few of the particulars contained in it. It appears that the disease, so far as the present generation is concerned, is new to Amoy. The reporters consider that it was imported from the Straits settlements. There, as well as in India, dengue had prevailed for many months prior to August 1872, when the epidemic broke out in Amoy. Both natives and Europeans, but chiefly the former, were attacked. Briefly, the malady witnessed by Drs Müller

and Manson may be defined as a specific epidemic disease, the typical forms of which are characterised by a first stage of fever more or less intense, lasting from one to three days, accompanied by severe myalgic and articular pains, with occasional swelling and marked congestion of the skin, ended by crisis of sweating, diuresis, diarrhoea, or epistaxis; a second stage, lasting to the end of the fourth, fifth, or sixth day, during which the patient is comparatively comfortable, though occasionally troubled with debility, myalgic pains, or anorexia; a third stage, beginning usually on the sixth day with slight return of fever, exacerbation of pains, and a specific well marked exanthematous eruption, followed, after a day or two, by diminution of the pains, fading of the eruption, and at times slight desquamation; and a fourth stage of convalescence, of variable duration, from a day or two to several weeks, during which the patient may be troubled with severe pains or slight and evanescent attacks of febrile disturbance. The period of incubation they believe to be under five days. Distinct examples of relapse were observed, with fever and eruption well marked. No death from the disease is recorded; but the authors are of opinion that the disease is a serious one to the feeble; and that, as neither young nor old, healthy nor sick, were spared, many persons much debilitated by other diseases must have succumbed to the violence of the initial fever, or to the subsequent debility. The treatment was directed to encourage diaphoresis and diuresis. The temperature-charts, which show a rise during the early stage of the thermometer to 104 to 107 deg. Fahr., add materially to the value of the report.

PHOTOGRAPHIC GROUP OF THE ASSOCIATION MEETING.

THE exceptional advantages offered by the recent meeting in London of securing the likenesses of many members of the profession, British and foreign, were not lost sight of. Messrs. Fradelle and Marshall, an energetic firm in Regent Street, were enabled, under many difficulties of sunlight and shade, to secure photographic groups of members of the Association *en masse*, and also groups of the various sections. Two out of three large groups are good, so far as they go, although the members in the foreground are not in many instances representative of the Association. The sectional groups afford some excellent likenesses, but in several instances the majority or even the whole of the officers are absent, rendering it a matter of difficulty to determine which Section would actually be represented. On the other hand, again, the prominent appearance in the foreground of some gentleman who had mistaken his Section, adds still more to the incompleteness of the sectional groups. The difficulties of light and the many demands of the meeting on the members sufficiently excuse many imperfections in the photographic groups, which are on the whole excellent. An index of names would add materially to the value and interest of the groups.

DEATH OF A PHYSICIAN FROM CARBOLIC ACID.

DR. HILL of Macon sends to the *Richmond and Louisville Medical Journal* the particulars of the death of Dr. R. S. C. Foster, who drank by mistake, instead of some whiskey, half an ounce of carbolic acid. He died, without much apparent suffering, about a quarter of an hour after he had swallowed the dose. It seemed to produce a sudden and fatal action on the nerve-centres. Mustard and lobelia were given as emetics without effect.

DRUNK OR DYING.

CASES of this kind are still perpetually recurring in the provinces. A few nights ago, according to the *Manchester Courier*, a Manchester agent, named Pritchard, was seized in the streets with paralysis. The police found him, and locked him up on the charge of being “drunk and incapable.” One policeman said he “took him to be drunk,” another that he “smelled drunk,” another that he “smelled very strongly of drink,” and another that “he couldn't smell any drink.” Subsequently the man died, and at the inquest a medical man said that, “anyone who had had much experience of drunken people ought very well to have told that it was a serious case, for paralysis

was obvious." The jury returned a verdict in accordance with the medical evidence, and expressed an opinion to the effect that the inspector on duty at the police-station was guilty of negligence in the discharge of his duty, in not discovering that the deceased was suffering from paralysis. The following is the Metropolitan Police Order on the subject. "In every case where a person is brought to a station in a state of insensibility, whether supposed from drink or any other cause, the officer on duty at the station is to send for medical advice as soon as possible. Drunken persons are to be visited and spoken to in the cells every half hour, and if they become insensible, and cannot be roused, medical advice is to be sent for at once." The wisdom and propriety of this rule are obvious, and if it were universally adopted and properly acted on, scandals such as the above could not occur.

HYDROPHOBIA IN THE COLLIERY DISTRICTS.

AN alarming outbreak of hydrophobia is stated to be present in the colliery districts, not only dogs but also pigs being attacked by the disease. In the neighbourhood of Consett alone, according to the *Shields Gazette*, upwards of fifty mad dogs have been destroyed during the last nine months. A short time ago a large hound visited Castleside, where it bit several dogs and also a pig belonging to a publican. It then attacked another pig in the neighbourhood, which with the publican's pig in a few days exhibited symptoms of hydrophobia. The two pigs, after tearing their flesh and everything within their reach, were destroyed. The dog, however, who caused all this trouble proceeded on his journey, and was next seen at Muggleswicke, where it bit a number of dogs. Thence it proceeded in the direction of Stanhope, and was ultimately shot at Bewley Top. On Sunday morning last another mad dog was shot at Fox Holes, after it had bitten several dogs in the villages of Rowley and Castleside. Under these circumstances, the magistrates of Lanchester have issued a notice ordering all dogs to be confined for the space of twenty-eight days. It is suggested by the *Pall Mall Gazette* that, considering the terrible nature of hydrophobia, it really seems that when a whole district is threatened in this fashion with one of the most fatal and horrible diseases that can attack humanity, it might be as well to take the same measures for "stamping it out" as are taken in the case of cattle-disease.

ALLEGED TYPHOID AT CROYDON.

It had been alleged by Mr. Smea, that typhoid fever had been produced in Croydon from the use of milk from sewage-fed cows. If the facts were as he states in reference to the prevalence of typhoid, they would of course afford no support to the monstrous theory with which he connects them, and which he has unfortunately to the discredit of medical science, paraded in the daily papers in company with suggestions of a similar nature put forward with equal imprudence by Mr. Sedgwick. But the facts are not as he believes them to be. The following returns for 1871 and 1872 show the actual facts. Population, 2,834. 1871: Births, 92; deaths, 32; deaths from typhoid or enteric fever, 0; scarlet fever, 2; diphtheria, 1; death-rate, 11.2 per 1,000. 1872: Births, 112; deaths, 38; deaths from typhoid or enteric fever, 0; scarlet fever, 0; diphtheria, 0; death-rate, 13.4 per 1,000. Total births, 1871 and 1872, 204; deaths, 70—increase, 134.

MEDICAL OFFICERS OF HEALTH.

THE *Local Government Chronicle* gives the following statement, which shows the several medical officers of health in the metropolis, with the salaries assigned to them. Bermondsey—Dr. W. Parker, salary £160; Bethnal Green—Dr. T. Sarvis, £150; Camberwell—Dr. J. S. Bristowe, £300; Chelsea, Dr. A. W. Barclay, £150; Clerkenwell—Dr. J. W. Griffith, £300; Fulham—Mr. J. F. Burge, £150; Greenwich—Mr. H. N. Pink, £150; Hackney—Dr. J. W. Tripe—£450; Holborn—Dr. S. Gibbon, £200; Islington—Dr. C. M. Tidy, —; Lambeth—Dr. M. J. McCormack, £500; Lewisham—Dr. F. E. Wilkinson, £73 10s.; Limehouse—Mr. G. A. Rogers, £200; London, City of—Dr. H. Letheby, £600; London, Port of—Mr. H. Leach, £400; Paddington

—Dr. W. Hardwicke, £150; Plumstead, Charlton Division—Dr. R. Finch, £50; Eltham Division—Dr. D. King, £50; Lee Division—Mr. J. S. Burton, £75; Plumstead Division—Dr. W. C. Wise, £50; Poplar, North Division—Mr. R. M. Talbot, £150; South Division—Mr. S. K. Ellison, £150; St. George's, Hanover Square—Dr. W. H. Corfield, £350; St. George's-in-the-East—Dr. J. J. Rygate, £150; St. George-the-Martyr, Southwark—Dr. H. Bateson, £200; St. Giles and St. George, Bloomsbury—Dr. G. Ross, £150; St. James, Westminster—Dr. E. Lankester, £200; St. John, St. Olave's, and Thomas, Southwark—Dr. J. N. Vinen, £150; St. John, Hampstead—Mr. C. F. J. Lord, £125; St. Luke, Middlesex—Dr. W. Pavy, £150; St. Martin-in-the-Fields—Mr. J. J. Skegg, £125; St. Mary Abbots, Kensington—Dr. T. O. Dudfield, £300; St. Marylebone—Dr. J. Whitmore, £500; St. Mary, Newington—Dr. W. T. Iliff, £300; St. Pancras—Dr. T. Stevenson, £300; St. Saviour, Southwark—Mr. R. Bianchi, £200; Strand—Dr. C. Evans, —; Wandsworth and Battersea, West Division—Mr. J. Oakman, £50; East Division—Mr. W. H. Kempster, £50; Clapham Division—Mr. J. McDonough, £50; Putney Division—Mr. R. H. Whiteman, £50; Streatham—Mr. D. C. Noel, £50; Wandsworth Division—Dr. G. E. Nicholas, £50; Westminster—Mr. B. Holt, £130; Whitechapel, Mr. J. Liddle, £250.

INTERNATIONAL OTOLOGICAL CONGRESS.

At the sixth annual meeting of the American Otological Society, July 16th, at Newport, a communication was received from Drs. Blake, Roosa, and Pomeroy, in regard to an International Otological Congress; and on motion of Dr. Roosa it was resolved, "that a committee of three be appointed by the chair, who shall report at the next meeting of this Society, as to the feasibility of holding an International Otological Congress in New York in 1876." The President appointed as such committee Drs. Roosa, Blake, and Knapp.

IRELAND.

MILK-POISONING.

THE death of two members of one family and the dangerous illness of the remainder, four in number, from drinking the milk of a goat which had eaten *athusa cynapium* are reported to have occurred in the County Limerick.

NEWSPAPERS FOR HOSPITALS.

It has been lately suggested that boxes should be placed at the various railway stations in Dublin, and outside hospitals for the purpose of receiving newspapers, periodicals, etc., for the use of patients in hospital. The papers found in the railway carriages in England are usually collected for the use of the inmates of hospitals, and it would be an admirable plan if the same arrangement were carried out in Dublin. All that is required is a little management; and we are confident, that if the governors of these charitable institutions were to ask permission to place receiving-boxes at the railway stations, the directors of those companies would not refuse so reasonable a request, compliance with which would contribute a large amount of pleasure at a very trifling outlay.

BEET-ROOT SUGAR.

A COMPANY has been formed in Dublin for the purpose of manufacturing sugar from beet-root. The soil of Ireland, from numerous experiments, has been found peculiarly adapted for the cultivation of beet-root, and the large percentage of saccharine matter obtained from Irish beet renders it extremely possible that this branch of industry will, for the future, be one of considerable importance. To show the extensive use of beet-root sugar, it may be mentioned that in 1866 it amounted to one-fourth of the entire quantity produced from all sources throughout the world. The factory will be arranged to work up 12,000 tons of beet-root in the season, and, if the result be favourable, several others will be constructed by the company.

THE DAIRY REFORM COMPANY AND THE OUTBREAK OF TYPHOID FEVER IN LONDON.

[THE following correspondence and remarks thereon appeared in the second edition of the JOURNAL published on August 30th. We have since received from Mr. Hope, one of the directors of the Dairy Company, a letter dated September 3, taking exception to some of the statements prefixed to the correspondence. But as the correctness of these cannot be reasserted without referring the matter to the Editor of the JOURNAL, who is out of town, we are compelled to postpone the insertion of Mr. Hope's letter until next week.]

A part of the following correspondence has been in type for the last fortnight; it was judged, however, to have lost most of its interest, from the frank admission of Dr. Corfield, on behalf of the Dairy Reform Company, of the direct inculcation of milk as the source of infection, both in his published letter and in the careful detailed report which he furnished to our pages. It should be stated that the letters of the Dairy Reform Company were furnished day by day to Mr. Ernest Hart by the Company, in consequence of his having called at the commencement of the week to urge the directors to comply with the suggestion of Sir W. Jenner and Dr. Murchison, by arresting the supply of suspected milk. It is the more necessary to state this, because the immediate cause of our publishing the correspondence is the allegation by the Secretary of the Company that insufficient opportunities were afforded them of becoming aware of the facts which were published a few days afterwards in the BRITISH MEDICAL JOURNAL. The actual fact is, that the Editor of this JOURNAL pursued the quite unusual course of personally seeing two of the directors, to impress upon their minds the urgency of the situation, and the importance of immediate action upon the known facts, seeing the danger to public health arising from a policy of delay.

No. 1.—Delivered to the Manager of the Dairy Reform Company at 9.30 A.M., August 11th.

London, August 9th, 1873.

Sir,—Within the last week we have been called to see a large number of cases of enteric fever; and many others, well authenticated, have been brought to our notice, which have commenced in the West-end of London mostly since the middle of last month. These cases cannot be traced to any defective drainage or to polluted water, and they are not restricted to localities supplied by any one water company. The one condition in common has been the use of milk supplied by your dairy; and in several families there have been special circumstances corroborating the opinion that the milk has been the medium of conveying the poison. This evidence is so strong that we deem it our duty to call your attention to the matter, in the hope that you will suspend the issue of milk from your dairy until the cause of the outbreak has been thoroughly investigated. The facts we refer to have been communicated to Mr. J. N. Radcliffe, the Medical Inspector of the Privy Council, who has been deputed to inquire into the matter.

(Signed)

W. JENNER, M.D.

C. MURCHISON, M.D.

To the Manager of the Dairy Reform Company,
Orchard Street.

P.S.—Of thirty-seven families in which it has come to our knowledge that typhoid fever has occurred, thirty-five are supplied with milk from your dairy.—C. M.

2.—Received at 5 p.m., August 11th.

Dairy Reform Company (Limited),

29, Orchard Street, W., August 11th, 1873.

Gentlemen,—I had the honour to receive this morning, at 10 o'clock, by the hands of Dr. Murchison, your letter dated Saturday last, the 9th instant. I immediately summoned a board meeting of the directors by telegraph, and I am now instructed to send you the following reply.

The directors have learned, with the greatest regret, the extensive outbreak of typhoid fever that has recently taken place at the west end of London; and it is with still greater regret that they have learned that a gentleman to whom the public is so much indebted for his great labours in investigating and mitigating this very disease (as Dr. Murchison), should now suffer the grief of seeing his own children stricken by it. The directors are, however, glad to observe that you do not as yet consider that the evidence that this outbreak of typhoid fever is

attributable to our milk amounts to *proof*; and this although you have had the opportunity of ascertaining all the evidence against the milk, without seeing the evidence in favour or it.

A letter from Sir William Jenner and Dr. Murchison, of the purport of that which they have received, is one which the directors feel to be of the gravest importance; and were they not in possession of facts unknown to you, they would not hesitate at once (at whatever sacrifice) to suspend—which would of course mean to close—their business, for they are quite sure you would not have written in the sense which you have unless you thought that the evidence before you at all events pointed to the milk. The Company is under contracts for twelve thousand pounds' worth of milk; and if we were to discontinue selling the milk in London, we must, of course, have it destroyed in the country, as we could not make the poisoned milk into cheese or butter. The Company also have premises in several parts of London, some of them on long leases, and adapted for their own purposes at a very large capital outlay, none of which would be of the slightest use to any other business; and they are under obligations to pay rent, etc., amounting to £650 a year. To suspend this business, announcing the cause of their suspension, would be, of course, to destroy it for ever, it could never be resumed; and as, although under limited liability, the Company is substantially a private partnership (the business having been started on public grounds, and the milk-supply of London having been really reformed through the energy and honesty of this Company), the loss to the individual members would therefore be very heavy and serious. Nevertheless, on receipt of a letter from Dr. Whitmore, dated the 7th instant, enclosed herewith, marked "Enclosure No. 1", the directors immediately sent the reply, of which copy is annexed, in "Enclosure No. 2", to which they have received no answer.

The directors having given their best attention to the whole subject, are as yet of opinion that it is almost impossible that the milk can be the cause of the fever, for the following reasons.

1. The *employés* of the Company, such as milk-carriers, horse-keepers, etc., receive an allowance of not less than a quart of milk per day gratis, and they often buy more. The milk given to them is served out from that remaining in the large milk-churns when they return from the distribution on their several beats; so that, if tampered with by any of the Company's *employés*, the milk which they receive must also be tampered with. There are upwards of fifty *employés*, and many of these are married, there being a total among them of about sixty children; and to the best of our knowledge and belief, there is not at this moment one single case of typhoid fever among all these persons (amounting to upwards of a hundred), nor has there been a single case.

2. We have written to all the farmers from whom we receive our milk, and we are informed by them that there is no case of typhoid in any of their families or *employés*. Most of the farmers have children, and one has no less than ten. Our milk is obtained from eight different farms; and when the families of these farmers (all of whom are stated to use the milk) and their servants are added to our own *employés* and their children, we have a total of something like two hundred persons using the milk every day, not one of whom, to our knowledge, is suffering from typhoid fever (half of them being children drinking the milk unboiled).

3. Not one of these two hundred persons, however, lives in a superior, well-built, tightly closed, London house, with waste-pipes and soil-pipes communicating in some way or another with the town sewer.

4. On the other side of Oxford Street, we have selected thirty customers whom we believe to have children; and we find that among them, six have cases of typhoid fever. Of these thirty, eight are medical men.

5. Of the six cases of typhoid fever among the thirty customers, four are in the houses of medical men.

6. We are not in possession of so many facts regarding the outbreak north of Oxford Street; but we believe that, in the first eleven cases, nine were in the houses of medical men.

7. We are informed of two cases of typhoid fever in the families of medical men not our customers, on the north side of Oxford Street—viz., Mr. Arnott of Nottingham Place, and Dr. Fuller of Manchester Square. If these two are the same two (out of the thirty-seven) which you allude to as not served by us, it would be a very remarkable coincidence that they should be also medical men. The directors are well aware that, up to the present, it is the opinion of the most eminent men in the profession that typhoid is not contagious; but certainly such remarkable coincidences are stronger evidence to the contrary than that milk which does not poison poor persons living in badly built houses, with doors and windows that do not shut very close, should nevertheless poison persons living in the houses of the rich under opposite conditions.

8. We are in possession of the facts of two cases of typhoid fever—

one to the north and the other to the east of Hyde Park—one served by the other not, where defects in the drainage arrangements of the houses have been pointed out, but not yet remedied, it being intended to remedy them when the families left town.

9. In the *Marylebone Mercury* of the 9th instant, in the report of a meeting of the Marylebone Vestry, it is stated that "Dr. Whitmore again urged upon the vestry the necessity of the waste-pipe of water-cisterns that was connected with the sewers being cut off, as it often conveyed foul air into the cisterns from the sewers, and thus engendered disease; and a letter from the Local Government Board with respect to precautions to be taken against cholera was referred to the Sanitary Committee."

10. Dr. Frankland reports very unfavourably of the water supplied during the month of June by the West Middlesex and Grand Junction Companies, which, we believe, supply all the houses where typhoid has broken out. "Taking into account the organic impurity of the Kent Company's water," Dr. Frankland found in the West Middlesex water that the organic impurity was equal to 3.0, and the Grand Junction water to no less than 3.4. It is only reasonable to suppose that this organic impurity must have increased during the month of July, owing to the very small quantity of rain which fell during that month. The directors are well aware that neither the analytical chemist nor the microscopist can detect the germs of disease in any material; but this, at all events, is certain, that they must come under the head of organic impurity.

11. The directors are informed that there has been some typhoid in, or in the neighbourhood of, Oxford. They do not know whether this is true; but if true, it is certain that the evacuations of the patients went into the Thames above the intake of both the Water Companies, on whom the directors consider the suspicion should rest, and not on the milk.

In our judgment, not only do the above facts almost prove the impossibility of the typhoid poison having been communicated by our milk, but they also show that there are abundant causes to account for the outbreak, at all events, in some of the cases.

In calmly reviewing the whole of the facts of the case, so far as they have as yet been ascertained, the Directors cannot see that there is any ground even for suspicion that the fever has arisen from the milk; but, were the case different, and were it a case of suspicion—grave suspicion—but of suspicion only, it might be a very proper course for a medical officer of health to close the shop of a milkman, or a baker, or a butcher, or a confectioner, or a greengrocer, or to stop a further supply of water by a particular water-company; but it is quite evident that, were such a step taken by him in the public interest, it would be only right that, as in the analogous case of cows suffering with rinderpest, a private person, suffering for the general good of the public, should be compensated by the public.

I am, gentlemen, your very obedient servant,
D. J. D. MACONCHIE, Secretary.

To Sir W. Jenner, Bart., M.D., K.C.B., and
C. Murchison, Esq., M.D., LL.D., F.R.S.

Enclosure No. 1.

Vestry of St. Marylebone.

Court House, Marylebone Lane, August 7th, 1873.

Gentlemen,—Since the date of my letter addressed to your manager, Mr. Maconochie, suggesting to him the necessity of suspending for a time the sale of your milk, several other cases of typhoid fever have been brought to my notice, all of which occurred in families who obtain their milk-supply from your establishment. Under these circumstances, I feel that my official position as medical officer of health of this important parish imposes upon me the very responsible duty of calling upon you at once to discontinue any further supply of milk to the public from your present source until such time as the true cause of the outbreak can be ascertained. I must also take leave to say that, should you think proper to disregard this notice, and should the investigation which I am now pursuing prove that the present outbreak of fever in this district is in any way attributable to your milk, the responsibility of any future ill consequences that may ensue will be yours.

I remain, gentlemen, your obedient servant,
(Signed) J. WHITMORE, M.D., Medical Officer of Health.
To the Directors of the Dairy Reform Company.

Enclosure No. 2.

Dairy Reform Company (Limited),

29, Orchard Street, W., August 8th, 1873.

Dear Sir,—I am desired by the directors, of whom a meeting was assembled by telegraph this morning, to acknowledge the receipt of your letter of yesterday's date, and, in reply, to inform you that we are

quite prepared to obey your orders, provided that the vestry will undertake to compensate us weekly or monthly for all the loss and injury which we may sustain in loss of custom and reputation.

We still utterly disbelieve the allegation as to typhoid fever, which is as yet absolutely unsupported by any evidence whatever. On the other hand, we now have overwhelming evidence to the contrary.

We will, on receipt of a formal undertaking as to the pecuniary losses which will fall upon us, keep a special profit and loss account, in the name of the vestry, from the date of our receipt of such undertaking.

I am, dear sir, yours faithfully,

(Signed) D. J. D. MACONCHIE, Secretary.

To J. Whitmore, Esq., M.D., Court House, Marylebone Lane, W.

3.—Delivered to the Manager of the Dairy Reform Company,
10 A.M. August 12th.

London, August 12th, 1873.

Sir,—We acknowledge the receipt of your letter of the 11th instant. We have carefully considered all the arguments and statements contained in it, and we see not the slightest reason to modify the opinion or the advice conveyed in our letter of the 9th instant.

We are your obedient servants,

(Signed) W. JENNER, M.D.
C. MURCHISON, M.D.

To the Manager of the Dairy Reform Company.

4.—Received at 3 P.M., August 12th.

Dairy Reform Company, Limited,

29, Orchard Street, W., Aug. 12th, 1873.

Gentlemen,—I had the honour to receive, soon after 10 this morning, your letter in reply to mine of last night. The Directors are now meeting daily, to be in readiness to take action the moment anyone can point out any cause for serious suspicion that the present outbreak of typhoid fever in districts where we have no shops and do not supply the inhabitants, as well as in those where we do, can, upon any theory known to science, be due to milk supplied by us, which is freely drunk by 200 persons within our own observation, not one of whom is suffering from the disease.

One of the Directors has made hygiene his special study for many years, and as yet he is quite unable to come to the conclusion that our milk is in any way, or in any degree, connected with the present outbreak. But it appears from your letter, to which I have now the honour to reply, there are facts within your knowledge which have not yet been brought to his knowledge; such, at least, he assumes to be the case from the fact that you do not see "the slightest reason to modify" your previous opinion in any of the very startling circumstances brought to your notice in my letter of yesterday.

If any explanation can be given us which can satisfactorily explain how cases in Inverness Terrace and Picnic, among persons whom we do not and never have supplied, can be due to our milk, we shall then admit the possibility of the entire outbreak being due to the milk. Until this is shown, we utterly disbelieve that pure milk, coming from the country, has been the vehicle by which this poison has been spread, and we shall continue to lay the blame on the Thames water supplied to London, which we know receives the whole of the sewage of Oxford, Reading, Windsor, and other places, unpurified; and the volume of this sewage bears at this time of year a continually increasing proportion to the volume of the Thames, for the former is constant and the latter continues to decrease until the autumn rains.

Mr. Radcliffe, from the Local Government Board, Dr. Whitmore, the District Medical Officer of Health, accompanied, at our request, by Dr. Corfield, the Medical Officer of Health for St. George's, Hanover Square, and Mr. J. Chalmers Morton, one of the Rivers Pollution Commissioners, have gone down to examine the farms from which our milk is obtained.

We have every confidence in the result, and it certainly seems to us that to attempt to trace a general outbreak of fever to the water in which the milk-dishes are washed from which the milk is supplied to a small percentage of the inhabitants, rather than to the sewage-contaminated water which is widely spread, is not logical.

However, one of the Directors is a well-known sanitary engineer. There are facts within his knowledge which, in his judgment, are sufficient to account for the fever, and if, pending the inspection of the farms,—the results of which cannot be known for forty-eight hours,—you would like to have an interview with this gentleman, he will keep any appointment which you may give me notice of, before five if for to-day, or before nine if for to-morrow.

I am, gentlemen, your very obedient servant,

D. J. D. MACONCHIE, Secretary.

To Sir W. Jenner, Bart., M.D., K.C.B., and
C. Murchison, Esq., M.D., LL.D., F.R.S.

5.—*Delivered at Office of Dairy Reform Company, at 3 P.M., August 13th.*

London, August 13th, 1870.

Sir,—I have received your letter of the 12th instant. Sir William Jenner has gone to Osborne, and is unable to join me in replying.

1. Many of your remarks appear to me to be quite irrelevant to the question at issue. We have not alleged that the Dairy Reform Company is responsible for all the typhoid fever in London. The occurrence of typhoid fever in Pimlico and other localities, not supplied by your company, has nothing more to do with the question than its occurrence in Liverpool or Edinburgh.

2. What we maintain is, that, in the localities which are supplied by the Dairy Reform Company, typhoid fever is at present limited almost entirely to those families using the milk of your dairy; other families, with the same conditions of drainage and water-supply, remaining exempt. Out of sixty families of the better class already known to us, in which enteric fever has appeared within the last month, all but one have used your milk.

3. Of the two exceptional cases mentioned in your letter, one at least turns out to be a most remarkable instance, corroborating the conclusion at which we have arrived.

4. In certain families not supplied by your company, individuals have been attacked with enteric fever who have accidentally partaken of your milk, and then these individuals have been the only members of the family who have suffered.

5. An unusually large proportion of the patients have been young children who consume much milk. In certain families, children who drank water, but not milk from your dairy, have remained exempt; while the children who drank Dairy Reform milk have suffered; and of the adults who have taken the fever, most have been milk drinkers.

6. Your statement, that the epidemic is for the most part restricted to the families of medical men, is not correct, and, consequently, your inference therefrom is groundless. It is true that the instances first known to me were, for the most part limited, to the families of medical men; but this was simply due to the inquiry being at first limited to them. Of the families now known to me to be infected, amounting to nearly sixty, not one-third are medical, while, of the medical men whose families are infected, the majority are pure surgeons, whose practice does not in any way bring them into contact with typhoid fever. I may add that there is not in medical literature, so far as I know, an instance of a medical man being the medium of conveying typhoid fever.

7. Your statement, that not one of your *employés* in London, consuming your milk, has typhoid fever, is likewise incorrect. Their comparative exemption may yet be explained; but, in the meantime, I have information which leaves no doubt in my mind that your statement is based upon insufficient information.

8. It was not probable that Dr. Jenner and I, who have devoted the best part of our lives to the study of enteric fever and its causes, would have written the letter to you, dated August 9th, without having first carefully considered all the other possible causes of the outbreak to which you refer. We addressed you with disinterested motives in the public interest, and we believe also in the interest of your dairy.

9. As to the pecuniary interests of the company at stake, I am surprised that they should be adduced as any argument for not temporarily suspending the issue of your milk. The question is not one of rinderpest among cattle, but of the lives of human beings.

10. But viewing the matter solely from the point of the pecuniary interest of the company, the advice which we took the liberty of tendering appears to me to have been sound. At a temporary sacrifice of money and reputation the company, by adopting our advice, would have earned a permanent reputation, which could not fail to have largely increased their business. A spontaneous suspension of their business would before long have more than removed the discredit into which the company have fallen, from what I believe to be no fault of their own.

11. All the facts bearing on the present outbreak of enteric fever in the west end of London, and its relation to the milk supply which are known to me, I shall communicate to Mr. Radcliffe as soon as he returns to town.

12. That the conclusion arrived at by Sir W. Jenner and myself will be corroborated by the investigation now pending, I have not the slightest doubt.—I have the honour to be your obedient servant,

C. MURCHISON, M.D.

To the Manager of the Dairy Reform Company.

6.—*Received at 11 P.M., August 13th.*

Dairy Reform Company (Limited),

29, Orchard Street, W., August 13th, 1873.

Sir,—Your letter of this day's date has been read and considered by the directors with the attention which its importance demands.

The directors desire me to state that, had the first joint letter, signed by yourself and Sir William Jenner, been simply a statement of your professional opinion that the milk was the cause of the fever, they would immediately, at whatever sacrifice to themselves, have stopped the further supply of *any* milk; but the letter, unfortunately, entered into a discussion, and, no doubt from its brevity as compared with the mass of conflicting evidence, did so partially and incompletely. This incompleteness was plain to the directors; moreover, although dated the 9th, it was not brought here until the 11th,* which led the directors to suppose you did not consider the matter urgent. They argued, that if you and Sir William Jenner considered that no harm would arise from the non-delivery of the letter for forty-eight hours, they were amply justified in delaying for another twenty-four, as they had requested Dr. Corfield to telegraph the moment the slightest cause for suspicion was detected on any of the farms. But the thing that disposed the directors most strongly to disbelieve that anything could be wrong on any of the farms was that, on the occasion of Dr. Whitmore's first visit, he came under the impression that we derived the whole, or our principal, supply of milk from a sewage-farm, and said that this would account for the contamination, whereas we do not derive a single drop from any such farm.

In addition to this, they had written and telegraphed to all their farmers to inquire as to their health and that of their families, and in every case had received, prior to the reception of your first letter, the most satisfactory replies.

It now appears from the investigations of Drs. Whitmore, Radcliffe, and Corfield, and Mr. Chalmers Morton, that there has been some typhoid on, or in the neighbourhood of, one farm, the supply of which was stopped by a telegram from Dr. Corfield last night. From that farm we had received, in answer to our inquiries last week, the letter of which I have the honour to enclose a copy, by which you will see that there is a strange mistake or wilful misstatement on the part of the writer.

We have, of course, not only stopped the distribution from that particular farm, but we have stopped its being sent to London, although it still appears to be only a case of suspected typhoid according to our latest advices; but, assuming that, instead of being a case of suspected typhoid, it is, or becomes, a case of admitted typhoid, we still fail to see that this amounts to anything approaching to proof that the milk has been contaminated, whereas it is a fact that the natural drainage of all that district is into the river Thames, which again runs into the Thames above Reading. Consequently, it is almost certain that some typhoid evacuations must have found their way from any cases on or near the farm of Chilton Grove into the water distributed by the West Middlesex and Grand Junction Companies, and, if the information given to us is corroborated, that cases of typhoid have occurred within the last few months in Oxford and Reading, it then becomes a matter of certainty that the Thames water has been contaminated by the poison; and this would be so much easier a way of accounting for the present outbreak, that it would require very strong proof to establish the fact that it was the milk and not the water; and while the first would explain the outbreak in various parts of the town, and also in houses in our districts not supplied by us, the latter would offer no explanation whatever of these other outbreaks which would be involved in as much mystery as before.

It appears, however, that two cases, prior to, or concurrent with, the earliest of the other cases alluded to, occurred in the Cavendish Square district, one of which was traced to Belgium, and the other of which was traced to Vienna—one of these cases proving fatal. The continual infection of the sewers by these two cases during a considerable period might well account for some others; for persons crossing the street near a sewer-ventilator only too often inadvertently inhale stinking gas, which, of course, at any given moment, might carry with it the germs of the disease.

If, on a complete investigation, it does in fact turn out that the milk supplied from one of this Company's farmers has (however difficult it may appear at present to account for it) been the vehicle of conveying this poison, it is unnecessary to say that the directors will be deeply grieved; but everything that honest men can do to ensure a pure supply of wholesome milk they have always done, and they feel sure that, on a calm review of all the circumstances of the case, you will think they were right in deciding not to close their business on what appeared to be, so far as they were able to ascertain, a too hasty suspicion. It is perfectly clear that in such cases a line must be drawn somewhere; it is impossible that large businesses for the supply of the necessities of life can be stopped abruptly every now and then upon mere suspicion arising, partially at all events, from erroneous data, such as Dr. Whit-

* Sir W. Jenner went to Osborne on the 9th, and did not return to town until late on Sunday, August 10th.

more's belief that our milk was produced on a sewage-farm. The extreme and excessive inconvenience to the public, and the excessive losses to the traders, would soon make the public impatient; and just as a prisoner is considered innocent until he is proved guilty, so the directors have considered that the only course of action at so early a stage as the receipt of your first letter, was to continue to consider the milk innocent until something more in the nature of proof were laid before them.

In conclusion, they again desire me to say that notwithstanding this view, had your first letter been simply a statement that you and Sir William Jenner had convinced yourselves that it was the milk that was to blame, without giving any reasons, and had the letter also been delivered at once, they would immediately have closed the establishment, for they would have considered such a statement sufficient proof.

I am, sir, your very obedient servant,

D. J. D. MACONOCHIE, Secretary.

To C. Murchison, Esq., M.D., LL.D., F.R.S.

Chilton Grove, August 7th, 1873.

Dear Sir,—In answer to your letter received this morning, I am too pleased to say we have had no fever in the family, nor with any of the milkers. I have not heard of a single complaint; the cows are all healthy and well; we drink the milk and cream and eat the butter of the remainder of what we send you; the churns are washed and cooled from the same pump-water we use daily.

(Signed)

Yours truly,

RUTH JESSOP.

To Mr. Maconochie.

MILK AS A VEHICLE OF INFECTION.

Dr. MICHAEL TAYLOR, of Penrith, discusses this question in a letter to a daily paper with so much clearness and accuracy, that his contribution will form an useful antidote to a great deal of the lamentable and mischievous nonsense which has appeared in the papers over the names of medical men who might be expected to have been better informed, or to have been more reticent and more modest than to obtrude upon the attention of an uninstructed public wild theories which they knew to be rejected by their own profession, and of which the publication discredits science, while it can only afford themselves a temporary notoriety of no desirable or creditable character. Dr. Taylor's statement is notably clear, accurate, and accordant with observed facts; and its publication was, under the circumstances, timely. He observes that it is quite true, and it is well authenticated in medical literature, that there are some diseases to which cows and goats are subject, which render their milk impure and unsafe for dietary purposes. It is also acknowledged that feeding on some rank esculents and poisonous plants, and possibly the over-abundant use by soiling or pasture of grasses, freshly drowned with sewage, may deteriorate the quality of the milk and butter, hasten the period of putrefactive change, and induce derangements in those who consume them. But it has never been shown that typhoid fever, or any special zymotic disease, has been so produced. Hence the importation into the discussion of such questions as the malady of the cow, and the use of sewage grasses as a cause of typhoid, as has been done by Mr. Smee, must be regarded as foreign to the inquiry which is now engaging public attention. It is after it has issued from the body of the animal that the impurity is introduced. The question is, where and how does the milk become infected with the poison? That warm milk is a fluid which absorbs with great readiness effluvia from the air, and is in the highest degree susceptible of the least mustiness and putrescence in the atmosphere, is a practical fact well known to the dairymaid, who has been taught by experience to observe scrupulous cleanliness and ventilation in the dairy. Dr. Taylor has tested experimentally the power which milk possesses of imbibing various kinds of odours, animal effluvia, and putrescent smells. Milk not only absorbs these effluvia to a wonderful extent, but also, from its oleaginous constitution, and property of throwing to the surface an impervious cream, retains such with peculiar tenacity. We must in truth look upon milk, of all fluids, as presenting the most congenial soil or nidus in which contagion may nestle and fructify, and in which, like leaven, the germs of typhoid, scarlatina, and cholera may be reproduced and multiplied. In all recorded epidemics, the contamination of the milk has taken place before it has left the premises of the dairymaid. It has, however, not been determined how far a supply of impure milk, derived from an infected dairy, on being mingled with wholesome milk brought from other separate and distant and healthy quarters, may fertilise with contagium germs the whole mass, and render

the whole equally dangerous. From what we know of the nature of zymotic poisons and their wonderful fecundity, and from what experience has taught us of the peculiar receptive attraction which milk presents to these infective particles, it is in every degree probable that an admixture of foul milk, even in small quantity, would leaven the whole mass. But how does the poison get into the milk? The virus is certainly not generated in the milk *de novo*. In all recorded outbreaks in which fevers, whether enteric or scarlatinal, have followed the trail of the milkman, such specific disease has existed on the premises of the dairymaid. To determine this question, we must examine the evidence in previously recorded instances of this accident. In the Islington outbreak, and in the present epidemic, proceeding from the Buckinghamshire dairy, it has been presumed that the cause lay in the use of water fouled by sewage for the purpose of rinsing the milk-cans, or by the introduction in some manner, accidental or otherwise, of such impure water into the mass of the milk before it left the dairy. Complete assent, Dr. Taylor says, must be withheld from this theory until the evidence is more positive and conclusive. His belief is, that the milk obtains the contagium by absorption from the infected air of the premises, and it may be directly from the person of the sick, or from the persons of those in attendance and in contact with the sick.

Such has been the result of his experience, to which on this occasion he once more refers. "It is," he says, "fifteen years ago since I brought before the profession the facts and arguments in support of my discovery of typhoid poisoning by the milk-supply. The whole story was told at the time in the *Edinburgh Medical Journal*, 1858. The facts were derived from an investigation of an epidemic in this town, similar in essential particulars to that now prevailing in Mayfair. The cows were healthy; the use of sewage grass or hay was unattainable; the addition of foul water to the milk, either by accident or by design, was practically impossible, the only available supply being the public service of pure water from Ullswater. The fever-virus entered the milk in this wise. The cows were milked by the hands of a woman who was nursing cases of typhoid fever on the premises; the milk-cans were brought into the room in which the sick were lying, and remained there until sent away to the customers. It was during the process of milking, while the thin warm stream was flowing, or whilst standing exposed to this atmosphere of fever-miasms, that the warm freshly drawn fluid absorbed the fever-virus, and afterwards communicated the disease to those who drank it. In the outbursts of typhoid fever which exploded along the track of a milk-walk at Leeds in 1872, as reported by Dr. Robinson, and again in Glasgow in 1873, as reported by Dr. Russell, the explanation of the manner in which the milk became infected is the same as I have indicated above."

There have been frequent outbreaks of enteric fever in Penrith arising from sewage stagnation, owing to the ignorance or supineness of the local sanitary authorities, but not again implicating a dairy until the year 1867, when a death from scarlatina occurred in a milkman's cottage. A rapid and fatal outburst of the pest amongst the families of the customers ensued, and an investigation forced the conviction that again the milk was the vehicle of the poison, and that the old dormant observations of 1858 were receiving their first corroboration. And it were well at the present time to be mindful that milk is a potent vehicle for the dissemination of this frequent and mortal zymotic scourge, scarlatina, and it may be of cholera also. Up to this time three distinct epidemics of scarlatina have been proved to have been diffused by milk, and have been publicly reported—viz., 1. That in Penrith in 1867, by Dr. Taylor himself; 2. In St. Andrew's in 1870, by Dr. Oswald Bell; 3. In Leeds in 1872, by Dr. Robinson. In the reports, they all agree as to the mode in which the poison was introduced into the milk. The cows were milked by scarlatina convalescents, or by those engaged in nursing the sick. In this disease the dry epidemic dust, the *débris* from the peeling skin, was the carrier of the infective germs. From the arms and dress of the milker it was shaken into the milk-pail, or absorbed by the milk from an atmosphere charged with these floating particles. In these instances it was not a question of a malady in the cow, nor of the use of sewage-grass, nor of the admixture of impure water. The evidence all bore on the direct mingling of the exuvie, or infective germs (if science can yet honestly admit such as a known quantity), proceeding directly from the bodies of the sick or from the absorption by the milk of the fever exhalations from the vitiated atmosphere in the vicinity of the sick. It will be observed that this explanation narrows the question of the means of prevention of such accidents within a range of easy attainment. Known the existence of enteric fever, or of scarlatina, or of cholera, on the premises of a dairy, either of two things must be insisted upon—the removal of the patient or the removal of the cows and milkers and dairy appliances from the sphere of infection.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above district will be held on Friday, the 19th instant, at Eastbourne; Robert Colgate, Esq., in the Chair. Dinner will be provided as usual; charge, 5s., exclusive of wine.

Notice of intended communications is requested by the Honorary Secretary on or before Thursday, the 11th instant, in order that they may be inserted in the circular concerning the meeting.

THOMAS TROLLOPE, M.D., *Honorary Secretary*.

35, Marina, St. Leonards-on-Sea, September 2nd, 1873.

NORTHERN BRANCH.

THE autumnal meeting will be held at the Central Hall, Darlington, on Thursday, September 25th, at half-past 1 P.M.

Dinner at the King's Head Hotel at 4 P.M. Tickets, exclusive of wine, 6s.

Notice of Motion.—Mr. H. G. Hardy will move, "That in future the annual subscription to the Branch be five shillings."

The following papers have been promised. 1. Mr. James Mackie: On the Working of the Public Health Act. 2. Dr. Eastwood: On the Water Supply of the Tees Valley.

Gentlemen who intend to read papers or introduce patients are requested to communicate their intention to the Secretary without delay.

G. H. PHILIPSON, M.D., *Honorary Secretary*.

Newcastle-upon-Tyne, September 2nd, 1873.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch will be held at Oundle, on Thursday, the 30th instant.

Gentlemen who intend to read papers or communications are requested to forward the titles of the same as early as convenient to Dr. Bryan, President.

W. MOXON, *Honorary Secretary*.

CORRESPONDENCE.

TYPHUS AND TYPHOID FEVER.

SIR,—When I last week intimated my intention to request the insertion of a few remarks "on a matter which concerns myself", I made use of a wrong expression. The influence on my fortunes as a physician, during the last thirty years, of my labours and views in reference to continued fevers, has been so infinitesimal, that I question if fifty men in the United Kingdom would consider my opinion on a case of fever worth asking or having. The merely personal question may, therefore, be conveniently dropped out of sight, and the whole subject may be treated as one of old-world history. Let it, then, be distinctly understood that, but for the vindication of historical accuracy, I should continue to maintain the silence which has been broken by me only once (in 1858) since the publication of my paper in 1840.

"Laudari a laudato viro"—to be praised at all by one so just, and so justly and admired and loved, as my old friend Professor Parkes—might seem, and by many will be thought, enough to satisfy any reasonable man. And so it would me, if the question were one merely of personal praise, and not, as the terms of Dr. Parkes's reference (as printed in the *Times* and *BRITISH MEDICAL JOURNAL*) to Jenner's and my labours historically exact? I have said "as printed"; for, as I listened to the Address in Medicine on the 6th instant, I thought I heard the two little words which are included in brackets in the following quotation, fall from the lips of the orator. "A most active member of this Association, Dr. Alexander Stewart, was a very early pioneer in this matter; and to [him and] one of the greatest physicians of our time, to William Jenner, must be ascribed the immortal honour of the demonstration which converted dubious conjecture into certainty." To have been thus bracketed with my distinguished friend Sir William Jenner would have satisfied me, because it would, and less than that would not, have satisfied the claims of historical truth. To accept the position of a mere pioneer, clearing a dubious and conjectural path for future and more accurate observers, would give an altogether erroneous idea of the work which I took in hand, and, I venture to say, accomplished. From and after the reading of my paper in April and its publication in October, 1840, the time of "dubious con-

jecture" as to the symptoms, course, duration, and *post mortem* appearances of typhus and typhoid fevers, was at an end. The "demonstration" I proposed to give of the essential dissimilarity of the two diseases in these respects was; I submit, full, clear, precise, and conclusive, resting on no dubious or conjectural foundation, but inviting the confirmation which subsequent inquiry has so abundantly supplied, and challenging the confutation which is still *in gremio futuri*. And, as I had not the advantage of access to the very able papers which embodied the views of Drs. Gerhard and Pennock, to whom, as Dr. Murchison remarks (2nd ed., p. 431), "certainly belongs the credit of first clearly establishing the most important points of distinction between the two diseases," I may truly add, "Alone I did it." Dr. Murchison thus refers (1st ed., p. 402; 2nd ed., p. 432) to the part which I took in working out this problem.

"Dr. A. P. Stewart studied fever in the Glasgow Fever Hospital from the summer of 1836 to June 1838, and afterwards in Paris. The results of his researches were communicated to the Parisian Medical Society on the 16th and 23rd of April, 1840, and were published in October of the same year. Dr. Stewart described in a masterly manner the leading distinctions between 'typhus' and 'typhoid' fevers as regards their origin, proximate causes, course, symptoms, and anatomical lesions; and he supported his views by a statistical analysis of cases of both fevers. He pointed out more accurately than any previous observer the differences of the eruptions; and he remarked that the characters of the two diseases, when taken collectively, were 'so marked as to defy misconception, and to enable the observer to form with the utmost precision the diagnosis of the nature of the disease and the lesions to be revealed by dissection.' He showed that, while there was overwhelming evidence to prove that the effluvia from living bodies in close and unventilated places could generate the poison of typhus, 'typhoid fever' often appeared in country places and in the best aired houses. The facts and arguments adduced in his memoir forced upon him the conviction that the two fevers were 'totally different diseases'. In November 1840, a review of Dr. Stewart's memoir appeared in the *Archives Générales de Médecine*, which the writer ended by remarking that Dr. Stewart's observations demonstrated that in England there were two distinct diseases—'typhus' and 'typhoid fever'."

The progress of these views, which had been slow though steady during the nine following years, was immensely accelerated by the publication in 1849 and 1850 of the classic treatise and papers of Jenner, who, says Murchison, "confirmed and amplified the distinctions between the symptoms of the two diseases previously drawn by Gerhard, Stewart, and others, and did much to facilitate their diagnosis.... But the most important part of his investigations bearing on the question at issue was that which demonstrated the dependence of the two fevers on distinct causes. By an analysis of all the cases admitted into the Fever Hospital during more than two years, he showed that the two fevers did not prevail together, and that the one did not communicate the other. He also adduced cases to prove that an attack of the one fever protected from subsequent attacks of itself, but not of the other." To him, therefore, belongs the undivided honour of having first conclusively proved that the two diseases must spring from distinct sources, and are not mutually protective; while Murchison, by showing the true nature of the source of enteric fever, has placed himself in the first rank of public benefactors. I am, etc., A. P. STEWART.

75, Grosvenor Street, W., August 28th, 1873.

OBITUARY.

GEORGE FABIAN EVANS, M.D., BIRMINGHAM.

DR. EVANS, whose death took place on August 31st, at the age of 67, was the son of Mr. Evans, a practitioner at Belper, in Derbyshire, and received his professional education in Dublin and Paris, in each of which places he spent about eighteen months, and at St. Bartholomew's Hospital. He afterwards graduated at Cambridge, where he was placed in the first class of the mathematical tripos. In 1833, he settled in practice in Birmingham, and was soon appointed one of the physicians to the Dispensary. Two years afterwards, he was elected physician to the General Hospital, to fill a vacancy caused by the resignation of Dr. Booth. This post he held for thirty-three years, resigning it in 1868. On his retirement, in recognition of his long and valuable services, his portrait was placed in the board-room of the hospital, and he was presented with a sum of money, two-thirds of which he applied to the foundation of a medical library, increasing it before his death to nearly £1,000. As a physician, Dr. Evans held for many years a leading position in Birmingham and the surrounding district, deserving and enjoying the confidence and esteem of his professional colleagues and of the public. His death was the result of cancer.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination. Examination for Honours. July 1873.—Anatomy.

First Class.

Pepper, Augustus Joseph (Exhibition and Gold Medal), University College
White, Ernest William (Gold Medal), King's College

Second Class.

Mercier, Charles Arthur, London Hospital

Physiology, Histology, and Comparative Anatomy.

First Class.

Pepper, Augustus Joseph (Gold Medal), University College

Second Division.

Jones, Arthur Henry, Guy's Hospital
White, Ernest William, King's College

Organic Chemistry and Materia Medica and Pharmaceutical Chemistry.

First Class.

Jones, Arthur Henry (Exhibition and Gold Medal), Guy's Hospital
Pepper, Augustus Joseph (Gold Medal), University College

Second Class.

Rogers, Thomas King, University College
Jones, Cyril Lloyd, Guy's Hospital
White, Ernest William, King's College } equal

UNIVERSITY OF EDINBURGH.—The following degrees in Medicine were conferred on August 1st.

Degree of Doctor of Medicine under the new Statutes.—(Three stars indicate those who obtained gold medals for their dissertations; two stars, those deemed worthy of competing for the dissertation prizes; and one star, those commended for their dissertations.)—*** Alexander Bennett, Scotland, M.B. and C.M., 1869; Thomas Marshall Bennett, England, M.B. and C.M., 1869; *** John Bishop, England, M.B. and C.M., 1870; George Bowman, England, M.B. and C.M., 1871; John Storr Brookfield (B.A. New Brunswick), Nova Scotia, M.B. and C.M., 1871; *** William Macfie Campbell, Scotland, M.B. and C.M., 1869; * John Connell (M.A. St. Andrews), Scotland, M.B. and C.M., 1867; John Archibald Cowan, Scotland, M.B. and C.M., with Second Class Honours, 1870; Richard Wright Dodds, Berwick-on-Tweed, M.B. and C.M., 1870; Edward Liveing Fenn, England, M.B., 1865; James Gairdner, Scotland, M.B. and C.M., 1867; Peter Gowan (B. Sc. Edin.), Scotland, M.B. and C.M., 1871; William Bruce Gordon Hogg, Jamaica, M.B. and C.M., 1868; Alfred Hollis, Isle of Wight, M.B. and C.M., 1869; John Johnstone Salcomb Johnstone (B.A. Oxon), England, M.B. and C.M., 1871; William John Kennedy, Scotland, M.B. and C.M., with Second Class Honours, 1870; Henry Charrington Martin, England, M.B. and C.M., 1870; *** David Page, Scotland, M.B. and C.M., with First Class Honours, 1870; ** Arthur Perigal, Scotland, M.B. and C.M., 1869; James Turnbull Richardson, England, M.B. and C.M., 1870; John Smith, Scotland, M.B. and C.M., 1866; William Thomson, Scotland, M.B. and C.M., 1871.

Degree of Doctor of Medicine under the old Statutes.—Frederick Churchill, England, M.B. and C.M., 1867; William Frederick de Fabek, England; Archibald Somerville, America.

Degrees of Bachelor of Medicine and Master in Surgery.—John Wilson Alston (B.A. Sydney), Australia (with first-class honours); Thomas Anderson, Scotland; William Andrew, England; Andrew Balfour, Hong Kong; Daniel Edgar Berryman, New Brunswick; William Bourke, Jamaica (with second-class honours); Charles Braid, England; John Milne Bramwell, Scotland; William Arthur Brebner, Jamaica; John Brown, Scotland; David Herd Bruce, M.A. St. Andrews; James Kendal Burt, England; Alfred Midgley Cash, England; Johannes Knockers van Oosterzie Cloete, Cape of Good Hope; William Morriston Davies, England; Alexander Dumbreck, Scotland; Alfred Edlowes, England; Alexander Airth Edward, Scotland; Andrew James Elliot, Scotland; John Findlay, Scotland; Franklyn Stuart Fraser, Ceylon; Jean Anatole Galdemar, Mauritius; Hamilton George Gardner, India; Alfred Charles Godfray, Jersey; Frederick Le Maitre Grasset, Canada; Alfred Chatham Gray, India; John Green, England; Robert Marcus Gunn, M.A., Edinburgh; George Guthrie, Scotland; John Haggart (M.A. Edin.), Scotland; Charles Norton Hayman, England; Alexander Hodgkinson (B.Sc. Edin.), England (with second-class honours); Andrew Houston (B.A. Sydney), New South Wales; George Hoyle, England; Horatio Nelson Fairbairn Huggins, Trinidad; Thos. Hume, Scotland; Samuel M'Aulay Inkster, Shetland; Frederick William Jackson, England (with second-class honours); Edward Hughes Klien, Demerara; David Brown Logie, Orkney; James Charles Logie, Orkney; Richard Marsden Pilkington Low, England; John Grefg M'Dowall, Scotland; John Lisle Hall M'Farlane, Jamaica; Charles Watson M'Gilvray, Scotland; George Hunter M'Kenzie, Scotland; Thomas MacQueen, Scotland; Roderick Macrae, Scotland; Reginald William Mapelton, England; John Meggat, Scotland; James Middleton, Scotland; William Birkmyre Miller, M.A. St. Andrews; Robert Davidson Murray, Scotland (with second class honours); William Peel Nesbitt, England; Theobald Adrian Palm, Ceylon; Charles Arundel Parker, England; William Thomas Pegus, Tasmania; William Preston, England; Frederick Parlett Fisher Ransom, England; Alexander William Watson Reid, England; Henry Russell (B.A. MacGill), Canada; James Simpson, Scotland; James Wilkie Smith, Scotland; Roger St. Clair Steuart, Scotland; John Trehanne, Wales; Andrew John Urquhart, Scotland; John Burnley Walker, England; Abraham Wallace, Scotland; George Arthur Warburton, Prince Edward Island.

Degree of Bachelor of Medicine.—John William Bramwell, England; Robert Laidlaw, Scotland; Murdoch Donald Macleod, Scotland; John Bissett Smith (M.A. Aberd.), Scotland.

Degree of Master of Surgery.—James Mitchell Monteith, Scotland, M.B., 1872.

The Ettles Prize of £40 to the most distinguished student of the year was awarded to John Wilson Alston, M.B., C.M.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 28th, 1873.

Foreman, Joseph, Wigan
Hardwicke, Edward Arthur, Rotherham
Hibberd, Henry Jukes, Westbourne Place, Harrow Road
Jackson, William, Leamington
Keyworth, George Hawson, Wellingley, near Rotherham
Lakin, Charles, Leicester
Lambert, John, Farsley, near Leeds
Tomes, Arthur, Coughton, Warwickshire

The following gentlemen also on the same day passed their primary professional examination.

Caddy, Henry, Guy's Hospital
Elcum, Donald, Guy's Hospital
Simmonds, William Allason, Guy's Hospital
Turtle, James Henry, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

BELFORD UNION, Northumberland—Medical Officer for the East District: £45 per annum.

BIRKENHEAD BOROUGH HOSPITAL—House-Surgeon: £80 per annum, board, and residence. Assistant House-Surgeon: £40 per annum, board, and residence. Applications, 15th instant, to Chairman of the Weekly Board.

CAISTON UNION, Lincolnshire—Medical Officer for the Waddingham District: £35 per annum, and fees. Applications, 12th instant, to George R. F. Haddeley, Clerk to Guardians.

CROYDON UNION—Medical Officer for District No. 4: £120 per annum. Applications, 8th instant, to Alfred G. Blake, Clerk to Guardians.

DEVON AND EXETER HOSPITAL, Exeter—Resident Pupil. Applications to the House-Surgeon-Apothecary.

DRIFIELD UNION, Yorkshire—Medical Officer and Public Vaccinator for the Wetwang District: £51 per annum, and fees. Applications to Henry Botterill, Clerk to Guardians.

GENERAL HOSPITAL, Birmingham—Resident Registrar and Pathologist: £100 per annum, board and residence. Applications, 6th instant, to Wm. T. Grant, House Governor and Secretary.

INISHOWEN UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clonmany Dispensary District: £120 per annum, and fees. Applications, 9th instant, to Mr. Doherty, Hon. Sec.

INVERNESS DISTRICT LUNATIC ASYLUM—Assistant Medical Officer: £70 per annum, bed, board, and washing. Applications, 15th instant, to Dr. Aitken, Medical Superintendent.

LIVERPOOL NORTHERN HOSPITAL—House-Surgeon: £100 per annum, residence and maintenance; and (if present Junior House-Surgeon should be elected) Junior House-Surgeon: £80 per annum. Applications, 8th instant to the Chairman of Committee.

KILMATHOMAS UNION, co. Waterford—Medical Officer to the Workhouse: £60 per annum. Applications, 9th instant, to Wm. Hunt, Clerk to Union.

LONGFORD UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Drumlish Dispensary District: £100 per annum, and fees. Applications, 11th instant, to John Reynolds, Hon. Sec.

MORPETH DISPENSARY—House-Surgeon: £110 per annum, furnished house, etc. Applications, 1st Oct., to D. F. Wilson, Hon. Sec.

PROVIDENT SURGICAL APPLIANCE SOCIETY, Bartholomew Close—Assistant-Surgeon: £80 per annum to commence. Applications, 10th instant, to J. P. Caesar, Secretary.

ROYAL FREE HOSPITAL—Junior House-Surgeon. Applications, 10th instant, to James S. Blyth, Secretary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—House-Surgeon. Applications, 8th instant, to A. Boodle, Secretary.

ROMNEY MARSH UNION, Kent—Medical Officer for the Brookland District: £50 per annum and fees. Applications, 10th instant, to John Humphery, Clerk to Guardians, New Romney.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, Manchester—Medical Officer to attend Patients at their Houses: £60 per annum, board and residence. Applications, 12th instant, to Joseph Barber, Sec.

ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications to the Treasurer.

SHEFFIELD UNION—Medical Officer for the South-East District: £40 per annum and fees. Public Vaccinator for the Park and South Registration District. 10th instant. Applications to Joseph Spencer, Clerk to the Guardians.

SWANSEA URBAN AND PORT SANITARY DISTRICTS—Medical Officer of Health: £300 per annum for the former; one guinea per visit to ships within the limits of the Port as defined by Order in Council, two guineas per visit to ships beyond, and expenses of transit for the latter. Applications, 8th instant, to Richard A. Essery, Town Clerk.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY—House-Surgeon: £50 per annum, board, lodging, and washing.

WANTAGE UNION—Medical Officer for the Ilsey District: £55 per annum, and fees. Applications, 8th instant, to Edward Ormond, Clerk.

YORK COUNTY HOSPITAL—House-Surgeon: £100 per annum, board, and lodgings.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

*GRAHAM, Adolphus F., M.D., elected Surgeon to the Liverpool Northern Hospital, in the room of G. B. Nash, Esq., resigned.

HARRIS, Michael, M.B., appointed Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.

HIRONS, George M., Esq., appointed Resident Surgeon to the Bournemouth General Dispensary, vice J. G. Douglas, M.B., resigned.

*HODGES, Frank H., Esq., appointed House-Surgeon to the Leicester Infirmary and Fever House, vice E. S. Lee, Esq.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

BOWER, Robert, Esq., Surgeon, late of Rochdale, at Southport, aged 70, on August 24th.

WALTHER, William, Esq., Surgeon, at Holyhead, aged 72, on August 18th.

THE WASTE OF FOOD.—At the Cookery School at South Kensington, Mr. Buckmaster lately produced a large heap of bread which he had picked up in Hyde Park, with remnants of joints, sufficiently good to provide twenty or thirty persons with a good dinner. He said he did not want his audience to indulge in commonplace expressions of sorrow at such sinfulness and waste. He wanted every lady to look after her own kitchen, because the master and mistress were as much to blame for this waste as the servants. A century ago, ladies of the highest rank, after prayers, used to put on clean muslin aprons and spend one or two hours in the kitchen, and this intercourse between servants and mistresses was a good thing for both.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 2 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

W. H. M.—A gentleman of the same name appears in the *Medical Directory* for Scotland, 1873, as M.D., but as "late physician" to the institution alluded to. His name is also in the *Medical Register*.

MR. DAVIS (Heytesbury).—Sir J. Y. Simpson's paper on "The Alleged Infecundity of Females born co-term with Moles" is not now to be had separately. It forms, however, the last article in the volume of his works, edited by Dr. J. Watt Black, and entitled *The Selected Obstetrical and Gynaecological Works of Simpson*.

C. P. R.—The question of putting M.D., or the prefix of Dr., on the plate, is one merely of fashion. It is the custom of Doctors in Medicine to adopt the latter course, sinking other titles which may not take equal rank with an University Degree.

DR. SAVILLE (Retford) is thanked for his communication; which, however, arrived too late for insertion.

A MEMBER asks: I. How and where can the Registrar-General's Reports be procured? II. Is there any good book on the subject of ventilation, and if so, by whom published? III. What is the most accurate method of ascertaining the amount of air in an apartment, in cubic inches? IV. Is Danchell's testing apparatus a reliable one for ascertaining the impurities in water?

* I. The Reports of the Registrar-General are to be purchased at the govern-

ment printers, viz., at Messrs. Spottiswoode's, Harding Street. II. Pettenkofer's lectures, translated by Dr. Hess, and recently published by Trübner and Co., may be consulted on the subject of ventilation. III. Actual measurement with a foot rule or tape line, and calculation from the measurement, is the only method we know of for ascertaining the quantity of air in a room. IV. Danchell's testing apparatus is not very much to be depended upon for the testing of water. Wanklyn, Chapman, and Smith's ammonia process is very simple and easily learnt, and is quite trustworthy.

FELLOWSHIP.—Zoology: Early part of Milne-Edwards. Botany: Small work by Professor Oliver.

DR. LAMBART (Liverpool) wishes to know why, in the JOURNAL of August 9th, we applied the observation *Proh pudor!* to the publication of the copy of the handbill announcing his lecture on cholera, diarrhoea, etc.; and explains his objects in delivering such lecture, which are excellent, viz., "to benefit the poor, to instruct the ignorant, and to warn the careless." We reproduce the handbill, which was as follows.

"Concert Hall, Lord Nelson Street, Liverpool.

"Sunday, August 3rd, 1873.

"Dr. Lambart, M.A. Oxon., M.D. Trin. Col. Dub., Member of the Royal College of Surgeons, England, Gold and Silver Medallist and Prizeman in Anatomy, Physiology, Materia Medica, Midwifery, Medicine, and Surgery, will lecture on the Cholera and Diarrhoea, how it becomes infectious, why we need not fear it, how to escape it, how to treat it, etc., things that everyone should know now, as the cholera is at present in Europe and America, and may visit England soon. Lecture to commence at 6.30 punctually.—N. J. Webster, Printer, 20, Gerard Street, Liverpool."

As Dr. Lambart is at a loss for a clue to the cause of the implied censure, we can only say that he will find, on inquiry, that the enumeration of school and college prizes in a public handbill is a stepping beyond the modesty which becomes a professional man and a member of the British Medical Association; nor is it usually found necessary for any of the excellent objects which he mentions.

MEDICAL NOTES AND QUERIES.

THERE was little hope of amending the ways of such a sheet as the *Medical Notes and Queries*; nor would it have seemed right to notice a production of the kind, but for an air of quasi-usefulness and propriety about the front pages of that journal, and the fact that it was with some audacity regularly forwarded to us, as if to challenge opinion. It seemed necessary to express the reprobation for which its contents call; and, that done, we can of course not enter upon any discussion with a paper of the kind. We may repeat what we have before said; that if its editor or editors be indeed, as they assert themselves to be, qualified medical men holding British diplomas, they will not, we believe, venture from beneath the veil of anonymity which conveniently shelters their doings. With that opinion, we leave them to the course which they have adopted, not without regret and pain that any medical men claiming professional character should be found to follow it.

We are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Ipswich Journal; The Manchester Guardian; The Aberdeen Daily Free Press; The Bath Express; The Birmingham Daily Post; The Australian and New Zealand Gazette, August 30th; The Bolton Chronicle, August 30th; The Dundee Advertiser, August 28th; The Surrey Advertiser and County Times, August 23rd; The Birmingham Daily Mail, September 1st; The Halifax Guardian, August 16th; The Northampton Herald, August 16th; The Northampton Mercury, August 16th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Rumsey, Cheltenham; Dr. Finlayson, Glasgow; Dr. A. Wiltshire, London; Mr. Frank Hodges, Birmingham; Dr. J. Watt Black, Keith; Dr. Middleton, Rusholme; Dr. Briscoe Owen, Beaumaris; Mr. Reginald Harrison, Liverpool; Mr. Davies-Colley, London; Mr. Stansfeld, Bristol; Mr. Lister, Edinburgh; A Member; Mr. J. G. Douglas, Bournemouth; Dr. Collie, London; Dr. George Johnson, London; Dr. A. Graham, Liverpool; Mr. R. F. Maguire, Holyhead; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Alfred Berry, Wisbech; Mr. E. Mills, London; Mr. L. Lewis, London; Mr. Lawson Tait, Birmingham; Dr. Farquharson, London; Mr. G. Everitt Norton, London; Mr. Lascelles, Slingsby; Dr. Durrant, Ipswich; Mr. George Gaskoin, London; Dr. Gairdner, Glasgow; Mr. A. E. Wilson, Birmingham; Dr. Cobbold, London; Mr. Hope, V.C., London; Our Dublin Correspondent; Dr. Philipson, Newcastle; Mr. Fussell, Brighton; Mr. J. H. Smith, Over Darwen; Dr. Trollope, St. Leonards; Mr. G. M. Hiron, Bournemouth; The Director of the "Universal Publicity", Paris; Mr. Love, Wolverhampton; Mr. H. G. Harper, London; Mr. J. W. Langmore, London; Our Paris Correspondent; Mr. James Thrupp, London; Mr. Scowcroft, Bolton; Mr. Bredon, Portadown; The Sanitary Commissioner, Punjab; Dr. Sibson, Germany; Dr. Arthur Gamgee, Edinburgh; Dr. Manson, Amoy; Mr. Morgan, Neath; Mr. Maconochie, London; Mr. Haviland, Northampton; Dr. Symes Saunders, Exminster; Dr. Saville, Retford; Mr. John St. S. Wilders, Birmingham; The Consul-General of the Netherlands, London; etc.

BOOKS, ETC., RECEIVED.

Thoughts on Nursing. By Edward H. Sieveking, M.D. London: 1873.
Essays on Diseases of Children. By W. H. Day, M.D. London: J. and A. Churchill, 1873.
On the Dissemination of Zymotic Diseases by Milk. By John Dougall, M.D. Glasgow: 1873.

EDUCATIONAL NUMBER.

TEACHING VERSUS LEARNING.

THOSE who have read Albert Smith's *Medical Student*, may remember his amusing sketch of the talented gentleman who undertook to impart to the dullest of pupils, in the course of a very few months, a sufficient knowledge of Medicine, Surgery, Anatomy, Physiology, Chemistry, Botany, etc., to enable him to obtain a legal right to "practise" upon his fellow-countrymen in any part of the globe. Possibly some of our readers may have still more accurate recollections of these "grinders", derived from personal experience. No doubt these gentlemen met a want; certainly their services were sought and appreciated by a considerable number of students; but somehow they were not equally well esteemed by the regular school professors, who accused them of subverting discipline by holding up to ridicule the overloaded lectures and the personal crotchets of their more orthodox rivals, and regarded them, to say the least, as dangerous interlopers.

The weak point in the medical schools at that time was the absence, in many cases, of personal intimacy between pupil and teacher. No doubt there were great exceptions, but generally the lecturer thought his duty done when he had finished his lecture; and, though he was willing to give any explanation to those who were sufficiently interested to ask for it, the idle and thoughtless were seldom interfered with: little trouble was taken to compel attendance, and still less to secure attention. But during the last few years medical education proper has been completely remodelled; a gradually higher standard of general information has been insisted upon; the examinations have been made more thorough and more practical; and lastly, in accordance with our suggestion, the practical results of the teaching are now published in the form of a table, showing the proportion of students from each school who have passed and failed at the College of Surgeons' examinations during the year. The effect of these changes has been increased activity of the teaching staff, and a decided improvement in the average professional qualification of the men who leave the schools. Meanwhile, the grinders have not been idle; indeed, it seems almost impossible, by any form of examination, entirely to frustrate the exertions of these ingenious and enterprising gentlemen: they have readily accommodated their teaching to the progress of events, and are no doubt flourishing as of old.

It is not, however, of the grinders themselves that we wish to speak, but of another and newer phase of the "cramming" system, which is now in process of development, and which we believe to be in danger of becoming even more injurious to the healthy progress of medical education. Among the many announcements which have appeared during the last few years in the prospectuses of the medical schools is one, now very general, to the effect that they possess an officer called a Medical Tutor, whose special province it is to assist students in preparing for the examinations of the Licensing Boards. We find, on inquiry, that the duties attached to the office vary considerably at different schools. The Medical Tutor in some cases teaches auscultation and case-taking, occasionally also bandaging; more often he has to set papers on various subjects and correct the answers; finally, the list of duties always concludes with the statement that he is supposed "generally to advise and assist the students in their studies". All this is very desirable; it relieves the senior members of the staff of a great deal of drudgery, and allows them to devote more attention than has hitherto been general to the teaching of the senior students. To accustom students to answer questions in writing readily and methodically is an important point. Many a well-informed man has cut a poor figure at an examination for want of

this sort of practice, and of the confidence which it brings. There is no doubt, also, that students are frequently in want of advice and guidance in the general management of their studies. The Medical Tutor is not generally himself a member of the lecturing staff, and is not, therefore, liable to be suspected of any particular bias. He can best deal with that troublesome individual, the man with a preference—the man who early shows a taste for some one subject, such as chemistry or natural history, and neglects everything else. Such a man is generally somewhat conceited, is often unduly encouraged by the lecturer whose course he favours, and frequently comes to grief in the end. There is, then, plenty of excellent work for the Medical Tutor, and there does not at first sight seem to be any objection to the office; nor, indeed, need there be any, so long as he confines himself to "general advice and direction in the prosecution of studies;" but here comes the point to which we wish to draw attention.

At the hospital doors we frequently see a notice that the Medical Tutor will meet the gentlemen who are going up for the College or Hall, as the case may be, on such and such days in the week. [Now, in many cases, these are not mere meetings held at the approach of the examination for the purpose of testing the men, but regular grinding classes, which go on steadily for some months; and they are more dangerous than the classes of which we spoke at the commencement of these remarks, in that a certain amount of discredit very often attached to a man who went to a professed crammer; his classes were composed in great measure of the black sheep and dunces of the schools. The Medical Tutor's classes, on the other hand, are officially recognised and approved; so that students who would be ashamed to go to a grinder, avail themselves without hesitation of the precisely similar services of the Tutor.]

One prospectus candidly confesses that the Tutor's classes are intended to obviate the necessity of students obtaining private teaching apart from that of the Medical School—i.e., to prevent them from going to a crammer. This is, we believe, far from a comprehensive representation of the actual work done by the Medical Tutor at the school in question; but we ask if necessity is the right expression. We should say decidedly not, except in the case of men deficient in intellect or in industry; and, though the passing of such men may, in the present state of competition, be of advantage to the school, it is not likely to be advantageous to the profession or to the public. But the mere fact of the existence of a grinding class, recognised or permitted by the staff, goes far to make it a necessity. A boy at school is taught to a great extent verbally and by rote. When he comes to college, he should learn gradually to teach himself; should learn little by little to pick out information from various sources, to mould it together, and to reason upon it; and this power is not always easily gained. The boy has hitherto been stuffed chiefly with facts—taught dogmatically; he has now to acquire such independence of thought as he may be capable of. Real education—the exercising of the reasoning powers—is now of more importance than mere instruction. An adult stomach is not in a healthy state if it cannot digest solid food; and an adult mind is not healthy if it cannot similarly incorporate from the bulk presented to it the knowledge of which it is in search. But the teaching of the grinder's class is merely the old stuffing with facts—a meal of already digested food. It is true that some minds can never get beyond this stage, and, if it be necessary that they should enter our profession, teaching suited to their capacity must be provided for them; but men capable of better work should never be tempted to avail themselves of a system so ruinous to their intellectual vigour and independence.

The Medical Tutor, we repeat, is or should be a most useful member of the staff, so long as he does not allow himself to degenerate into a licensed crammer. There is some temptation to that course; he would gain popularity among the students; and the immediate results of his instruction, necessarily superficial though it be, may be apparently suc-

cessful, but in the long run it cannot fail to be injurious to his pupils, and through them to the profession.

We fear that the fault of our schools just now is, that there is too much teaching, too little learning. The honest student, however, has the remedy in his own hands; and to him we address these words of warning.

CHANGES IN THE HOSPITALS AND MEDICAL SCHOOLS.

THE following changes have taken place in the *personnel* of the Hospitals and Medical Schools during the year.

At St. Bartholomew's Hospital, the death of Mr. Holmes Coote, late Senior Surgeon, has been followed by the promotion of Mr. Thomas Smith to the office of Surgeon, and the appointment of Mr. Howard Marsh as Assistant-Surgeon. In the course of General Anatomy and Physiology, the lectures on Histology, or Microscopic Anatomy of the Elementary Tissues, will be given by Dr. Klein, of the Brown Institution. The lectures on Descriptive Anatomy will be delivered by Mr. Thomas Smith and Mr. Langton; Mr. Callender retiring from this course and becoming the colleague of Mr. Savory in the lectureship on Surgery. Mr. Langton will give demonstrations on Diseases of the Ear in place of Mr. T. Smith.

At Charing Cross Hospital, the number of Assistant-Physicians has been increased to four by the appointment of Dr. J. Mitchell Bruce. Mr. J. Astley Bloxam has been appointed Assistant-Surgeon. Dr. E. Sparks has been appointed Physician for Skin-Diseases, and will lecture on this subject. Mr. A. H. Garrod has been appointed Lecturer on Zoology and Comparative Anatomy. Dr. Poore will deliver a course of lectures on Electro-therapeutics.

The only change in the staff of St. George's Hospital is the appointment of Dr. Robert J. Lee as Assistant-Physician Accoucheur. In the school, Dr. Cavafy takes the place of Dr. William Ogle as Lecturer on Physiology and General Anatomy; and Dr. Whipple that of Mr. Child as Lecturer on Botany. Mr. Herbert Watney will give Demonstrations on Minute Anatomy and the use of the Microscope, in place of Dr. Cavafy.

At Guy's Hospital, Dr. Owen Rees has retired from the post of Senior Physician, and has become Consulting-Physician. Dr. Moxon has consequently become full Physician, and Dr. Frederick Taylor has been appointed Assistant-Physician. Mr. C. Higgins has been appointed Assistant Ophthalmic Surgeon, and Mr. H. Moon Assistant Dental Surgeon. Dr. Pye-Smith has become the colleague of Dr. Pavy in the Lectureship on Physiology and General Anatomy, and will also, as last year, give the demonstrations in Practical Physiology and the course of lectures on Comparative Anatomy. Dr. Owen Rees retires from the Lectureship on Medicine, in which Dr. Habershon becomes the colleague of Dr. Wilks, being succeeded by Dr. Moxon as Lecturer on *Materia Medica*.

At King's College Hospital, the only change is the appointment of Dr. T. C. Hayes as Assistant-Physician Accoucheur. In the College, Dr. John Curnow has succeeded the late Mr. Partridge as Professor of Anatomy.

At the London Hospital, Mr. McCarthy succeeds Dr. Fenwick as Dr. Woodman's colleague in the lectureship on Physiology, and in teaching Practical Physiology. Practical Anatomy is to be taught by Mr. Adams and Mr. Reeves, the latter gentleman replacing Mr. Waren Tay and Mr. McCarthy. Mr. Jonathan Hutchinson retires from the lectureship on Surgery, leaving Mr. Couper as the sole occupant.

No change has been made at St. Mary's Hospital.

At the Middlesex Hospital, Dr. R. Liveing retires from the lectureship on Descriptive Anatomy, leaving Mr. Morris as the sole lecturer in that department; he retains, however, his office of Demonstrator of Practical Anatomy. Medical Jurisprudence is taught by Dr. Robert King, in place of Dr. Divers. Mr. Hensman, the lecturer on Botany, takes also the lectureship on Comparative Anatomy, vacated by Dr. Murie.

At St. Thomas's Hospital, Mr. Le Gros Clark has retired from the office of Surgeon, and has been appointed Consulting Surgeon. Mr. Mac Cormac has consequently become Surgeon; and Mr. W. W. Wagstaffe has been appointed Assistant-Surgeon. Mr. Mac Cormac also succeeds Mr. Le Gros Clark as Mr. Sydney Jones's colleague in the lectureship on Surgery. Mr. A. W. Bennett has been appointed lecturer on Botany, in place of the Rev. Dr. Hicks.

There is no change at University College.

At the Westminster Hospital, Dr. Radcliffe has resigned the office of Physician, and has been made Consulting Physician; and Mr. Holt, the Senior Surgeon, has retired, and has become Consulting Surgeon. Dr. Anstie and Mr. Cowell have consequently been promoted to the offices of Physician and Surgeon respectively; and Dr. Allchin has been appointed Assistant-Physician, and Mr. Bond Assistant-Surgeon. Mr. Richard Davy lectures on Descriptive Anatomy in place of Mr. Pearse; who, in conjunction with Mr. Cowell, succeeds Mr. Holt-house as lecturer on Surgery. Mr. E. M. Holmes is appointed lecturer on Botany in the room of Mr. Bennett. In the course of Forensic Medicine, Dr. J. B. Potter has become the colleague of Dr. Dupré; the latter gentleman teaching Toxicology, and the former giving the remainder of the course, including Hygiene. Dr. Allchin alone will lecture on Pathology; Mr. Bond will give a short course of lectures on Diseases of the Skin; and Dr. Anstie will teach Electrical Therapeutics.

In the Leeds School of Medicine, Mr. T. Fairley lectures on Chemistry in the place of Mr. J. C. Wilson. In the Infirmary, the number of Surgeons to the Eye and Ear Department has been increased to three, and Mr. R. P. Oglesby has been appointed.

At the Manchester Royal School of Medicine, Mr. Lund has retired from the lectureship on Anatomy, leaving Mr. Bradley as the sole occupant, and has become joint lecturer on Surgery with Mr. Southam. Dr. Arthur Gamgee has charge of the course of Practical Physiology and Histology. Chemistry and Practical Chemistry are taught by Dr. Roscoe, and Botany by Mr. W. C. Williamson. The courses of Physiology, Chemistry, and Botany, will be delivered in Owen's College, with which the School of Medicine is now incorporated.

In the Sheffield School of Medicine, Mr. E. Skinner, in place of Mr. A. Jackson, lectures on Anatomy conjointly with Mr. W. Skinner. Mr. A. Jackson becomes the colleague of Mr. Favell and Mr. Parker in the lectureship on Surgery. Dr. Keeling has retired from the lectureship on Midwifery, which is now occupied by Dr. Hime alone.

In the University of Durham College of Medicine, Newcastle-on-Tyne, Mr. H. E. Armstrong is now the sole lecturer on Botany, Mr. Thornhill having retired. Dr. B. Bramwell has been appointed lecturer on Medical Jurisprudence.

In the Edinburgh Extra-Academical School of Medicine, Dr. J. G. McKendrick and Dr. Bell Pettigrew are announced as lecturers on Physiology; Dr. Gamgee having been appointed to Owen's College, Manchester. Dr. Batty Tuke will lecture on Insanity.

In the Andersonian Institution at Glasgow, Dr. A. Lindsay has been appointed Lecturer on Forensic Medicine.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and the names of the gentlemen appointed to deliver introductory addresses. Where no name is inserted, there is no special introductory lecture.

St. Bartholomew's Hospital—October 1st.

Charing Cross Hospital—Mr. Bellamy—October 1st, 8 P.M.

St. George's Hospital—Mr. R. B. Carter—October 1st, 2 P.M.

Guy's Hospital—Mr. Hinton—October 1st, 2 P.M.

King's College—Dr. E. Sheppard—October 1st, 4 P.M.

London Hospital—Dr. Prosser James—October 1st, 3 P.M.

St. Mary's Hospital—Dr. Shepherd—October 2nd, 8 P.M.

Middlesex Hospital—Mr. Morris—October 1st, 3 P.M.

St. Thomas's Hospital—Dr. J. Harley—October 1st, 2 P.M.

University College—Dr. Roberts—October 1st, 3 P.M.

Westminster Hospital—Mr. Cowell—October 1st, 8 P.M.

Bristol Medical School—October 1st.

Birmingham (Queen's College)—Mr. Clay—October 1st, 3 P.M.

Leeds School of Medicine—Mr. Scattergood—October 1st, 4 P.M.

Liverpool Royal Infirmary School of Medicine—Dr. Caton—October 1st, 3 P.M.

Manchester Royal School of Medicine—Dr. Gamgee—October 1st.

Newcastle College of Medicine—Dr. L. Armstrong—October 1st, 2 P.M.

Sheffield School of Medicine—Mr. H. Jackson—October 1st, 4 P.M.

Aberdeen University—October 29th.

Edinburgh University—The Principal—November 3rd, 2 P.M.

Edinburgh School of Medicine—Dr. Balfour—November 3rd, 11 A.M.

Glasgow University—Dr. Macleod—October 27th.

Anderson's University—October 28th.

The Dublin Medical Schools open their Dissecting-Rooms on October 1st, but lectures do not begin until the end of the month.

REGULATIONS

OF

THE GENERAL MEDICAL COUNCIL AND
MEDICAL LICENSING BODIES.

SESSION 1873-74.*

THE GENERAL MEDICAL COUNCIL.

Recommendations and Opinions on Preliminary Examination.—Testimonials of Proficiency granted by the National Educational Bodies, according to the subjoined list, may be accepted, the Council reserving the right to add to, or take from, the list. I. *Universities of the United Kingdom.* Oxford, Cambridge, Durham, and London: Examinations for Degrees in Arts. Oxford, Cambridge, and Durham: Local Examinations (Senior); Certificates to include Latin and Mathematics. Oxford: Responsions; Moderations. Cambridge: Previous Examination. Durham: Examination for Students in their Second and First years; Registration Examination for Medical Students. London: Matriculation Examination. Aberdeen, Edinburgh, Glasgow, and St. Andrew's: Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery. Edinburgh: Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh. Dublin: Examination for a Degree in Arts: Entrance Examination. Queen's University (Ireland): Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree. II.—*Other bodies named in Schedule (A) to the Medical Act.* Royal College of Surgeons of England: Examination conducted, under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors. Society of Apothecaries of London: Examination in Arts. Royal College of Physicians and Royal College of Surgeons, Edinburgh: Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined. Faculty of Physicians and Surgeons of Glasgow: Preliminary Examination in General Literature. Royal College of Surgeons in Ireland: Preliminary Examination; Certificate to include Mathematics. Apothecaries' Hall of Ireland: Preliminary Examination in General Education. III.—*Examining Bodies in the United Kingdom, not included in Schedule (A) to the Medical Act.* Royal College of Preceptors: Examination for a First Class Certificate. The Examiners for Commissions in the Military and Naval Services of the United Kingdom; Certificate to include all the subjects required by the General Medical Council. IV.—*Colonial and Foreign Universities and Colleges.* University of Calcutta, Madras, or Bombay: Entrance Examination, Certificate to include Latin. University of McGill College, Montreal, of Toronto, of King's College, Toronto, of Queen's College, Kingston, of Victoria College, Upper Canada, of Dalhousie College and University, Halifax, of Fredericton, New Brunswick, or of Sydney: Matriculation Examination. University of King's College, Nova Scotia: Matriculation Examination; Responsions. University of Melbourne: Matriculation Examination, Certificate to include all the subjects required by the General Medical Council. Codrington College, Barbadoes: English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur." Tasmanian Council of Education: Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics. Christ's College, Canterbury, New Zealand: Voluntary Examinations, Certificate to include all the subjects required by the General Medical Council. Cape of Good Hope: Third Class Certificate in Literature and Science, granted by the Board of Public Examiners. South Australian Institute, Adelaide: Preliminary General Examination.—N.B. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient Testimonial of Proficiency.—That it be recommended to the Licensing Boards not to accept the certificate of proficiency in general (preliminary) education from any of the Bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in—1. English Language, including Grammar and Composition.† 2. Arith-

metic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin, including Translation and Grammar. And in one of the following *Optional Subjects*:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—That students who cannot produce any of the testimonials referred to in the first recommendation be required to pass an Examination in Arts, established by any of the bodies named in Schedule (A) to the Medical Act, and approved by the General Medical Council.—That certificates of proficiency, to be received from all bodies legally authorised to examine in General Education in Great Britain and Ireland, and from the several Licensing Bodies enumerated in Schedule (A) to the Medical Act in Great Britain and Ireland, shall bear evidence that the candidates have been examined and approved in at least the above subjects.—That, in the case of certificates received from similar educational and licensing bodies in other parts of the empire and foreign countries, satisfactory evidence shall be given to the Medical Council, or Branch Councils, that such certificates are equivalent to those recognised in the United Kingdom.—That the Executive Committee prepare annually and lay before the Council for recognition a list of Examining Bodies, whose examinations shall fulfil the conditions of the Medical Council as regards Preliminary Education.

Registration of Medical Students.—Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a Preliminary Examination. The commencement of the course of Professional Study recognised by any of the qualifying bodies, shall not be reckoned as dating earlier than fifteen days before the date of registration.—The registration of medical students shall be placed under the charge of the Branch Registrars. Each of the Branch Registrars shall keep a Register of medical students according to a form, containing the Date of Registration, the Name, the Preliminary Examination and Date, and the Place of Medical Study.—Every person desirous of being registered as a medical student, shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed form,* which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and a statement of his place of medical study.—The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.—Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for registration.—The several Branch Councils shall have power to admit special exceptions to the foregoing regulations, for reasons which shall appear to them satisfactory.—A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st December in each year, to the Registrar of the General Council; who shall, as soon as possible thereafter, prepare and print an Alphabetical List of all students registered in the preceding year.—The several qualifying bodies are recommended not to admit to the final examination any candidate (not exempted from registration) whose name had not been entered in the Medical Students' Register at least four years previously.—In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

Age for License to Practise.—That the age of 21 be the earliest age at which a candidate for any Professional Licence shall be admitted to his final examination; that the age shall, in all instances, be duly certified; and that a return of any exceptions in this recommendation allowed by

in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition. 2. To write a portion of an English author to dictation. 3. To explain the grammatical construction of one or two sentences. 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature. 5. To give the derivation and definition of a few English words in common use. Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

* *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered as a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname: Christian name: Preliminary examination: Date of preliminary examination; Place of medical study; Applicant's signature; Address; and Date of Application. To the Registrar of the Branch Council for —.]

N.B.—The above form of Application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by a Certificate of the applicant's having passed a Preliminary Examination, as required by the General Medical Council, and a statement of his place of Medical Study.

* To save space, we omit those portions of the Recommendations of the General Medical Council and of the Regulations of the Examining Bodies, which are not of direct importance to medical students.

† The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1. To write a few sentences

the Licensing Bodies, together with the reasons for such exceptions, be transmitted to the Branch Council of that part of the United Kingdom in which they have been granted.—That no Licence be obtained at an earlier period than after the expiration of forty-eight months subsequent to the registration of the candidate as a medical student.

Professional Education.—That the course of Professional Study required for a Licence shall comprehend attendance during not less than four winter sessions, or three winter and two summer sessions, at a school recognised by any of the Licensing Bodies mentioned in Schedule (A) to the Medical Act.—That the following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—1. Anatomy; 2. General Anatomy; 3. Physiology; 4. Chemistry; 5. Materia Medica; 6. Practical Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine. "Chemistry" should include a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine. "Medicine and Surgery" should include a knowledge of systematic and Clinical Medicine and Surgery, and also of Morbid Anatomy.

Professional Examination.—That it is desirable that the different Licensing Bodies should combine their examinations, when this is practicable.—That the professional examination for any Licence be divided into two parts; the first embracing the primary or fundamental branches directly connected with the Practice of Medicine and Surgery. That the former be not undergone till after the close of the winter session of the second year of professional study; and the latter, or final examination, not till after the close of the prescribed period of professional study.—That the examination in Physics, Botany, and Natural History may be undergone at an earlier period than the first professional examination.—That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.—That excellence in one or more subjects should not be allowed to compensate for failure in others.—That if a candidate be rejected for failure in any one subject, he should be re-examined in all.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.*

EXTRACTS OF BYE-LAWS RELATING TO MEMBERS.

ANY person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the Bye-Laws and Regulations of the College, may be proposed to the College to be admitted a Member.—Every Candidate for the Membership who shall have commenced his professional studies after September 1861, shall satisfy the Censor's Board that previously to the commencement of his professional studies he has obtained a Degree in Arts from some University of the United Kingdom or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts.—Every Candidate for membership shall furnish proof that he has attained the age of 25; and shall produce a testimonial of moral character and conduct from a Fellow or Member of the College.—Every Candidate (*except such as are specially exempted as below described*) shall produce proof of his having been engaged in professional studies during five years, of which four years at least shall have been passed at a medical school or schools recognised by the College; and shall produce evidence, satisfactory to the Censors' Board, of having studied the following subjects. [The subjects are the same as those required for the Licence (see next page); but Morbid Anatomy must be attended during six months, and Clinical Medicine during *three winter and three summer sessions*.] He must also give evidence of having attended diligently during three winter sessions and three summer sessions the medical practice, and during *three winter sessions and two summer sessions the surgical practice*, of an hospital containing at least 100 beds; of having been engaged during six months in the clinical study of Diseases peculiar to Women; and of having served the office of clinical clerk in the medical wards during at least six months.—Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding bye-law (*except such as shall be exempted as below stated*), shall, nevertheless, bring proof of his having attended, during at least twelve months, the medical practice of an hospital in the United Kingdom containing at least 100 beds.

Exemptions from all or part of the examinations are allowed in the

cases of candidates who have obtained the degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, wherein the courses of study, and the examinations to be undergone by the students are satisfactory to the Censors' Board, or who have attained the age of forty years and shall produce testimonials satisfactory as to moral character and conduct and general and professional acquirements; or who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology conducted by any of the bodies named in Schedule (A) to the Medical Act, or who shall have obtained a degree in Surgery at an University in the United Kingdom, or shall have passed the examination on Surgery conducted by the Royal Colleges of Surgeons of England, of Edinburgh, or in Ireland, after a course of study and an examination satisfactory to the College. The Fee for admission is Thirty Guineas.

Every Candidate for the Membership of the College (except such as shall be exempted), will be required to pass the following examinations.

First examination; Monday: *Evening*, from 7 to 10, by written questions. Tuesday: *Evening*, commencing at seven o'clock, *viva voce*, on Dissections and Preparations.

Second Examination; Monday: *Evening*, from 7 to 10, written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Tuesday: *Morning*, Practical examination either at the College or in the surgical wards of a Hospital. *Afternoon*, from 1 to 4 on Materia Medica, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology. (This examination will be partly written and partly practical.) *Evening*, commencing at 7 o'clock, by written questions on Midwifery and the Diseases Peculiar to Women. Thursday: *Evening*, *viva voce* examination, commencing at 7 o'clock.

Third, or Pass Examination; Thursday: *Afternoon*, from 2 to 6, by written questions on Medical Anatomy and on the Principles of Medicine. Friday: *Afternoon*, from 2 to 6, by written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Saturday or Monday: Practical examination at the College or in the medical wards of a Hospital. Tuesday and Wednesday: Examination *viva voce*.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second examination until after the termination of four years of professional study, nor to the third or pass examination until after the completion of the required course. A candidate rejected at the first examination will not be readmitted to examination until after three months, and will be required to produce a certificate of the performance of dissections, or other professional study, satisfactory to the examiners, during that time. A candidate rejected at the second examination will not be readmitted to examination until after six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures. Any candidate not approved at the third or pass examination will not (except by special permission of the College) be readmitted to examination until after the lapse of a year. Every candidate must give fourteen days' notice in writing to the Registrar of the College, of his intention to present himself for examination, at the same time transmitting the following certificates. *For the Primary Examination*: Evidence of having passed an Arts Examination; and, in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a Degree of Arts from some University of the United Kingdom, or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second Examination*: Evidence of having completed four years of professional study; of having attained the age of 21 years; of instruction and proficiency in vaccination; and of having attended not less than twenty labours. *For the Pass Examination*: Proof of having attained the age of 25 years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.

The third or pass examinations of candidates for the Membership of the College will commence on October 23rd, 1873, and on January 22nd, April 23rd, July 23rd, and October 22nd, 1874. The first and second examinations are generally held at the commencement of the same months.

* The requirements printed in italics apply to candidates who commence their Professional Education in the United Kingdom on or after October 1st, 1867; and to candidates who commence their Professional Education at a recognised Foreign or Colonial School on or after October 1st, 1868.

BYE-LAWS RELATING TO LICENTIATES.

Every candidate for the College Licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect. Of having attained the age of 21 years. Of moral character. Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College. Of having been registered as a medical student in the manner prescribed by the General Medical Council. Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions, in one or other of the following ways: 1. Attending the practice of a hospital or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction.* Of having attended, during three winter sessions and two summer sessions, the Medical and Surgical Practice at a recognised Hospital or Hospitals, and of having been engaged during six months in the clinical study of Diseases peculiar to Women. Of having studied the following subjects: Anatomy (with Dissections), two winter sessions;† Physiology, two winter sessions; Chemistry, six months; Practical Chemistry, three months; Materia Medica, three months; Practical Pharmacy, three months;‡ Botany, three months;§ Morbid Anatomy, two winter sessions;|| Principles and Practice of Medicine, two winter sessions;¶ Principles and Practice of Surgery, two winter sessions; ** Clinical Medicine, and Clinical Surgery, each two winter sessions and two summer sessions;†† Midwifery and diseases peculiar to women, three months;‡‡ Forensic Medicine three months. Of having passed the professional examinations.

Examination for the Licence. Every candidate for the Licence, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

First Examination, on Anatomy and Physiology. First day: *Evening*, from 7 to 10, by written questions. Second day: *Evening*, commencing at 7 o'clock, *viva voce*, on Dissections and Preparations. Second or Pass Examination; First day: *Evening*, from 7 to 10, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Second day: *Morning*, Practical examination at the College or in the Surgical Wards of an Hospital. *Afternoon*, from 1 to 4 on Materia Medica, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology. (This examination will be partly written, and partly practical.) *Evening*, commencing at 7 o'clock, written questions on Midwifery and the Diseases peculiar to Women. Third day: *Evening*, from 7 to 10, written questions on Medical Anatomy, and on the Principles and Practice of Medicine, including the Principles of Public Health. Fourth day: *Morning*, the candidate's practical knowledge will be tested, either at the College or in the medical wards of a Hospital. *Evening*, commencing at 7 o'clock, *viva voce*, on the Principles and Practice of Medicine, Surgery, and Midwifery.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second or pass examination until after the termination of four years of professional study. The College will not admit to the pass examination any candidate (not ex-

empted from registration) whose name has not been entered in the Medical Students' Register at least four years previously.

Any candidate who shall be rejected at the first examination, will not be re-admitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of Dissections, or other professional study satisfactory to the examiners, during that time. Any candidate who shall be rejected at the second or pass examination, will not be readmitted to examination until after six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures, or other professional study satisfactory to the examiners.

Every candidate intending to present himself for examination, is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following certificates. *For the First Examination*—Evidence of having passed an Arts Examination; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second or Pass Examination*—Evidence of having completed four years of professional study; of having attained the age of 21 years; of proficiency in the practice of vaccination; and of having attended not less than twenty labours. A testimonial of moral character is required of every candidate. Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.

The exemptions in the regulations regarding the Membership, are applicable also to candidates for the Licence; and any candidate who shall have obtained a Degree in Medicine at an University recognised by the College, after a course of study and examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any Registered Medical Practitioner, whose qualification or qualifications shall have been obtained before the 1st day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examination as his qualifications may seem to the examiners to render in his case unnecessary.*

The fee for the Licence is Fifteen Guineas, of which Five Guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the Licence; and he will be admitted to one subsequent first examination without the payment of an additional fee.† Any candidate who shall be rejected at the second or pass examination will have the fee, paid on admission to this examination, returned to him, less Three Guineas.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

Examinations of candidates for the College Licence will take place as follows. *First Examination*, commencing on the first Mondays of October and December, 1873, and February, April, July, October, and December, 1874. *Second or Pass Examination*, commencing on the second Mondays of the same months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE DIPLOMA OF MEMBER.

1. **Preliminary General Education and Examination.**—Candidates who commenced their professional education on or after the 1st of January, 1861, will be required to produce one or other of the following certificates:—1. Of Graduation in Arts at an University recognised for this purpose; viz., Oxford; Cambridge; Dublin; London; Durham; Queen's University in Ireland; Edinburgh; Glasgow; Aberdeen; St. Andrew's; Calcutta; Madras; Bombay; McGill College, Montreal; and Queen's College, Kingston, Canada. 2. Of having passed an examination for Matriculation, or such other examination as shall from time to time be sanctioned by the Council of this College, at an University in the United Kingdom, or at a Colonial or Foreign University recognised by the Council of the College.‡ 3. Of

* Forms of application may be obtained of the Registrar of the College.

† The Fee must be paid within three days prior to the day on which the examination commences.

‡ The following are the Examinations at present recognised under this Clause No. 2, viz.: Oxford—Responsions or Moderations; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Cambridge—Previous Examination; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Dublin—Entrance Examination. London—Matriculation Examination. Durham—Examination of Students in Arts in their second and first years; Middle-Class Examinations, Senior, the Certificates to include Latin and

* Professional studies commenced before the candidate shall have passed an examination in the subject of general education, will not be recognised by the College.

† The winter session comprises a period of six months, and the summer session a period of three months.

‡ By Practice of Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a Public Hospital or Dispensary recognised by the College.

§ This course of Lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination, will be exempt from attendance on this course.

|| This includes attendance and instruction in the Post Mortem Room during the period of Clinical Study.

¶ It is required that the Principles of Public Health should be comprised in this course of Lectures, or in the course of Lectures on Forensic Medicine.

** The attendance on the Lectures on Medicine and Surgery must not commence earlier than the second winter session at a recognised Medical School.

†† The attendance on the Lectures on Clinical Medicine and Clinical Surgery must not commence until after the first winter session at a recognised Medical School. By Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with Lectures on cases.

‡‡ Certificates must also be produced of attendance on not less than twenty Labours, and of instruction and proficiency in Vaccination.

having passed the preliminary examination for the Fellowship of this College. 4. Of having passed the preliminary examination of the Royal College of Surgeons in Ireland or of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow. 5. Of having passed the examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland. 6. Of having passed the first-class examination of the Royal College of Preceptors. 7. Testamur of the Codrington College, Barbadoes. 8. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate that the student has been examined in Latin and Mathematics. 9. Of having passed the voluntary examinations of Christ's College, Canterbury, New Zealand, the certificate to include all the subjects required from time to time in the Preliminary Examination of the College. Candidates who shall not be able to produce one or other of the foregoing certificates, will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.*

II. *Professional Education.*—Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge, in conformity with the regulation in the preceding section, are not recognised.—The following will be considered as the commencement of professional education:—1. Attendance on the practice of a hospital, or other public institution recognised by this College; 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Work-house, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council; 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College. *The commencement of professional study otherwise than by attendance on lectures in recognised Medical Schools, or by attendance on the practice of recognised Hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the Hospital or other institution to the practice of which he shall have entered, and will date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the preliminary examination in general knowledge:—*Candidates will be required to produce certificates:—1. Of being 21 years of age. 2. Of having been engaged, subsequently to passing the preliminary examination, during four years, or during not less than four winter and four summer sessions, in the acquirement of professional knowledge. 3. Of having attended the following courses: Lectures on Anatomy, two winter sessions. 4. Dissections, not less than

two winter sessions. 5. Lectures on General Anatomy and Physiology, one winter session. 6. Practical General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.* 7. Lectures on Surgery, one winter session. 8. Practical Surgery during not less than six months prior or subsequent to the course required by Clause 7.† 9. One course of lectures on each of the following subjects, viz.: Chemistry‡; Materia Medica; Medicine; Forensic Medicine; Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months. 10. Practical Pharmacy, three months. 11. A three months' course of Practical Chemistry (with manipulations), in its application to medicine. 12. Instruction and proficiency in the practice of Vaccination.§ 13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter|| and two summer¶ sessions. 14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.** 15. Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended at a recognised hospital or hospitals, Clinical Lectures on Surgery during two winter and two summer sessions. 16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a Surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. 17. Of having attended, during the whole period of attendance on Surgical Hospital Practice (see clause 13), demonstrations in the *post mortem* rooms of a recognised hospital. 18. Of having attended, at a recognised or hospitals, the Practice of Medicine and Clinical Lectures on Medicine during one winter and one summer session.

NOTICE.—Clauses 6, 8, 11, 14, and 17, and the notes to clauses 6, 8, 9, 12, and 14, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause 9, are applicable to candidates who commenced their professional education on or after the 1st of October, 1870.

N.B.—Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

III.—*Certificates, etc.*—1. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science. 2. Certificates will not be recognised from any hospital in the United Kingdom, unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom. 3. No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. 4. The recognition of colonial hospitals and schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recogni-

* The learners themselves must individually be engaged in the necessary experiments, manipulations, etc.

† In this course, each pupil must be exercised in practical details, such as—the application of anatomical facts to Surgery, on the living person, or on the dead body; the methods of proceeding and the manipulations necessary to detect the effects of diseases and accidents; the performance, where practicable, of operations on the dead body; the use of Surgical Apparatus; the examination of diseased structures.

‡ This course is not required from candidates who have passed a satisfactory examination in Chemistry in the preliminary examination.

§ In the case of candidates who commenced their professional education on or after the 1st of October, 1868, the certificate of instruction in vaccination will only be received from recognised Vaccine Stations, or from recognised Vaccine Departments in Medical Schools or Hospitals, or other Public Institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.—The certificates of attendance on lectures must include evidence that the student has attended the practical instructions and examinations in each course.

|| The Winter Session comprises a period of six months: and, in England, commences on the 1st of October and terminates on the 31st of March.

¶ The Summer Session comprises a period of three months: and, in England, commences on the 1st of May and terminates on the 31st of July.

** It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the Hospital.

Mathematics; Registration Examination for Medical Students. Queen's University in Ireland.—Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B.A. Course; Middle-Class Examinations, the Certificates to include Latin and Mathematics; Matriculation Examinations. Edinburgh, Aberdeen, Glasgow, and St. Andrew's.—Preliminary or Extra Professional Examinations for Graduation in Medicine. Calcutta, Madras, and Bombay; McGill College, Montreal; University College, Toronto; Victoria College, Toronto; University of Laval, Quebec; King's College, Windsor, Nova Scotia; University of Fredericton, New Brunswick; Dalhousie College and University, Halifax; University of Sydney; Bellevue Hospital Medical College, New York.—Matriculation Examinations. Queen's College, Kingston.—Matriculation Examination; Preliminary Examination of Students in Medicine. University of Melbourne.—Matriculation Examination, with a Certificate that the Student has passed an Examination in Latin.

* The following are the subjects of the examination during the year; viz.—Part I. *Compulsory Subjects.* 1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition: such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple or compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History: that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics: Euclid, Books I and II; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of *Cæsar's Commentaries De Bello Gallico*.—Part II. *Optional Subjects.* Papers will be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the first Book of the *Anabasis* of Xenophon. 2. Translation of a passage from X. B. Saintine's *Picciola*. 3. Translation of a passage from Schiller's *Wilhelm Tell*. Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics: the questions will be chiefly of an elementary character. 5. Chemistry: the questions will be on the elementary facts of Chemistry. 6. Botany and Zoology: the questions will be on the Classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account. N.B. Each candidate (who has not already paid the amount) is required to pay a Fee of £2 on the morning of the first day of the examination, prior to his admission thereto. The next examination will be held on or about the third Tuesday or Wednesday in December. The exact dates of the examination are duly advertised when fixed in the Medical Journals; and candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of each examination. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I, to pass in Greek, French, or German; and in one, at his option, of the remaining subjects in Part II.

tion of provincial hospitals and schools. 5. Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required; in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for the period of at least six months will be required. 6. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools.* 7. Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma. Candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities will be admitted upon the production of the several certificates required for their degree by the authorities of such universities. 8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom; Graduates in Surgery of any university recognised for this purpose by this College; and 9. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being 21 years of age. In each of these cases, 7, 8, and 9, the candidate will also be required to produce a certificate of instruction and proficiency in Vaccination, and satisfactory evidence of having been occupied, after having passed the preliminary examination, at least four years, or four winter and four summer sessions, in the acquirement of professional knowledge.

IV. *Professional Examination.*—This examination is divided into two parts. 1. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. 2. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine, is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. [A candidate can claim exemption from examination in Medicine under the following conditions, viz.: a. The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine of a colonial or foreign university approved by the Council of the College. b. A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the above mentioned medical qualifications; in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the examinations entitling him to receive the same.] 3. The primary examinations are held in January, April, May, July, and November, and the pass examinations generally in the ensuing week. 4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of attendance at a recognised school or schools; nor to the pass or surgical examination until after the termination of the fourth year of professional education. 5. The fee of five guineas, paid prior to the primary examination, and allowed on the whole fee of twenty-two pounds† payable for the diploma, is retained; and after two failures at the primary examination, the candidate is required to pay an additional fee of five guineas prior to being again admitted to that examination, which additional fee is also retained. 6. Five guineas, part of the balance of the whole fee due for the diploma and paid prior to the pass examination, are retained; and after two failures at the pass examination, the candidate must pay an additional fee of five guineas prior to being again admitted to the said pass examination, which additional fee is also retained. 7. A candidate having entered his name for either the primary or the pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards. 8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to reference. 9. A

candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to reference.

REGULATIONS RELATING TO THE DIPLOMA OF FELLOW.

I. *Preliminary Examination.*—Candidates must produce certificates of graduation in Arts at an University recognised for this purpose;* or of having passed such examinations in Arts as shall from time to time be required for graduation in Medicine at Oxford, Cambridge, Dublin, London, or Durham. Candidates who do not produce one of the foregoing certificates must pass an examination conducted by the Board of Examiners of the Royal College of Preceptors.†

II. *Professional Education.*—1. Except in the cases provided for to the contrary, every candidate for admission to the First or Anatomical and Physiological Examination for the Fellowship must produce, in addition to certificates of the same kind as are described in Section II, Clauses 3, 5, 6, 10, and 11 of the Regulations for the Membership, certificates of having passed the Preliminary Examination; of having performed dissections during three winter sessions; of having attended one course of lectures on Comparative Anatomy and one course of lectures on Chemistry.

2. Except in the cases provided for to the contrary, every candidate before his admission to the Second or Professional Examination, must produce, in addition to the certificates described in Section II, Clauses 7, 8, 9 (except Chemistry, included in the first examination), 12, 14, and 15 of the Regulations for the Diploma of Member, certificates of being twenty-five years of age; of having been engaged for six years in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College; or, if the candidate be already a Member of the College, certificates of having been engaged for two years in the acquirement of professional knowledge, in addition to the certificates required for the diploma of Member; of having performed Operations on the dead body under the superintendence of a recognised teacher; of having attended the Surgical Practice of a recognised hospital or hospitals during four winter and four summer sessions, and the Medical Practice during one winter and one summer session; of having attended, during three winter and two summer sessions, demonstrations in the *post mortem* rooms of a recognised hospital; of having attended Clinical Lectures on Medicine during one winter and one summer session; and of having served the office of house-surgeon or dresser for not less than six months.

3. In the case of a candidate who shall have taken by examination the degree of Bachelor or Master of Arts in any University in the United Kingdom recognised by the Council, it shall be sufficient for him to produce a certificate or certificates that he has been engaged for five years (instead of six years) in the acquirement of professional knowledge in recognised hospitals or schools.

4. Any Member of the College shall, after the expiration of eight years from the date of his diploma, be entitled to be admitted to the professional examination for the Fellowship upon the production of a certificate, signed by three Fellows, that he has been for eight years in the practice of the profession of surgery, and that he is a fit and proper person to be admitted a Fellow, if upon examination he shall be found qualified.

III. *Professional Examinations.*—The examinations are held in May and November, and at such other times as the Council may appoint, and occupy not less than two days. The subjects of the first examination are the same as for the Membership; the second examination, on Pathology, Therapeutics, and the Principles and Practice of Surgery and Medicine,‡ is partly written, partly *viva voce*, and partly on the practical use of surgical apparatus, and includes the examination of patients and operations on the dead body.—The Fees are: for the first examination, Five Guineas, to be allowed on the fee for the Diploma of Fellow, but to be retained in case of rejection; for the second examination, Five Guineas (if the candidate be a Member) over and above charges for stamps, to be retained in case of rejection; Twenty-five Guineas (if he be not a Member) over and above charges for stamps, of which Five Guineas will be retained in case of rejection.§ A candidate whose qualifications are found insufficient on his anatomical and physiological examination cannot present himself for re-examination until after six months; and a candidate whose qualifications shall be

* See Regulations for Diploma of Member, Section i, Clause 7.

† For the Subjects, see Note to Section i, Clause 9, page 308.

‡ For the condition of exemption from examination in Medicine, see Regulations respecting the Diploma of Member, Section iv, Clause 2. A candidate who has passed an examination in Medicine for the Membership will not be required to pass any further examination in Medicine for the Fellowship.

§ The sum of £2, paid on the Preliminary Examination, will be allowed again these amounts.

* At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

† This sum of twenty-two pounds is exclusive of the fee of two pounds paid for the preliminary examination.

found insufficient upon his pathological and surgical examination cannot present himself for re-examination until after one year, unless the Court of Examiners shall otherwise determine.

SOCIETY OF APOTHECARIES, LONDON.

REGULATIONS RELATING TO CANDIDATES FOR EXAMINATION.

Every candidate for a certificate of qualification to practise as an Apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school.") 2. Of having served an apprenticeship or pupillage of not less than five years to a practitioner qualified by the Act of 1815. (This period may include the time spent in attending lectures and hospital practice). 3. Of having attained the full age of 21 years. 4. Of good moral conduct. 5. Of having pursued a course of medical study in conformity with the regulations of the Court. 6. Of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least. 7. Of having been examined at the class-examinations instituted by the various lecturers and professors of the respective medical schools and colleges.

Course of Study.—Every candidate whose attendance on lectures shall have commenced on or after October 1st, 1863, must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1st to July 31st). *First Year: Winter Session:* Chemistry; Anatomy and Physiology; Dissections. *Summer Session:* Botany; Materia Medica and Therapeutics; Practical Chemistry.—*Second Year: Winter Session:* Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. *Summer Session:* Midwifery and Diseases of Women and Children, and Vaccination; Forensic Medicine and Toxicology; Clinical Medical Practice.—*Third Year: Winter Session:* Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.—No certificates of lectures or of anatomical instruction delivered in private to particular students, apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.—All students are required personally to register the several tickets of admission to lectures and medical practice within the first fifteen days of the months of October and May.

Examination in Arts.—Examinations in the subjects of preliminary education will be held at the Hall of the Society on Friday and Saturday, January 30th and 31st, April 24th and 25th, September 25th and 26th, 1874.—Candidates will be examined in the following branches; and no candidate will be approved unless he show a competent knowledge of each branch:—1. The English Language; 2. The Latin Language; 3. Mathematics; 4. One of the following subjects, at the option of the candidate; (a) Greek; (b) French; (c) German; (d) Natural Philosophy.* Candidates applying to be admitted to any examination must pay the fee (One Guinea) at least one week before the examination; and must sign their names in the candidates' book between 11 A.M. and 3 P.M., not later than the previous Thursday. If a candidate fail to pass the examination, the fee will not be returned to him; but he will be admissible to either or both of the two next following examinations in Arts without the payment of an additional fee, upon giving the usual notice, and signing the candidates' book. Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

Professional Examinations.—The Court meets every Thursday; and

candidates are required to attend at 3.45 P.M. Every candidate intending to offer himself for examination must give notice on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from 10 to 4 o'clock; Saturdays, 10 to 2.

The examination of candidates for the Licence is divided into two parts, and is conducted partly in writing (on Wednesday), and partly *vivâ voce* (on Thursday). Those students only who have to undergo the written examination have to attend at half-past 4 P.M. on Wednesday.

The *First Examination*, which may be passed after the second winter session, embraces the following subjects:—The *British Pharmacopæia*; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany and Materia Medica.

The *Second Examination*, after the third winter session (the five years' pupillage having been completed), includes: Principles and Practice of Medicine; Pathology; Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

Modified Examinations.—All Graduates in Medicine of British Universities will be admitted to a practical examination in Medicine and Midwifery only.—Licentiates of the Royal College of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; or of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *vivâ voce* examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.—Members of the Royal College of Surgeons of England; and Licentiates of the Royal Colleges of Surgeons of Edinburgh, and of Ireland, possessing a surgical qualification only, will be admitted to a first and second examination on one evening. The first or *vivâ voce* examination will include Physicians' Prescriptions, Visceral Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Pharmacy; the second, partly written, and partly *vivâ voce*, will include Practice of Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicological Chemistry.—Any candidate who has passed his first examination for the Licence of either of the Colleges of Physicians in the United Kingdom, or of the Colleges of Physicians and Surgeons of Edinburgh jointly, or of the Faculty of Physicians and Surgeons, Glasgow, or of the Apothecaries' Hall of Dublin; the first professional examination for the Degree of M.B., or Master in Surgery in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the Degree of M.D., or Master in Surgery in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the first examination for medical and surgical degrees in the Irish Universities, will be admitted to a single examination in Materia Medica, Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, part of which examination will be conducted in writing.

No rejected candidate for the Licence can be re-examined until the expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after three months.

Fees.—For a certificate of qualification to practise, Six Guineas, the half to be paid at the first examination; for an assistant's certificate, Two Guineas.

Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most; and of a silver medal and a book to the candidate who does so in the next degree. The examination in Botany will be held at the Hall of the Society on the second Wednesday in June, at 10 A.M., and will be conducted by printed papers and *vivâ voce* questions. The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday, and on the following Friday, in October, from ten in the forenoon to one in the afternoon of each day; by printed papers on the Wednesday, and by *vivâ voce* questions on the Friday.

The Society's Botanic Garden at Chelsea is open daily (except Sundays) from 10 A.M. to 5 P.M.; on Saturdays from 10 to 2. Tickets of admission may be had on application at the beadle's office at the Hall.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House, for three years. During these three years he has to pass two examinations in Arts, and one in either Mathematics,

* The following is the Syllabus of Subjects for Examination in 1874. 1. English. The leading features of its History. Its Structure and Grammar. English Composition. [The Books recommended for study in this subject are Adams's *Elements of the English Language*, and French, *English, Past and Present*.] 2. Latin. January: Cicero, *First Philippi*. April: Horace, *Satires*, Book I. September: Virgil, *Æneid*, Book I. Re-translation of easy sentences. Grammatical Questions will be introduced into the Latin Paper, and each Candidate will be expected to give satisfactory answers. 3. Mathematics: The Ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations; The First Two Books of Euclid. 4. One of the following subjects, at the option of the candidate. (a) Greek: Xenophon, *Anabasis*, Books I and II; Grammatical Questions. (b) French: Molière, *Le Misanthrope*; Translation from English into French; Grammatical Questions. (c) German: Schiller, *Wilhelm Tell*; Translation from English into German; Grammatical Questions. (d) Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. [The Book recommended for study in this subject is Snowball's *Cambridge Course of Elementary Natural Philosophy*.]

Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination in *Literis Humanioribus*. A student deciding to graduate in medicine must, after passing the requisite examination for the degree of B.A., spend two years in study prior to a scientific examination for the degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. Examination. Two years after passing this examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school.

The M.B. Degree confers the Licence to practise. For the Degree of Doctor in Medicine, a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term. Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Every year a Radcliffe Travelling Fellowship is competed for by any one who, having taken a first-class in any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to study medicine. The Travelling Fellows receive £200 a-year for three years, half this period being spent in study abroad.

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must—(1) Reside in the University two-thirds of each of nine terms: (2) Pass the previous examination, which may be done in the first or second terms of residence; (3) Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case only four years are required. Of this time of five years he must spend six terms in medical study in the University after passing the previous examination, unless he has obtained honours in one of the above-mentioned Triposes, in which case four terms only are required.—A student who has not graduated in Arts is required, before keeping the terms of medical study, in addition to passing the previous examination, to pass in Algebra either in the examination for the additional subjects of the previous examination (which he may do in his second term of residence or in any subsequent term), or in the general examination for the ordinary B.A. Degree.

There are three examinations for the degree of Bachelor of Medicine, conducted partly by written answers, and partly *vivâ voce*. The examinations include chemical analysis, practical histology, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients.

The subjects of the first examination are—1, Mechanics and Hydrostatics; 2, Chemistry with Heat and Electricity; 3, Botany.* The student may present himself for this examination at any time after passing the previous examination. He must produce certificates of having diligently attended one course of lectures on Chemistry, including manipulation, and one course on Botany.

The subjects of the second examination are—1, Elements of Comparative Anatomy;† 2, Human Anatomy and Physiology; 3, Pharmacology. Before presenting himself for this examination, the student must have completed two years of medical study, the time of medical study required to be spent in the University being included in these two years. He must have attended hospital practice during one year, have practised dissection during one season, and must produce certificates of having diligently attended a course of lectures on each of the following subjects: 1, Elements of Comparative Anatomy; 2, Human Anatomy and Physiology; 3, Materia Medica and Pharmacy; 4, Pathology.

The subjects of the third examination are—1, Pathology and the Practice of Physic (two papers); 2, Clinical Medicine; 3, Medical Juris-

* Students who have obtained Honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, or passed the general examination for the B.A. Degree, are not required to be examined in Mechanics and Hydrostatics; and those students who have obtained Honours in the Natural Sciences Tripos, are not required to be examined in Botany or Chemistry, with Heat and Electricity, if they have passed with credit the examination in the Tripos in those subjects. Students who have passed the special examination in Botany for the B.A. Degree, are not required to be examined again in that subject.

† Students who have obtained honours in the Natural Sciences Tripos, and passed with credit the examination in Comparative Anatomy for that Tripos, are not required to be examined again in that subject.

prudence.—Before presenting himself for this examination, the student must have completed the course of medical study, must have attended hospital practice during three years, and must produce certificates of having attended one course of lectures on each of the following subjects: 1, Principles and Practice of Physic; 2, Clinical Medicine; 3, Clinical Surgery; 4, Medical Jurisprudence; 5, Midwifery: also of having been clinical clerk for six months at least at a recognised hospital; or of having, subsequently to the completion of his attendance on hospital practice, attended to practical medicine in the special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless he himself be duly qualified.

After these examinations have been passed, an Act must be kept in the schools. The candidate reads a thesis, composed in English by himself on some subject approved by the professor; the professor brings forward arguments or objections in English for the candidate to answer, and examines him *vivâ voce* as well on questions connected with his thesis as on other subjects in the faculty of a more general nature. The exercise must continue at least one hour.

DOCTOR OF MEDICINE.

This may be taken by a Bachelor of Medicine in the ninth term after his inauguration. He is required to produce certificates of having been engaged five years in medical study, to keep an Act similar to that for M.B., and write an extempore essay. He pays ten guineas for the Act.—A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A., without having taken the degree of M.B. He must pass the three examinations for M.B., and keep the Act for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice are required as of the candidate for the degree of M.B.; but he is not required to have kept medical terms in the University.

MASTER OF SURGERY.

The subjects of the examination for this degree are—1, Surgical Anatomy; 2, Pathology and the Principles and Practice of Surgery; 3, Clinical Surgery; 4, Midwifery.—Before admission to this examination, the candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1, a second course of lectures on Human Anatomy; 2, one course of lectures on the Principles and Practice of Surgery; 3, lectures on Clinical Surgery during one year; 4, ten cases of Midwifery; 5, of having practised Dissection during a second season.—The examination takes place at the same time as those for M.B., and in a similar manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

UNIVERSITY OF LONDON.

DEGREES IN MEDICINE AND SURGERY.

THE following Examinations for Degrees in Medicine will be held in the University of London in 1874. They will commence on the following days.

Preliminary Scientific Examination: Monday, July 25th.

Bachelor of Medicine (M.B.) First Examination: Monday, July 28th.

Bachelor of Medicine (M.B.) Second Examination: Monday, November 3rd.

Bachelor of Surgery (B.S.): Tuesday, November 25th.

Master in Surgery (M.S.) and Doctor of Medicine (M.D.): Monday, November 24th.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds.* If a candidate withdraw or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to two subsequent preliminary scientific, first M.B., second M.B., or B.S. examinations, or to one subsequent M.S. or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination, or to have taken

* For the degree of Doctor of Medicine, the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided, in the last case, that Latin has been one of the subjects in which he has passed). 2. To have passed the preliminary Scientific Examination.* 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

First M.B. Examination.—The candidate must have passed the preliminary scientific examination at least one year previously, and must produce certificates—1. Of having completed his nineteenth year. 2. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy; General Anatomy and Physiology; Comparative Anatomy; Pathological Anatomy; *Materia Medica* and Pharmacy; General Pathology; General Therapeutics; Forensic Medicine; Hygiene; Obstetric Medicine and Diseases peculiar to Women and Infants; Surgery; Medicine.† 3. Of having dissected during two winter sessions. 4. Of having attended a course of Practical Chemistry. 5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy; Physiology;‡ *Materia Medica* and Pharmaceutical Chemistry; Organic Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *visû voce* interrogation, by demonstration from preparations and specimens, and by dissections.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) *Materia Medica* and Pharmaceutical Chemistry, and Organic Chemistry. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself most in each of these three divisions receives an exhibition of £40 *per annum* for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the second M.B. examination within three years from the time of passing the first M.B. examination. Under the same circumstances, the first and second candidates in each subject receive each a Gold Medal of the value of five pounds.

Second M.B. Examination.§—No candidate is admitted to this examination within two academical years of the time of his passing the first examination, nor without certificates:—1. Of having passed the first M.B. examination. 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the first examination. 3. Of having conducted at least twenty labours.|| 4 and 5. Of having attended the surgical and the medical practice of a recognised hospital or hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine.¶ 6. Of having, subsequently to the comple-

tion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months. 7. Of having acquired proficiency in vaccination.* The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *visû voce* interrogation; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparation. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Midwifery and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a Gold Medal, value five pounds.

BACHELOR OF SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on surgical anatomy and surgical operations; by examination and report on cases of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *visû voce* interrogation.

Examination for Honours.—Any candidate who has been placed in the first division at the examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a Gold Medal of the value of five pounds.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery† in this University. 2. Of having attended subsequently—(a) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (b) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (c) or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.‡ 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *visû voce* interrogation; and the candidates are examined in Logic and Moral Philosophy,§ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of twenty pounds.

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required

* Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

† Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates, the attendance on surgical practice required by regulation 2, may commence from the date of the M.B. Degree.

‡ One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

§ Any candidate who has taken the degree either of B.A., B.Sc., or M.D. in this University, is exempted from this part of the examination; and any candidate who has passed the Second M.B. Examination, may at any subsequent M.S. Examination present himself for Logic and Moral Philosophy alone, if he so prefer: thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

* Candidates for the Degree of M.B. are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, a candidate must have completed his seventeenth year, and have either passed the Matriculation Examination or taken a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided in the last case that Latin be one of the subjects in which he has passed). Candidates are examined in Mechanical and Natural Philosophy; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects of examination, and in Practical Chemistry. Candidates who matriculated previously to January 1867, are not required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they may pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

† The subjects numbered 2, 3, and 4, must be attended after passing the Matriculation Examination, or taking a Degree in Arts.

‡ Any candidate is allowed, if he so prefer, to postpone his examination in Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such candidate is not admitted to compete for honours on either occasion; and he cannot be admitted as a candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his examination in Physiology.

§ Any candidate for the Second M.B. Examination who has passed the First M.B. Examination under the former regulations, is required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present regulations; at which examination he is not allowed to compete for honours.

|| Certificates will be received from any legally qualified practitioner.

¶ The student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

for candidates for the degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and oral interrogation; and candidates are examined in Logic and Moral Philosophy, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of twenty pounds.

UNIVERSITY OF DURHAM.

EVERY student in medicine must have been registered; and no one shall be registered unless he have passed the Registration Examination or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination is directed to the rudiments of Religion, Literature, and Science; and is conducted by two or more examiners nominated by the Warden. The Registration Examination will begin on April 14th and September 15th, 1874.*

LICENCE IN MEDICINE.

The candidate must be of the age of 21 years, and must, since his registration, have spent four years in medical study at one or more of the schools recognised by the Licensing Bodies named in Schedule (A) of the Medical Act. One of the four years must be spent at the College of Medicine at Newcastle-on-Tyne. There are two public examinations: the first after two years at least of medical study; the second after four years at least of medical study. Candidates must produce satisfactory testimonials of conduct, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

BACHELOR OF MEDICINE.

The candidate must be of the standing of three terms at least as a Licentiate of Medicine, and of eighteen terms (six years) at least from the date of registration or matriculation.—No one who is not a Bachelor of Arts shall be admissible to this Degree, unless he have kept three terms by residence at Durham or have resided and attended lectures in Arts for one winter and one summer session at Newcastle (in addition to the four years of medical study), and have passed the final examination for the Degree of Bachelor of Arts, or an equivalent to it, besides the examination for the Degree of Bachelor of Medicine.

DOCTOR OF MEDICINE.

The candidate must be a Bachelor of Medicine of the standing of twenty-one terms at least (seven years) from his registration or matriculation, and of three terms at least from his admission to the Degree of Bachelor of Medicine; and must perform such exercises as the Warden and Senate require.

LICENCE IN SURGERY.

The candidate must be of the age of 21 years, and have spent four years in medical and surgical study since his registration as a student. In other respects, the regulations are similar to those for the Licence in Medicine; but the second examination is partly in surgical subjects.—The second examination may be passed at the same time with the second examination for a Licence in Medicine.

MASTER IN SURGERY.

The candidate must be a Licentiate in Surgery and in Medicine, and of the standing of eighteen terms (six years) at least from the date of his registration or matriculation, and of three terms at least from the date of his admission to the Licence in Surgery.—[In other respects, the regulations for this degree are analogous to those for that of Bachelor of Medicine, but having relation to Surgery in place of Medicine.]

The Warden and Senate have authority to arrange for students in the Faculty of Medicine an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient medical author or authors as they may think fit.

Any student in medicine who was registered before Easter Term, 1868, shall be entitled to be admitted to the Degree of Master in Surgery on the conditions required above for a Licence in Surgery.

These regulations shall not interfere with the power of the University to grant degrees by diploma to persons of sufficient standing and approved merit.

* The following are the subjects for examination. The History contained in the Acts of the Apostles.—English Grammar and Composition.—Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations.—Euclid, Books I and II.—Latin Grammar, with—in April, Caesar, *De Bello Gallico*, Lib. I and II.—In September, Virgil, *Æneid*, Lib. I and II.—Also any one of the following:—Greek Grammar, with Xenophon's *Memorabilia*.—French Grammar, with Voltaire's *Châtres VII*.—German Grammar, with Goethe's *Dichtung und Wahrheit*, Book I.—Elementary Questions in Mechanics, Hydrostatics, and Pneumatics.

Fees for Examinations and Degrees.—Senior Middle-Class Examination, £1; Examination at the end of First Year, £1; Registration Examination, £1; Extraordinary Registration Examination, £2; Registration, 5s.; each Public Examination in Medicine and in Surgery, £1; Licence in Medicine or Surgery, £3; Degree of Master in Surgery, Bachelor in Medicine, or Doctor in Medicine, each £6.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

No one can obtain the Licence of the College under the age of 21 years. Every applicant must produce satisfactory evidence of having been engaged in the study of medicine during at least four years subsequently to registration as a student, and of having attended the following courses at an University, or at a medical school recognised by the College:—Anatomy, Practical Anatomy, Chemistry, Practice of Medicine, Clinical Medicine, and Principles and Practice of Surgery, each a six months' course; Practical Chemistry, *Materia Medica* and Pharmacy, Physiology or Institutes of Medicine, Clinical Surgery, Midwifery, Medical Jurisprudence, General Pathology, or Pathological Anatomy, and Practical Pharmacy, each a three months' course. He must have attended the Practice of a Public Hospital (containing not fewer than eighty beds) during not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital; or have been engaged during six months as visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner, and have studied vaccination under a competent and recognised teacher. He must have passed the Preliminary Examination in Literature and Science,* and had his name inscribed in the General Medical Council's Register of Medical Students, previously to the commencement of his Medical Studies. Masters and Bachelors of Arts of any British or Foreign University, whose course of study may be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or any of the licensing boards recognised by the Medical Act.

The professional examination will be divided into two parts: (1) Anatomy, Physiology, Chemistry; (2) *Materia Medica* and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until he has completed two, or to the second until he has completed four, years of professional study. The following will be the periods of Examination to October 1874:—1. Preliminary examinations, October 21 and 22, 1873; April 21 and 22, and July 25 and 27, 1874. 2. First professional examinations, October 15, 1873; January 21, April 22, July 29, and October 14, 1874. The second professional examinations will be held on the Thursdays and Fridays following the first professional.

Candidates who already possess a qualification from a recognised Licensing Body, or who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College), will be at once admitted to the second examination.

No candidate is admissible to examination who has been rejected by any other licensing board within the previous three months.

The Fee payable by a Licentiate is Ten Guineas. If a candidate be unsuccessful, Two Guineas will be retained to pay expenses.

Candidates may be admitted to special examination on bringing forward satisfactory reasons and paying an extra Fee.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

The regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see next page), except that the third course of Medicine and the course of Pathological Anatomy are not required. The first professional examinations will be held on October 28, 1873; January 27, April 7 and 28, and July 28, 1874. The second examination takes place immediately after the conclusion of the first.

At the second examination, the student, in furnishing the statement of his professional study, must, if he has been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If the candidate have been an apprentice

* For the subjects, see note to regulations for double qualification.

to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the *Materia Medica*, are employed during the examinations; and all candidates are required to write out formulæ of prescription. They are also subjected to a practical clinical examination in the Surgical Hospital.

No candidate shall be admissible to examination who has been rejected by any other Licensing Board within three months preceding his application to be examined.

The Fees are: for the first examination, £4; for the second, £6; from candidates who have elsewhere passed the first professional examination, £10. In each case, £2 is retained if the candidate be unsuccessful.

Special examinations are held when required, the regulations being the same as in Clause 16 of the regulations for the professional examination for the double qualification, and an extra Fee being paid.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

The Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh, while they still give their Diplomas separately, have made arrangements by which, after one series of examinations, the student may obtain the Diplomas of both Colleges. This joint examination is conducted by a Board, in which each body is represented for examination in the branches common to both Medicine and Surgery; but the College of Physicians takes exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

1. Every candidate must have followed his course of study in a University, or in an established School of Medicine, or in a Provincial School specially recognised by the College of Physicians and Surgeons of that division of the United Kingdom in which it is situate. 2. Under the title *Established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Professional Education.—1. Candidates commencing professional study after September 16th, 1866, must have been engaged, during four years after the examination in general education, in not less than four winter sessions* or three winter and two summer sessions' attendance at a recognised medical school.* 2. The candidate must have attended the following courses of lectures: Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures;‡ Chemistry, Practice of Medicine, Clinical Medicine,§ Medicine (a third course, either Practice or Clinical, at option),§ Principles and Practice of Surgery, Clinical Surgery,§ Surgery (a third course, either Principles and Practice or Clinical Surgery, at option),§ each six months; Practical or Analytical Chemistry, *Materia Medica*, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy,|| each three months.¶ 3. He must also produce certificates:—*a.* Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b.* Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College on special application, or the superintendent of the laboratory of a Public Hospital or Dispensary, or a registered practitioner who dispenses medicine to his own patients.

* Candidates commencing study prior to the above date, will be admitted to examination after four winter sessions' or three winter and two summer sessions' attendance on classes at a regular Medical School.

† The two courses must not be attended in the same session.

‡ In those Schools of England and Ireland in which two separate courses of Lectures are delivered at separate hours—one on Anatomy, the other on Anatomy and Physiology—the former of these courses will be received as a course of Anatomy, and the other as a course of Physiology.

§ Two courses of Clinical Medicine or of Clinical Surgery of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the attendance at the Hospital where they are delivered.

|| A certificate of attendance at the *Post Mortem* Examinations at a General Hospital will be accepted in lieu of this course.

¶ The six months' courses delivered in Scotland must consist of not fewer than one hundred lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' courses must consist of not fewer than fifty lectures.

c. Of having attended, for twenty-four months, a public General Hospital containing, on an average, at least eighty patients. *d.* Of having attended, for six months, the practice of a public Dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e.* Of having been instructed in vaccination; the certificate to be signed by the teacher, who must be a registered practitioner.—It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.*

Preliminary Examination in General Education.—All candidates for the Diplomas of the Colleges must have passed the examination in General Education,† and have had their names inscribed in the General Medical Council's Register of Medical Students at the commencement of their Medical Studies. Certificates of having passed the examinations in General Education, conducted by other bodies (viz., those recognised by the General Medical Council), will be accepted as equivalent. Students who intend to undergo the preliminary examination must give in their names, addresses, and places of birth to the officer of either College, not later than three days before the day of examination; and must pay a fee of Ten Shillings, not to be returned in case of rejection; but they will be admissible to re-examination at a future period without paying another fee. Candidates who commenced their professional studies before September 17th, 1866, may pass the preliminary examination at any period previously to the first professional examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a preliminary examination in general education will be admitted to a special examination in general education previously to their first professional examination. For this they pay a fee of £1.

Professional Examination.—1. Candidates for the double qualification are subjected to two professional examinations. 2. Opportunities for both examinations will be presented six times in each year. On each occasion, the candidates write answers to the questions proposed; and are examined orally on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter season. 5. Candidates must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination;‡ and must produce certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination. 6. The sum of £6 must be paid to the Inspector of Certificates for this examination, not later than 10 A.M. of the day preceding it. This sum will be considered as paid to account for the entire Fee of £16 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £4 will be returned to him. 8. The second examination embraces Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, *Materia Medica* and Pharmacy, and Medical Jurisprudence; and takes place after the termination of the winter session of the last year of study. In the case of candidates who began their course of study after September 16th, 1866, it does not take place until four years after the examination in general education. 9. Applications for examination must be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce—*a.* Satisfactory evidence of having attained the age of twenty-one years; *b.* A certificate of having passed the preliminary

* The following order of study is recommended as a guide to the student, though not enjoined. *First Year*—Anatomy; Practical Anatomy; Chemistry; Practical or Analytical Chemistry; Hospital. *Second Year*—Anatomy; Practical Anatomy; Physiology; Surgery; *Materia Medica* (the last either in this or the third year); Hospital. *Third Year*—Practice of Medicine; Clinical Surgery; Practical Anatomy; Practical Pharmacy; Clinical Medicine; Pathological Anatomy; Hospital. *Fourth Year*—Surgery or Clinical Surgery; Midwifery and Diseases of Women and Children; Practice of Medicine or Clinical Medicine; Medical Jurisprudence; Practical Midwifery; Hospital.

† The examination will embrace the following subjects:—1. English language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: Cicero, *De Senectute* et *de Amicitia*; or Horace, *Carmina*, Lib. II and III; also a passage from an unprinted author. 5. One of the following subjects at the option of the candidate:—(1) Greek: Herodotus, *History*, Book I; and Homer, *Iliad*, Book II. (2) French: Voltaire's *Henriade*. (3) German: Schiller's *Wilhelm Tell*. (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. In Latin, Greek, French, and German, parsing of words from the passages given to be translated will be required; also, translation of short sentences from English into the respective languages.

‡ Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters; as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents.

examination, unless this certificate have been already seen by the Inspector; *c.* A certificate of registration in the books of the General Medical Council; *d.* A certificate of having passed the first professional examination; *e.* The certificate of his classes, etc.; *f.* A tabular statement (for which a printed form will be furnished), exhibiting the whole of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools, attended during each session. 11. The fee for this examination is £10, which must be lodged with the Inspector not later than 10 A.M. of the day preceding the examination-day. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at this examination, £8 will be returned to him. 14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certificates of the whole course of study prescribed, and of having passed their preliminary and first professional examinations. If any of the three subjects of the first examination have been omitted, the candidate will have to undergo an examination on the omitted subjects; and none of the subjects set down in § 8 will be omitted at the second examination, even if some of them should have formed part of the first examination by another Board. The fee payable by such candidates is £16, and unsuccessful candidates will receive back £14. 15. In addition to the written and oral examinations, all candidates are subjected to a practical Clinical Examination in Medicine and Surgery. 16. Candidates desirous of special examination on other days than those fixed by the regulations, must prepare a case to be submitted for consideration, with evidence to show why it was, and is, impossible for them to avail themselves of the ordinary examinations, past or future. They must at the same time produce certificates of the whole of the prescribed course of study and of the preliminary examination, and state the earliest and the latest days within which they can present themselves. An extra fee is required in such cases. 17. No candidate is admissible to examination who has been rejected by any other Licensing Board within the three preceding months.

Communications from candidates to be addressed to Dr. GAIRDNER, Inspector and Treasurer of the Double Qualification, at 45, Northumberland Street, Edinburgh.

The following will be the periods of examinations for the Double Qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, for the year 1873-74. *Preliminary Examination in General Education*, October 21st and 22nd, 1873, April 21st and 22nd, and July 25th and 27th, 1874. *First Professional Examinations*.—Tuesdays, November 4th, 1873, February 3rd, April 14th, May 5th, July 21st, and August 4th, 1874. *Second Professional Examinations*.—These will take place immediately after the conclusion of the first professional examinations. In no case will they be begun on an earlier day than the Thursday of any period.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE Regulations respecting the Curriculum of Professional Study are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held on October 17th and 31st, 1873, April 24th, July 24th, October 9th and 30th, 1874.* The Fee is Ten Shillings. Candidates are requested to give in their names to the Secretary at least two days before the examination, and to give intimation of the optional subject they select.

The *First Professional Examinations* take place on the second Tuesday of every month. The *Second Professional Examinations* take place, the written part on the second Tuesday of every month, and the clinical and oral parts on the succeeding day.

The Fee is £10; viz., £4 for the first, and £6 for the second examination.

* The examination in 1873 will embrace the following subjects:—1. English Language, including writing to dictation, Grammar, and Composition. 2. Latin: Translation from one of the two following Books, at the option of the candidate; viz., for 1873, the Second Book of *Cæsar's Commentaries*, and Virgil's *Æneid*, Lib. vi.; for 1874, the First Book of *Cæsar's Commentaries*, and Virgil's *Æneid*, Lib. vi.; an Exercise in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic, to Vulgar and Decimal Fractions inclusive; Algebra, including Simple Equations. 4. Geometry: First two Books of Euclid. 5. One of the following subjects at the option of the candidate. *a.* Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. *b.* Greek: Xenophon's *Anabasis*, Book III.; or Homer's *Iliad*, Book III. *c.* French: La Fontaine's *Fables*, first six books. *d.* German: Schiller's *Wilhelm Tell*. In the English, Latin, Greek, French, and German papers, special stress will be laid on accurate answering of the grammatical questions.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, Chemical Tests, Articles of the *Materia Medica*, the Microscope, Surgical Apparatus, and Pathological Specimens are employed. Candidates are also subjected, at the second examination, to a practical Clinical Examination at the Hospital.

Candidates for the Diploma of the Faculty, who possess a qualification to practise, or who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the Licensing Bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, will be admitted to the second professional examination. In such cases, the full fee is exigible. In the case of unsuccessful candidates, £2 of the fee is retained.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners in which each body is represented. The regulations as to the curriculum of study are the same as those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The fee for the two Diplomas granted conjointly is £16. The first examinations will be held on October 2nd, 1873, January 15th, April 2nd, May 7th, July 23rd, and August 6th, 1874.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We, therefore, give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University, viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of C.M. is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.—The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass a satisfactory examination in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place† before the candidate has entered on his medical curriculum.‡

* The Universities of Glasgow, Aberdeen, and St. Andrew's, include Natural History.

† As far as possible.—*Aberdeen*.—At *Glasgow*, the examination in the first class of subjects must take place before Matriculation; and that in the second class previously to the first professional examination.

‡ In Edinburgh, examinations on these subjects will be held on 15th and 16th of October 1872, and 18th and 19th March 1873. 1. *English*. Writing a passage from dictation; composition, with correction of sentences of bad English; Grammar, with analysis of sentences and derivation and definition of some common English words; History and Geography. 2. *Latin*.—Livy, Book ix.; an easy passage (Latin) from a Prose Author, and a single passage of English (translated from a Latin Author) to be re-translated into Latin, the more difficult Latin words being given. 3. *Arithmetic*.—The Common Rules, including Vulgar and Decimal Fractions. 4. *Elements of Mathematics*.—Euclid, Books I, II, and III; and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. *Elements of Mechanics*.—Elementary Mechanics and Hydrostatics. (See Tomlinson's *Rudimentary Mechanics*, Weale's series.)—At least two of the following subjects. 1. *Greek*.—Xenophon's *Memorabilia*, Book I. 2. *French*.—Molière, *Les Fourberies de Scapin*. 3. *German*.—Schiller's *Thirty Years' War*, Book I. 4. *Higher Mathematics*.—Euclid, Books I to VI; Algebra, Trigonometry, and Conic Sections. 5. *Natural Philosophy*.—Balfour Stewart's *Elementary Physics*. 6. *Logic*.—Jevons' *Elementary Lessons in Logic*. 7. *Moral Philosophy*.—Caldwell's *Handbook*. In Latin, Greek, French, and German, questions in Grammar will be set, and passages to be translated from English.

In Glasgow, examinations will take place on October 12th, 1872, and April 12th, 1873, as follows. *First or Elementary Part*, Exercises in all of which are required. *English*.—Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar. *Latin*.—Fourth Book of the *Æneid* of Virgil, and Sallust de *Bello Jugurthino*, chap. 1–4. Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions in Grammar and Construction. *Arithmetic*.—The Common Rules, including Vulgar and Decimal Fractions. *Elements of Mathematics*.—Euclid, Books I, II, and III; Algebra, as far as Simple Equations. *Elements of*

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Court, exempts from all preliminary education; [and an examination in Arts by any corporate body, whose examination has been recognised by the General Medical Council, and also approved by the University Court, shall exempt from preliminary examination in Arts on all subjects comprised in the examination of the said corporate body.]*

DEGREE OF BACHELOR IN MEDICINE AND MASTER IN SURGERY.

Candidates for the Degree of Bachelor of Medicine or Master in Surgery must have been engaged in medical and surgical study for four years—each *Annus Medicus* being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week.

Every candidate for the degree of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine and of Surgery, Midwifery and the Diseases of Women and Children,† General Pathology,‡ during courses including not less than 100 Lectures; Practical Anatomy, a course of the same duration as the preceding; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or attendance on six cases under a registered medical practitioner; Clinical Medicine and Clinical Surgery, each course of not less than 100 lectures; or two courses of three months; Medical Jurisprudence, Botany, Natural History, including Zoology, courses of not less than 50 lectures. 2. That he has attended for at least two years, the Medical and Surgical Practice of a General Hospital with not fewer than eighty patients. 3. That he has been engaged for at least three months in compounding and dispensing drugs at the Laboratory of a Hospital or Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.§ 4. That he has attended, for at least six months, the out-practice of a hospital or the practice of a dispensary, or of a registered practitioner. Evidence of a practical knowledge of vaccination is also required.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.|| [At St. Andrew's, no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges; viz., the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Attendance during at least six winter months on the medical or surgical practice of a

Mechanics—Questions, for which such works as Tomlinson's *Rudimentary Mechanics* may serve as text-books. *Second Part*, Exercises in two of the subjects of which, to be selected by the candidate, are required. *Greek*—*Cyropædia* of Xenophon, Book II, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied: Questions in Grammar. *French*—Molière's *Monsieur de Pourceaugnac*; Translations and exercises as in Latin and Greek. *Mathematics*—Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. *Natural Philosophy*—Such a knowledge of the principles as may be obtained from the Text-books of Golding Bird and Brooke, and Ganot—*Natural History*—Geology or Zoology. Text-books—Jukes, Lyell, Dana, R. Jones, Nicholson. *Logic*—Whately's *Logic*, Books II and III. *Moral Philosophy*—The General Principles, as stated in Dugald Stewart on the Active Powers, or Dr. Fleming's Manual.

At St. Andrew's, every Student in Medicine must be registered; but no one can be registered unless he has passed the Registration Examination, or an equivalent examination. The Registration Examination takes place during the first week of November. The following are the subjects: *English*—Grammar, Writing to Dictation, Composition. *Geography*—Europe. *Arithmetic*—including Vulgar and Decimal Fractions. *Latin*—Translations, with Grammatical Questions, from any one of the following Books, at the choice of the candidate: Cicero, *de Amicitia*, or *de Senectute*; Virgil, *Æneid*, one book; Horace, *Odes*, one book. One of the following subjects, selected by the candidate: *Greek*—Greek Grammar, with Parsing; and either fifty pages of Xenophon's *Anabasis*, or a Book of Homer. *French*—Voltaire's *History of Charles XII.* and French Grammar. *German*—Schiller's *Ballads*, and German Grammar. *Mathematics*—The First Book of Euclid.

* This portion, enclosed in brackets, is in the Regulations of the University of Edinburgh alone.

† Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

‡ Or a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine.

§ In the Laboratory of an Hospital or Dispensary, of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain.—*Glasgow*.

|| Entitled to grant Degrees in Medicine.—*Glasgow*.

General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the Edinburgh University Court, may be reckoned as one of the four years.* All candidates not students of the University of Edinburgh attending the lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—1. A declaration, in his own handwriting, that he is 21 years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.†

Each candidate is examined in writing and *viva voce*—1, on Chemistry, Botany, and Natural History; 2, on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4, Clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica and Pathology, are conducted, as far as possible, by demonstrations of objects. Students may be admitted to examination on the first division of these subjects at the end of their second year, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of the fourth year. If any candidate be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

[The above are the regulations, regarding professional examination, of the University of Edinburgh. Those of the other three Universities differ somewhat from those of Edinburgh. They are as follows.]

Every candidate for the Degrees of Bachelor of Medicine and Master in Surgery must undergo three professional examinations, conducted in writing and *viva voce*. The first examination (not to be taken before the end of the second year of study) includes Chemistry, Elementary Anatomy, and Botany.‡ The second examination (not to be taken before the end of the third year) includes advanced Anatomy, Physiology, and Zoology with Comparative Anatomy.§ The third examination (not to be taken before the end of the fourth year) includes Materia Medica, General Pathology, Surgery, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery.|| The examinations in Anatomy, Chemistry, Physiology, Botany, Zoology, and Materia Medica are conducted, as far as possible, by demonstrations of objects; and those on Medicine and Surgery, in part, by clinical demonstrations. Candidates may be admitted to examination on the first two at the end of the third year, or to the three examinations at the end of the fourth year. If any candidate be found unqualified, he is not again admitted to examination unless he shall have completed another year of medical study, or such portion of another year as may be prescribed by the examiners.]

DEGREE OF DOCTOR OF MEDICINE.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of 24 years, and has been engaged, subsequently to having received the degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Service, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of his obtaining the

* The other two years may be constituted by attendance upon courses in the great Hospital Medical Schools of London or Dublin; and, in default of such attendance, one of the four years may be constituted by attendance on any general Hospital containing not less than eighty beds, provided attendance has been given at the same time on a course of Practical Anatomy.—*Glasgow*.

† The Universities of Aberdeen and St. Andrew's require an Inaugural Dissertation to be presented previously to the final examination for M.B. In Edinburgh and Glasgow, no Thesis is now required until the candidate seeks the Degree of M.D.

‡ And Materia Medica.—*St. Andrew's*.

§ And Surgery.—*St. Andrew's*.

|| Materia Medica and Surgery in the two previous examinations.—*St. Andrew's*.

degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination in Greek, and in Logic, or Moral Philosophy, and in one at least of the following subjects: viz., French, German, Higher Mathematics, and Natural Philosophy.* He must submit to the Medical Faculty a Thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, and in Aberdeen before November 1861, are entitled to be examined for the degree of Doctor of Medicine, under the regulations then in force in each University respectively.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of 40 years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three examinations, each £5 : 5 = £15 : 15; for the Degree of C.M., £5 : 5 additional; for the Degree of M.D., £5 : 5 additional to that for M.B., together with Government Stamp Duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25; at St. Andrew's, the fee for the Degree of M.D. under the section relative to Registered Medical Practitioners is 50 Guineas. Stamp Duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RELATIVE TO THE LICENCE OF MEDICINE.

EXAMINATIONS for the Licence are held on the second Tuesday and following day in each month (except August and September).

A candidate who has not previously obtained any medical or surgical qualification recognised by the College must produce certificates—1. of having been engaged in the study of Medicine for four years. 2. Of having passed the preliminary examination of one of the recognised Licensing Corporations before the termination of the second year of medical study. 3. Of having studied at a school or schools recognised by the College the following subjects: Practical Anatomy; Anatomy and Physiology, or Institutes of Medicine; Botany; Chemistry; Practical Chemistry; Materia Medica; Practice of Medicine and Pathology; Surgery; Midwifery; Medical Jurisprudence. 4. Of having attended a Medico-Chirurgical Hospital in which regular courses of Clinical Lectures are delivered, together with clinical instruction, for twenty-seven months, or such hospital for eighteen months, with nine months at a medical hospital. 5. Of having attended Practical Midwifery for six months at a recognised Lying-in Hospital, or evidence satisfactory to the College of having attended Practical Midwifery. 6. Of character, from two registered physicians or surgeons. A candidate who has already obtained a recognised medical or surgical qualification must fill up a schedule which will be supplied on application, and produce his diploma or certificate of registration, and the certificate of Practical Midwifery, and testimonials as to character.

The examination is conducted by printed questions and *viva voce*, and consists of two parts:—1. Anatomy; Physiology; Botany; Chemistry. 2. Materia Medica; Practice of Medicine; Medical Jurisprudence; Midwifery. Candidates will also be examined at the bedside.

Candidates who have already obtained a qualification from an University or other licensing body, or who have passed the first examination after a complete curriculum, are required to undergo the second part of the professional examination only. Physicians or surgeons of five years' standing are exempted from the written portion of the final examination. Fee for Licence in Medicine, £15 : 15; of which £3 : 3 are returned if the candidate be unsuccessful.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTERS TESTIMONIAL.

THE Council of the Royal College of Surgeons have recently adopted a new scheme of examination, which is to supersede the existing scheme in next December. The old system is, however, continued for the pre-

sent, to enable students who have already commenced their curriculum to complete it as had been originally intended.

Every person, without any examination, shall be registered as a pupil on payment of £5 : 5, which is allowed in his diploma fee.

Students are admitted to the classical examination at any period previous to the final examination for letters testimonial.*

Examination under the Old System.—Candidates are divided into two classes—Junior and Senior. The junior class must produce certificates of having attended three courses each of Lectures on Anatomy and Physiology, and on Practical Anatomy with Dissections; two courses of Lectures on Chemistry; one course each of Lectures on Materia Medica, Botany, and Forensic Medicine. This class is examined in Anatomy, Physiology, and Materia Medica. The senior class must produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, and one course each of Lectures on the Practice of Medicine, and of Lectures on Midwifery; also of certificates of attendance on a recognised hospital for three winter and three summer sessions. This class is examined in Surgery, Operative Surgery, the Practice of Medicine, and forms of Prescription.

The fee for the junior examination is £5 : 5; for the senior, £15 : 15; making, with the preliminary examination fee (10s.) and registration fee (£5 : 5), a total of £26 : 15 for Letters Testimonial. In addition, a fee of one Guinea is paid to the Registrar on receiving the diploma. Every candidate rejected at the quarterly examination must pay £2 : 2 on applying for re-examination.

New Regulations.—The Sessional Examinations essential for the granting of the Letters Testimonial are to be three in number, instead of two, as at present, and must be passed within the following periods:—(a.) The Primary Examination, after the termination of the Second Summer Session. (b.) The Secondary, after the Third Summer Session. (c.) The Pass or Practical Examination, after the Fourth Summer Session.

Each examination will occupy two days, of which the first is to be devoted, in the Primary and Secondary Examinations, to the writing of answers to printed questions; and in the Pass Examination, to clinical examination and operative surgery; and the second day, in all cases, to *viva voce*.

The Sessional Examinations will commence on the second Tuesday in April and July, and the first Tuesday in December. The Primary and Secondary written examinations take place on the first day; and the *Viva Voce* Examinations, first of the Primary and afterwards of the Secondary class, are to be continued from day to day in the alphabetical order of candidates' names.

Primary Examination: the subjects are—*a.* Anatomy (bones, muscles, ligaments, chest, abdomen, urinary, and genital organs); *b.* Physiology of digestion and of absorption; *c.* Chemistry; *d.* Materia Medica and Medical Botany; *e.* Principles of Surgery.

Secondary Examination: the subjects are—*a.* Anatomy (regional and surgical); *b.* Physiology and Histology; *c.* Surgery; *d.* Medicine, practical. The description of anatomical specimens, and of microscopic histological preparations, forms part of the written examination.

Final or Pass Examination: The subjects are—*a.* Clinical Examination; *b.* Surgical Operations; *c.* Surgical Appliances; *d.* Prescriptions; *e.* Medical Jurisprudence.

Midwifery Examination.—An examination in Midwifery is held at the same time as the Pass Examination; the passing of which, however, is compulsory. Any candidate presenting himself for examination in that subject shall, if passed, receive the Midwifery Diploma without extra fee. The candidate is required to produce the following certificates, in addition to those required for his two previous examinations: (a) Midwifery, one course; (b) Surgery, one course.

The fees are: for the primary examination £5 : 5; for the second and final examinations £5 : 5 each; and £5 : 5 in addition, previous to the final examination for the diploma. Any rejected candidate seeking re-examination shall pay an additional fee of £2 : 2.

FELLOWSHIP.

Every registered pupil or licentiate may be admitted to examination for the Fellowship on producing a certificate that he is 25 years of age, and that he is a Bachelor of Arts, or has been examined with a view to ascertain that he has obtained a liberal preliminary education; also a certificate, signed by two or more Fellows of the College, of general

* In Greek and in Logic or Moral Philosophy, and in any one of the other optional subjects in the examination in General Education.—*Glasgow.* Natural History added in optional subjects.—*St. Andrew's.*

* The following are the subjects of the Preliminary Examination:—The English Language, including Grammar and Composition. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. Geometry, first two Books of Euclid. Greek and Latin, including Translation and Grammar. In Greek.—The Gospel of St. John, the *Monopans* of Lucian, or the First Book of Xenophon's *Anabasis*. In Latin.—The First and Second Books of the *Aeneid* of Virgil, the *Jugurthine War* of Sallust, or the Third Book of Livy.

good conduct. He must have been engaged in the acquisition of professional knowledge not less than six years (five years being required in the case of Bachelors of Arts), during three of which he must have studied in one or more of the schools and hospitals recognised by the Council. The other three years may have been passed in any approved school. He must also have acted as House-Surgeon or Dresser in a recognised hospital; and must have attended the lectures required of candidates for Letters Testimonial, together with one course of lectures on Comparative Anatomy, and one on Natural Philosophy. He must present a thesis on some medical subject, or clinical reports, with observations of six or more medical or surgical cases taken by himself.

Licentiates of the College, who cannot show that they have followed the course of study specified in the regulations, may, at the expiration of ten years from the date of their Diploma, be admitted to the examination for the Fellowship, on producing satisfactory evidence that they have conducted themselves honourably in the practice of their profession.

Each candidate for the Fellowship is examined on two days. The subjects of the first examination are Anatomy and Physiology (Human and Comparative); those of the second—Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and such other branch of medical science as the Council may direct. The examinations are both oral and written. The candidates must perform Dissections and Operations on the dead body. Rejected candidates cannot present themselves a second time until after one year from the first examination.

The Fee payable is £21 if the candidate be a Licentiate, or £36 : 15 if he be a registered pupil; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he pays, if a Licentiate, £31 : 10; if a registered pupil, £47 : 5. Fellows entering on the country list, who may subsequently settle as practitioners in Dublin, or within ten miles thereof, must pay £10 : 10 to the College.

APOTHECARIES' HALL OF IRELAND.

REGULATIONS REGARDING THE LICENCE TO PRACTISE.

EVERY candidate for the Licence to practise is required to undergo a Preliminary and a Professional Education and Examination.* The Arts Examination will be held on the third Thursday in January, April, July, and October, at 12 noon. Answers in writing must be given to printed questions. Unsuccessful candidates will be remitted to their studies for six months.

Professional Education and Examination.—Every candidate for the Licence must produce certificates: 1. Of having passed an examination in Arts previously to entering on professional study. 2. Of being at least 21 years of age, and of good moral character. 3. Of apprenticeship to a qualified apothecary, or of having been engaged at practical pharmacy with an apothecary for three years subsequently to having passed the examination in Arts. 4. Of having spent four years in professional study. 5. Of having attended the following courses, viz.: Chemistry, Principles and Practice of Medicine and Surgery, each during one winter session; Anatomy and Physiology, Demonstrations and Dissections, each during two winter sessions; Botany and Natural History, and Forensic Medicine, each during one summer session; Practical Chemistry (in a recognised Laboratory) and Materia Medica, each during three months; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (twenty cases); instruction in vaccination. 6. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. 7. Of having performed vaccination successfully under a recognised vaccinator.

The examination for the Licence to practise is divided into parts. The first part comprehends Chemistry, Botany, Anatomy, Physiology, and Materia Medica. The second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene. The first

part may be undergone at the close of the second winter session; and the second at the termination of the fourth winter session.

The examinations will be held on the first and second Mondays in January, April, July, and October.

Candidates who fail to pass the first part of the professional examination will be remitted to their studies for three months. Unsuccessful candidates at the pass examination will not be re-admitted until after six months.

UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE.

THE degrees in Medicine and Surgery granted by the University are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Master in Surgery. It also grants Licences in Medicine and Surgery.

BACHELOR IN MEDICINE.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical and Operative Surgery; Chemistry; Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine; Materia Medica and Pharmacy; Medical Jurisprudence. *Term Courses*—Heat (Michaelmas); Electricity (Hilary); Magnetism and Comparative Anatomy (Trinity). Two courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.† Six months' instruction in Practical Midwifery,‡ including clinical lectures. A certificate of personal attendance on fever cases, with names and dates of cases. Six months' dissection, and three months' laboratory instruction in Chemistry. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.‡ The Fee for the *Licent ad Examinandum* is £5; for the Degree of M.B., £11.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the Degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this Degree, £13.

MASTER IN SURGERY.

The Degree of Master in Surgery can only be obtained by students who are Bachelors of Arts, and who have completed the professional curriculum, and passed the examinations required. The curriculum comprises the following, in addition to the complete course for the M.B. Degree: Theoretical and Operative Surgery, one course; Dissections, two courses; Ophthalmic Surgery, one course; Nine months in Sir Patrick Dun's or other recognised metropolitan hospital, with clinical lectures. Attendance on the practice of a recognised county infirmary for two years previously to the commencement of medical study in Dublin, is allowed to count as one year of hospital attendance. Candidates are required to perform surgical operations on the dead subject. Candidates for the Degree of Master in Surgery, who have already passed the examination for the Degree of Bachelor in Medicine, will be examined in Anatomy and Surgery only. Fee for the *Licent ad Examinandum*, £5; for the Degree of M.Ch., £11.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine or Surgery must be matriculated in medicine, and must have completed two years in Arts and four years in medical studies.

In case the student should wish to continue the undergraduate course in Arts, with a view to the degree of B.A., his answering in the

* The following are the subjects of Preliminary Examination:—*Compulsory*. 1. *English*: Grammar, Composition, writing from Dictation, and History. 2. *Arithmetic and Algebra*: Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. *Geometry*: First Two Books of Euclid. 4. *Latin*: the Twenty-first Book of Livy, or the First Three Books of the *Æneid* of Virgil. 5. *Greek*: the First Two Books of the *Anabasis* of Xenophon, or the Ninth Book of the *Iliad* of Homer. 6. *French*: *Charles XII*, *Histoire de Vie*, of Voltaire, or *Voyage en Orient* of Lamartine. 7. *German*: *Wilhelm Tell* or *Die Räuber* of Schiller.—Candidates will be examined in either French or German, as they may select.—*Optional*. 8. *Natural Philosophy*: Mechanics, Hydrostatics, and Pneumatics. 2. *Natural History*: The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

† The following Hospitals are recognised:—1. Sir Patrick Dun's Hospital; 2. Meath Hospital; 3. House of Industry Hospitals; 4. Dr. Steevens' Hospital; 5. Jervis Street Infirmary; 6. City of Dublin Hospital; 7. Mercer's Hospital; 8. St. Vincent's Hospital; 9. Adelaide Hospital; 10. Mater Misericordiae Hospital.

‡ Certificates of Practical Midwifery are received from—1. The Rotundo Hospital; 2. The Coombe Hospital; 3. Sir P. Dun's Hospital Maternity; 4. Dr. Steevens' Hospital Maternity.

§ The following schools, in addition to the School of Physic of Trinity College, are recognised:—1. The School of the Royal College of Surgeons in Ireland; 2. The Carmichael School; 3. The School of Dr. Steevens' Hospital; 4. The St. Peter Street School; 5. The School of the Catholic University. The recognition is conditional on the students being furnished with *bona fide* certificates of regular attendance equivalent to that required by the University; i.e., three-fourths of the entire Lectures in each course.

matriculation examination* will be reckoned as equivalent to the entrance examination and the Hilary examination of the Junior Freshman year.

The medical course and examination for the Licence in Medicine is the same as for the Degree of M.B. A Licentiate in Medicine, on completing his course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the Degree fees, without further examination in medicine. Fee for the *Licent ad Examinandum*, £5; for the Licence in Medicine, £5.

The surgical course and examination necessary for the Licence in Surgery, are the same as for the Degree of Master in Surgery. Fee for the *Licent ad Examinandum*, £5; for the Licence in Surgery, £5.

Candidates for Degrees and Licences in Medicine and Surgery are required to pass an examination in the following subjects previously to their Degree examination: Descriptive Anatomy; Botany, Materia Medica and Pharmacy; Chemistry; and Physics. Two Medical Scholarships, of £20 each for two years, are awarded to the best answers at the previous examinations, on certain conditions. Candidates for Degrees and Licences in Medicine and Surgery are examined at the bedside.

QUALIFICATIONS IN STATE MEDICINE.

Doctors of Medicine, who wish to obtain from the University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects: 1. Law; 2. Engineering; 3. Pathology; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence.

QUEEN'S UNIVERSITY IN IRELAND.

DEGREES IN MEDICINE AND SURGERY.

THIS University grants the Degrees of Doctor in Medicine and Master in Surgery, and a Diploma in Midwifery. It includes three Colleges—The Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any University, College, or School, recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Experimental Physics and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised laboratory, and the practice during six months of a recognised Medico-Chirurgical Hospital, containing at least sixty beds, together with clinical lectures delivered therein; and, during the second period, a recognised Midwifery Hospital, with clinical lectures therein delivered, for three months; or a Midwifery Dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; and eighteen months' practice of a recognised Medico-Chirurgical Hospital containing at least sixty beds, with clinical instruction.

There are two University examinations—one comprising the subjects of study in the first period, the other the subjects of the second period. The examinations are held twice in each year, in June and September. Candidates who commence their medical studies elsewhere are admitted to the first University examination before proceeding to College.

Students of Medicine may present themselves for examination in Modern Languages, Experimental Physics, Botany, and Zoology, at any time after they have attended recognised courses in the same, and before they have passed an examination in the rest of the subjects prescribed for the First University Examination in Medicine. After January 1st, 1874, no candidate for the Degree of Doctor in Medicine will be allowed to postpone his examination in Modern Languages or in Experimental Physics until he shall present himself for the final examination.

Degrees in Surgery and Diplomas in Midwifery will only be conferred on candidates who hold the Degree of Doctor in Medicine of the University. After January 1st, 1874, the examination for the Degree of

Master in Surgery will be an examination in the Theory and Practice of Surgery, including Operative and Clinical Surgery; and that for the Diploma in Midwifery will be an examination in the Theory and Practice of Midwifery, including the use of Obstetrical Instruments and Appliances.

Further information will be found in the *Queen's University Calendar*, or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

THE ARMY AND NAVY MEDICAL SERVICES.

THE Regulations to be observed by candidates for admission to the Medical Services of the Army or Navy are identical, with a few slight exceptions.

1. Every candidate desirous of presenting himself for admission to the Army or Navy Medical Service must be unmarried, and not under 21 nor over 28 years of age. He must produce a certificate from the district Registrar, in which the date of birth is stated; or if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character [from the parochial minister, if possible].

2. The candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate.† He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. The candidate must be registered under the Medical Act of 1858 as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects: Anatomy and Physiology; Surgery; Medicine, including Therapeutics; the Diseases of Women and Children; Chemistry and Pharmacy; and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Army or Navy Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, Botany with special reference to Materia Medica, and French or German, and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley, on—1. Hygiene; 2. Clinical and [Naval and†] Military Medicine; 3. Clinical and [Naval and†] Military Surgery; 4. Pathology of Diseases and Injuries incidental to [Naval and†] Military Service.

7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of an Army or Naval Medical Officer, he will be eligible for a commission as Assistant-Surgeon.

8. During the period of his residence at the Netley Medical School, each candidate will receive an allowance of 5s. *per diem* with quarters, or 7s. *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (*viz.*, the Regulation undress uniform of an Assistant-Surgeon, but without the sword).

9. All candidates will be required to conform to such rules of discipline as the Senate may, from time to time, enact.

10. After completing three years' full-pay service, Assistant-Surgeons will be allowed to be examined for the rank of Surgeon, but no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years [two of which must have been in a ship actually employed at sea.]

* Army Regulations.

† His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. [A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.—*Army.*] Every candidate must also be free from organic disease of other organs, and from constitutional weakness or other disability likely to unfit him for military or naval service in any climate.

† Naval Medical Service.

* The following are the subjects of examination. Homer's *Iliad*, Books I, II (omitting Catalogue of Ships), III; Lucian's *Dialogues* (Walker's edition); Xenophon's *Anabasis*, Books I, II, III; Virgil, *Æneid*, Books I, II, III; Sallust; Horace, *Satires*; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra, to the end of Simple Equations; Euclid, Books I, II, III.

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1873-4.

For further particulars regarding each Hospital and Medical School, see pp. 324 et seq.

LECTURES, ETC.	St. BARTHOLOMEW'S HOSPITAL.	CHANCERY CROSS HOSPITAL.	St. GEORGE'S HOSPITAL.	GUY'S HOSPITAL.	KING'S COLLEGE AND HOSPITAL.
WINTER SESSION.					
PHYSIOLOGY	Mr. Baker..M. Tu. F., 2.30	Dr. Silver..M. Tu. W. F., 8.30	Dr. Cavafy..Tu. Th., 3; F., 11	Dr. Pavy & Dr. Pye-Smith..M. W. F., 4.15	Dr. Rutherford..M. W. Th. F., 4
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. T. Smith and Mr. Langton..Tu. W. Th. F., 9	Mr. Barwell..M. W. F., 9; Th., 3	Mr. Rouse..M. W. F., 3	Mr. Durham & Mr. Howse..Tu. W. Th. F., 9	Dr. Curnow..daily, exc. M., 9
ANATOMICAL DEMONSTRATIONS	Mr. Marsh, Mr. Cumberbatch, and Mr. Finner..daily, 10.15 to 4	Mr. Bellamy & Mr. Cantlie..daily, 10	Mr. Spitts, Mr. Ellis, and Mr. Blake	Mr. Davies-Colley, Mr. R. Rendle, and Mr. Lucas..daily, 10 to 4	Dr. Curnow and Mr. Perrin
CHEMISTRY	Dr. Russell..M. W. F., 10	Mr. Heaton..M. Th. F., 11	Dr. Noad..Tu. Th. S., 11.30	Dr. Debus and Dr. Stevenson..Tu. Th. S., 11	Mr. Bloxam...M. W. Th. 10.15
MEDICINE	Dr. Black, Dr. Andrew..M. Tu. Th., 8.30	Dr. Headland..M. W. F., 12.30	Dr. Barclay..Tu. Th. S., 9	Dr. Wilks and Dr. Habershon..M. W. F., 3	Dr. Johnson..Tu., 4 P.M.; Th. F., 5
SURGERY	Mr. Savory & Mr. Callender..W. Th., 2.30; S., 9.30	Mr. Canton..Tu. Th. S., 9	Mr. Holmes..M. W. F., 9	Mr. Birkett and Mr. C. Forster..Tu. Th., 3.30; F., 10.30	Mr. J. Wood..M. Tu. W., 5
HOSPITAL PRACTICE: Physicians	Dr. Black..M. Tu. Th., 1 Dr. Harris..Tu. Th. S., 1.30 Dr. Andrew...daily, exc. W., 1.30 Dr. Southey..M. W. Th. S., 1.30	Dr. Headland..M. W. F., 1 Dr. Pollock, Tu. Th. S. Dr. Silver..Tu. Th. F.	Dr. Fuller..M. F., 1 Dr. Barclay..M. F., 1 Dr. J. Ogle..Tu. S., 1 Dr. Wadham..Tu. S., 1	Dr. Habershon..Tu. Th. S., 1.30 Dr. Wilks..M. Th., 1.30 Dr. Moxon..M. Th. F., 1.30	Dr. Johnson..M. Th., 2 Dr. Beale..Tu. S., 2 Dr. Garrod..W. F., 2 Dr. Duffin..W. S., 1
Obstetric Physicians	Dr. Greenhalgh (in-p.)..Th., 1.30; (out-p.) S., 9	Dr. J. W. Black..M. W. F., 1	Dr. J. Clarke..in-p., Tu. S., 1; out-p., Th., 12	Dr. Braxton Hicks..W. S., 1.30	Dr. Playfair...Tu. Th. S., 1.30
Assistant-Physicians	Dr. Church..Tu. F., 11 Dr. Gee..W. S., 11 Dr. Duckworth..M. Th., 11 Dr. Hensley	Dr. Green..M. Th. Dr. Powell..Tu. F. Dr. Poore..W. S. Dr. Bruce	Dr. Dickinson..Tu. S., 12 Dr. Whigham..M. F., 12 Dr. R. J. Lee, (obst.), in-p., Tu. S., 1; out-p., Th., 12	Dr. Fagge..Tu. F., 12 Dr. Pye-Smith..W., 12 Dr. F. Taylor..M., 12 Dr. Phillips (obst.)..M. F., 1.30 (out-p.), Th. S., 12	Dr. Yeo..M. Th., 1 Dr. Kelly..Tu. F., 1 Dr. Hayes (obst.)..Tu. Th. S., 12.30
Surgeons	Mr. Holden..Tu. F. S., 1.30 Mr. Savory..M. 1; Tu. W. Th. F. S., 1.30 Mr. Callender..daily, 1.30 Mr. T. Smith..daily, 1.30 Mr. Willett..W. S., 12.30 Mr. Langton..Tu. F., 12.30 Mr. M. Baker..M. Th., 12.30 Mr. Marsh	Mr. Canton..Tu. F. Mr. Hind..M. Th. Mr. Barwell..W. S.	Mr. P. Hewett..M. F., 1 Mr. Pollock..M. F., 1 Mr. H. Lee..Tu. S., 1 Mr. Holmes..Tu. S., 1	Mr. Birkett..M. Th., 1.30 Mr. C. Forster..M. Th., 1.30 Mr. Bryant..M. Th., 1.30 Mr. Durham..W. F. S., 12	Sir W. Ferguson, Bart...Tu. Th. S., 1.30 Mr. Wood..M. W. F., 1.30 Mr. H. Smith..M. W. F., 1
Assistant-Surgeons	Mr. Marsh	Mr. Bellamy..M. Th. Mr. Fairlie Clarke..Tu. F. Mr. Bloxam..W. S.	Mr. Rouse..Tu. S., 12; Th., 12 (ear)	Mr. Howse..M. Th., 12 Mr. Davies-Colley..W. S., 12	Mr. H. R. Bell...Tu. Th. S., 1
CLINICAL MEDICINE	The Physicians..Weekly	The Physicians	Dr. Fuller and Dr. Wadham (Win.)..M. F., 2; Dr. Ogle (Sum.)..M., 2 Mr. Hewett & Mr. Pollock (Win.); Mr. Holmes (Sum.)..Tu., 2	The Physicians (Win.)..S., 1.30; the Assistant-Physicians (Sum.)..W., 1.30 The Surgeons (Win.)..W., 1.30; the Assistant-Surgeons (Sum.)..F., 1.30 Dr. Hicks (Win.)..W., 1.30 Dr. Phillips (Sum.)..M., 3	Dr. Johnson..alt. M., 3 Dr. Beale..alt. Tu., 3 Dr. Garrod..alt. F., 3 Sir W. Ferguson..alt. Th., 3 Mr. Wood..alt. F., 3
CLINICAL SURGERY	Sir J. Paget (Consulting Surgeon) and the Surgeons..Weekly	Mr. Hancock, and the Surgeons	Dr. J. Clarke	Dr. Hicks (Win.)..W., 1.30 Dr. Phillips (Sum.)..M., 3	Dr. Playfair..alt. Th., 3
CLINICAL MIDWIFERY	Dr. Greenhalgh..Weekly	Dr. J. W. Black...Fortnightly			
OPERATIONS	Wednesday & Saturday, 1.30	Saturday, 2	Thursday, 1	Tuesday and Friday, 1.30; on Eye, M. F., 1.30	Wednesday, 2; Saturday, 1.30
SUMMER SESSION.					
MATERIA MEDICA	Dr. Farre and Dr. Brunton..Tu. Th. S., 10; W., 11.30	Dr. Powell..Tu. Th. S., 9.45	Dr. Dickinson..M. W. F., 3	Dr. Moxon..Tu. Th. F., 3	Dr. Garrod..Tu. W. Th. F., 8 A.W.
BOTANY	Rev. G. Henslow..M. W. F., 10	Dr. Dowson..Tu. Th. S., 11	Dr. Whigham..Tu., 3; W. Th., 12	Mr. C. Johnson..Tu. Th. S., 11.30	Mr. Bentley...M. Tu. Th. F., 12.15
MIDWIFERY	Dr. Greenhalgh..Tu. W. F. S., 8.30 A.M.	Dr. J. W. Black...M. W. Th., 8	Dr. J. Clarke and Dr. R. J. Lee..M. W. F., 9	Dr. Braxton Hicks..Tu. W. Th. F., 8.45	Dr. Playfair...Tu. W. Th. F., 9
FORENSIC MEDICINE	Dr. R. Southey...Tu. Th. S., 9	Dr. Poore..M. W. F., 9	Dr. Wadham..Tu. Th. S., 9	Dr. Taylor..Tu. Th. S., 10	Dr. Ferrier..M. Tu. W. Th., 12.15
PRACTICAL CHEMISTRY ..	Dr. Russell..M. Tu. F., 11	Mr. Heaton and Mr. Bolas..M. F., 10 to 1	Dr. Noad..M. W. Th. F., 10	Dr. Debus...M. W. F., 10 to 1	Mr. Bloxam...M. W. Th., 10.15
COMPARATIVE ANATOMY ..	Dr. Church (Winter)..M. Th., 11	Mr. A. H. Garrod..Tu. F., 4	Dr. Cavafy (Sum.)..M. F., 4.30	Dr. Pye-Smith (Sum.)..M. F., 1.30	Mr. Rymer Jones (Sum.)..Tu. F. S., 10.15
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Mr. Symons (Pract. Phys.)..M., 2.30 (Win.) Dr. Klein (Hist.)..M., 2.30 (Win.)	Dr. Bruce	Mr. Watney..Tu. Th. S., 4.30	Dr. Pye-Smith (Win.)..M. Th. S., 1.30	Dr. Prichard (Win.)..Tu., 11.15; (Sum.)..M. W. F., 4
PATHOLOGY AND MORBID ANATOMY	Dr. Gee (lect.)..W., 9.30; (demonst.) 1; Surgical Registrars, 2.30	Dr. T. H. Green (Sum.)..Tu. F., 3; W., 4; Mr. Bloxam (Surg.)..Sum.	Dr. Dickinson (Win.)..Th., 3; Mr. J. W. Howard (demons.)..W., 12	Dr. Fagge & Dr. Goodhart (dem.)..daily, 2.30; Dr. Fagge (lect.)..Sum..S., 9 Dr. Dickson (Sum.)..M., 10	Dr. Beale (Sum.)..Tu. Th., 4
PSYCHOLOGICAL MEDICINE	Dr. Claye Shaw (Sum.)..Th., 12	Dr. W. J. Hunt..(Sum.)..M., 12	Dr. Blandford		Dr. Sheppard (Sum.)..W., 11
HYGIENE	Dr. Southey (Jan., Feb.)..F., 3.30	Mr. Heaton and Dr. Poore	With Medicine	Dr. Fagge (Sum.)..M. F., 12.15	Dr. Guy
PRACTICAL AND OPERATIVE SURGERY	Mr. Willett...M. W. F., 2.30; Mr. Langton and Mr. Marsh	Mr. Bellamy and Mr. Clarke..Th., 4	Mr. Pick (Sum.)..M. W. F., 3	Mr. Durham (Sum.)...M. Th., 8.30	
OPHTHALMIC MEDICINE AND SURGERY	Mr. Power (vis.)..Tu. Th., 1.30; (lect.) Tu. W. F., 12.45; Mr. Vernon (vis.) Th. S., 1.30; (dem.) W., 2		Mr. R. B. Carter (vis.)..W. S., 2; Win. (lect.)..W., 10	Mr. Bader (vis.)..W. S., 1.30; (lect.) (Sum.) F., 3; Mr. Higgins (out-p.) Tu. F., 12	Mr. Soelberg Wells..(vis.) Tu. Th. S., 1; (lect. (Sum.) M. S., 9; clin. (Win.) alt. M., 3
DENTAL SURGERY	Mr. C. Cleman..(vis.) F., 9 (lect.) F., 10.30 (Oct. Dec.)	Mr. Fairbank..(vis.) M. W. F., 10; (lect.) in Sum..	Mr. Vasey (vis.)..Tu. S., 9; Th., 1; (lect.) Sum. Tu., 10 Mr. Dalby (vis.)..Tu., 2; (lect.) Sum., W., 3	Mr. J. Salter..Th., 12; Mr. Moon..Tu. F., 12 Mr. Hinton..Tu. F., 12	Mr. Cartwright..Tu. F., 10; clin. (Win.) alt. Tu., 10.30
AURAL SURGERY	Mr. Langton..F., 2.30		Dr. Whigham..(Sum.) Th., 2		
DISEASES OF SKIN	Dr. Duckworth..F., 1.30	Dr. Sparks..(vis.)..Tu. S., lect. in Sum.	Obstetric Assistant, Th., 10	Dr. Fagge..Tu., 12 (Win.)	Dr. Duffin..Tu.
VACCINATION	Dr. Gee and Dr. Duckworth..W.	Mr. R. W. Dunn		Dr. Phillips	Mr. R. W. Dunn
MISCELLANEOUS	Natural Philosophy: Dr. Hensley Orthopaedic Surgery: Mr. Willett..F., 12.30	Auscultation: Dr. Green..W., 3 Diseases of Children: (clin. dem.) Dr. Bruce (weekly) Electro-Therapeutics: (lect.) Dr. Poore	Orthopaedic Surgery: Mr. Broadbent (vis.)..M. W. F., 2; (lect.) Win. Th., 10 Physiological Chemistry: Mr. S. W. Moore..(Win.) M. W. F., 10	Morbid Histology: Mr. Howse...Tu. F., 1 (Sum.) Experimental Philosophy: W., 12 (Win.)	Diseases of Throat and Laryngoscopy: Dr. Johnson..W., 3 Tutor's Class: (Win.)..M. W. F., 5; (Sum.) daily, exc. S., 9

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1873-4.

For further particulars regarding each Hospital and Medical School, see pp. 324 et seq.

LONDON HOSPITAL.	ST. MARY'S HOSPITAL.	MIDDLESEX HOSPITAL.	ST. THOMAS'S HOSPITAL.	UNIVERSITY COLLEGE AND HOSPITAL.	WESTMINSTER HOSPITAL.
Dr. Woodman and Mr. McCarthy..M. W. Th., 4 Mr. Rivington..M. Tu. Th. F., 3 Mr. Adams and Mr. Reeves..19 to 3, excepting W. and S. aft. Dr. Lethaby and Dr. Tidy..M. W. F., 10, 20 Dr. H. Davies, Dr. Ramskill, and Dr. Down (bef. Ch.). M. W. Th., 9, 19 (after); Th., 9, 15; Tu. F., 1 Mr. Couper..Tu. F. S., 9 Dr. Davies..Tu. F., 8, 30 Dr. A. Clark..M. Th., 1, 30 Dr. Ramskill..W. S., 1, 30 Dr. Down..Tu. F., 1, 30 Dr. H. Jackson..M. Th., 1, 30 Dr. Head..Tu. F., 1, 30 Dr. Palfrey..W. S., 1, 30 Dr. M. Mackenzie..W. S., 1, 30 Dr. Sutton..M. Th., 1, 30 Dr. Fenwick..Tu. F., 1, 30 Dr. Woodman..Tu. F., 1, 30 Mr. Hutchinson..M. Th., 1, 45 Mr. Maunder..Tu. F., 1, 30 Mr. Couper..W. S., 1, 30 Mr. Rivington..M. Th., 1 Mr. J. Adams..Tu. F., 1, 30 Mr. Tay..M. Th., 1, 30 Mr. McCarthy..M. Th., 1, 30 Mr. Reeves..Tu. S., 1, 30 Physicians Who Assist in the Rotation twice weekly The Surgeons Dr. Head..2nd F. in mo.; Dr. Palfrey..alt. T. Wednesday, 2 Dr. Prosser James..Tu. Th. F., 4 Mr. Baker..M. W. F., 11 Dr. Head..M. W. Th. F., 9 Mr. Rodgers and Dr. Tidy..daily, exc. S., 10 Dr. Lethaby..M. Th. S., 9 Mr. A. Sanders..Tu. Th., 11 Dr. Woodman and Mr. McCarthy..M. W. Th., 4 Dr. Sutton (Win. and Sum.)..Tu. Th., 12, 30 .. With Forensic Medicine Mr. Maunder (Sum.) Mr. Hutchinson lect. (June) Tu. F., 8 A.M.; Mr. J. Adams and Mr. Tay, W. S., 9 Mr. Barrett (vis.)..Tu. 10; lect. (March) 6 Mr. Rivington and Mr. Reeves..S., 9 Mr. McCarthy..W., 9 Assist. Obst. Phys. and Resident Accoucheur Diseases of Throat: Dr. M. Mackenzie (Sum.) S., 8	Dr. Lawson..M. W. S., 12 Mr. Norton..M. Tu. Th. F., 2, 15 Mr. F. Owen & Mr. Schlesinger..daily, 9 to 5, exc. S., 9 to 1 Dr. Wright..M. Tu. Th. F., 9 Dr. Chambers and Dr. Broadbent..M. W. Th., 4 Mr. J. R. Lane and Mr. Gascoyen..Tu. F., 4; W., 8 Dr. H. Jones..M. Th., 1, 15 Dr. Sieveking..Tu. F., 1, 15 Dr. Broadbent..W. S., 1, 15 Mr. S. Smith..M. Th., 1, 15 Mr. Walton..W. S., 1, 15 Mr. J. R. Lane..Tu. F., 1, 15 Dr. H. Jones..Th. Dr. Sieveking..alt. F. Dr. Broadbent..alt. S. Mr. S. Smith..M. Mr. H. Walton..alt. S. Mr. J. R. Lane..alt. Tu. Dr. A. Meadows..alt. Tu. Wednesday, 1, 30 Dr. Cheadle..Tu. W. F. S., 12 Dr. Trimen..M. W. F., 10, 30 Dr. A. Meadows..daily, exc. S., 9 Dr. Randall..M. W. Th., 10 Dr. Wright..Inorg. Tu. F., 8, 9; Organ. Tu. F., 10 Mr. St. G. Mivart (Summer) Tu. Th., 11 Dr. Shepherd (Win.) Tu. W. F., 10 Dr. Cheadle (Win.) Tu. F., 12 .. With Forensic Medicine Mr. Gascoyen Mr. Walton...Vis. M. Th., 1, 30; lect. (Sum.) M., 2, 15 Mr. H. Hayward..W. S., 9, 30 Mr. Allen (lect.) F., 8; (vis.) Tu. F., 2 Dr. Jones and Dr. Cheadle..Tu. Th., 1, 30; Dr. Cheadle (lect.) Th., 2 (Sum.) Mr. Sumner Diseases of Throat: Mr. Norton..W. S., 12, 30	Mr. Lowne..M. W. F., 4 Mr. Morris..M. W. Th. F., 10 Dr. R. Liveing...daily, 11 to 4 Mr. Heisch..M. Tu. F. S., 11 Dr. Greenhow..M. W. F., 9 Mr. De Morgan..Tu. Th. S., 9 Dr. H. Thompson..Tu. Th. S., 1 Dr. Greenhow..Tu. Th. S., 1 Dr. R. Liveing..M. W. F., 1, 30 Dr. H. Davis (in-p.)..Tu. F., 1, 30; (out-p.) W. S., 1, 30 Dr. Cayley..M. W., 8, 30 Dr. John Murray..Tu., 4; F., 8, 30 Dr. R. King..Th., 8, 30, S., 4 Mr. De Morgan..M. F., 1 Mr. Nunn..Tu. F., 1 Mr. Hulke..M. Th., 1 Mr. Lawson..Th. S., 1 Mr. Morris..M. F., 1 (an- cer); Th., 1, 30 Mr. A. Clark..Th. S., 1 The Physicians..F., 8 The Surgeons..M., 3 Dr. Hall Davis..Tu., 10 Wednesday, 1 Dr. Thorowgood..M. W. F., 10 Mr. Hensman..M. W. F., 10 Dr. Hall Davis..Tu. Th. S., 9 Dr. R. King..M. W. F., 9 Mr. Heisch..M. Tu. F., 11 Mr. Hensman..(Sum.)..Tu. Th., 4 Mr. Lowne (Sum.)..Tu. W. Th., 3 Dr. Cayley and Dr. Murray (Win.)..M. Th., 4 Dr. H. Rayner (Sum.) .. Mr. Hulke, Mr. Lawson, and Mr. Morris Mr. Hulke (vis.)...Tu. F., 8, 30; (clin.)..alt. Tu., 3 Mr. Tomes and Mr. Turner..daily, 9 Mr. A. Clark..M., 1 Dr. R. Liveing (Sum.)...Th., 4 Dr. W. Pearse Diseases of Throat: Dr. J. Murray..Tu., 4 Parasitic Diseases: Dr. Cobbold	Dr. Ord and Dr. J. Harley..M. W. F., 4 Mr. Mason & Mr. Wagstaffe..M. Tu. Th. F., 8; W., 12, 30 Mr. Mason, Mr. Wagstaffe, Mr. Rainey, and Dr. R. W. Reid..daily, 9 to 3 Dr. Bernays..Tu. Th. S., 11 Dr. Peacock and Dr. Murchison..M. Th. or F., 2; W., 5 Mr. S. Jones and Mr. Mac Cormac..M. or Tu. Th. F., 5 Dr. Peacock..Tu. F., 8, 45 Dr. Bristowe..W. S., 9, 30 Dr. Clapton..W. S., 9, 30 Dr. Murchison..M. Th., 9 Dr. Barnes..Tu., 9; F., 2; out-p., F., 12, 30 Dr. Stone..M. Th., 12, 30 Dr. Ord..W. S., 12, 30 Dr. J. Harley..Tu. F., 12, 30 Dr. Payne Dr. Gervis (obst.) S., 1 Mr. Simon..W. S., 9, 30 Mr. S. Jones..Tu. F., 8, 45 Mr. Croft..M. Th., 9, 30 Mr. Mac Cormac..M. Th., 9, 30 Mr. F. Mason..M. Th., 12, 30 Mr. H. Arnott..Tu. F., 12, 30 Mr. Wagstaffe..W. S., 12, 30 The Physicians, after or during visits The Surgeons, after or during visits Dr. Barnes..W., 5 Wednesday and Saturday, 1, 30; Saturday, 9, 30 Dr. Clapton..M. W. F., 8 Mr. A. W. Bennett...Tu. Th. S., 8 A.M. Dr. Barnes..Tu. W. Th. S., 8 Dr. Stone and Dr. Gervis..Tu. S., 12; F., 8 Dr. Bernays..Tu. Th. S., 11 Mr. Stewart (Sum.)..M. W., 11, 30 Dr. Ord and Dr. Harley (Sum.)..M. Th. F., 1, 30 Dr. Bristowe..Th. 4 Dr. Payne and Mr. Arnott..F., 1 Dr. W. R. Williams..F., 12 With Forensic Medicine Mr. Croft (Win.)..M. or Tu., 5; (Sum.) Tu. Th., 3, 30 Mr. Liebreich (vis.)...M. Th., 8; lect. (Sum.) M., 8 Mr. Elliott..Tu. F., 10 .. Dr. Payne (out-p.)..M., 12, 30 Dr. Gervis..W., 12, 30 Physics and Natural Philosophy: Dr. Stone (Win.)..S., 12	Dr. Sharpey..daily, exc. S., 10 Mr. Ellis..daily, 12 Mr. Ellis, Mr. G. D. Thane, and Mr. A. J. Pepper Dr. Williamson..daily, exc. S., 11; (exarc.) Tu. W. Th. F., 9 Dr. Reynolds..daily, exc. M., 9 Mr. Marshall..Tu. W. F., 4 Sir W. Jenner, Bart. Dr. Reynolds Dr. Wilson Fox Dr. Ringer Dr. C. Bastian Dr. Graily Hewitt..Twice weekly Dr. F. T. Roberts Dr. J. Williams (obst.) Mr. Erichsen Mr. Marshall Sir H. Thompson Mr. Berkeley Hill Mr. C. Heath Mr. Marcus Beck Sir W. Jenner and Dr. Reynolds..M. Tu. Th. F., 1 to 3 Dr. W. Fox..twice weekly Mr. Marshall and Sir H. Thompson..M. W. S., 1 to 3; Mr. Erichsen..weekly; Dr. G. Hewitt, fortnightly Wednesday, 2 Dr. Ringer..M., 9; Tu. W. Th. F., 10 Mr. Oliver..daily, exc. S., 8 Dr. Graily Hewitt..Tu. W. F. S., 9 Dr. Maudeley..Tu. W. Th. F., 10 Dr. Williamson (dem.) Tu. W. Th. F., 11; (sen.) M. S., 10 Dr. Grant (Win.)..daily, exc. S., 8 Dr. Burdon-Sanderson..daily, exc. S., 9; (lect.) S., 11; Laboratory, daily, 9 to 4 Mr. Beck (Surg.) Jan. Feb. Mar., M. Th., 4; Dr. Bastian (Sum.) M. Th., 9; F., 4 Dr. Sankey (Sum.)..M. Tu. W., 4; (clin.) Tu., 2 Dr. Corfield (Sum.)..Tu. Th., 4 Mr. Hill (Ost. Nov. Dec.)..M. Th., 4; Mr. Heath..(Sum.) 8, 30 A.M., or 3 P.M. Mr. W. Jones & Mr. Streetfield (vis.) M. W. F., 1 and 3; lect. (Sum.) Tu. Th.; (clin.) alt. weeks Mr. Ibbotson..(Winter) M. Th., 4; (vis.) W., 10 .. Dr. Tilbury Fox..(vis.) S., 9; (clin.) lect. alt. weeks Mr. G. L. Cooper or Mr. W. Pearse Tuesday, 2 Dr. Sturges..M. Th. F., 3 Mr. Holmes..M. W. F., 9 Dr. F. Bird..Tu. Th. F., 4 Dr. Potter and Dr. Dupré..Tu. W. F., 4 Dr. Dupré..M. W. F., 10 Mr. Carter Blake (Sum.)..W. S., 11 Dr. W. H. Alchin (Win.)..W. Th., 11 Dr. Alchin (lect.) (Sum.) Tu. W. Th., 10; Dr. Alchin & Mr. Ramsay (dem.) 2 Dr. Sutherland Dr. Potter (with Forensic Medicine) Mr. Davy (bandaging, etc.) (Sum.)..F., 12 Mr. Cowell (vis.) M. Th., 2, 30; (lect.) (Sum.) M., 2, 45 Mr. J. Walker (vis.) W. S., 9, 15; (lect.) W., 9, 30 .. Mr. Bond (vis.) W. S., 1; (lect.) (Sum.) W., 4 Dr. W. Pearse Electro-Therapeutics: Dr. Anstie Natural Philosophy: Mr. Brooke (Sum.)..Tu., 3	

For further particulars regarding each Hospital and Medical School, see pp. 329.

LECTURES, ETC.	BIRMINGHAM QUEEN'S COLLEGE.	Bristol Medical School.	Leeds School of Medicine.	Liverpool Royal Infirmary School of Medicine.	Manchester Royal School of Medicine.	Sheffield Medical School.	University of Durham College of Medicine, Newcastle.
ANTHROPOMY AND PHYSIOLOGY.	Dr. Norris and Mr. T. H. Bartlett. M. Th. 4	Mr. Atchley and Dr. Spencer. M. W. F. 9.30	Mr. Wright & Mr. Walker. M. W. 10; Tu. F. 12	Dr. Caton. Tu. Th. S. 9.15	Mr. W. Smith. M. Tu. W. Th. 12.30	Mr. T. Leeds and Mr. S. Morton. M. W. F. 6	Dr. G. H. Hume. Three days weekly. 5 v.
ANTHROPY, DESCRIPTIVE AND SURGICAL.	Mr. C. J. Bracey and Mr. Thomas. M. Tu. Th. F. 1	Mr. Board and Mr. Dobson. M. W. F. S. 10.30	Mr. Seaton, Dr. R. T. Land, and Mr. J. A. Nunneley. Tu. Th. F. 8	Mr. W. M. Banks. M. W. Th. F. 8	Mr. Bradley. Tu. W. Th. F. 8.45 a.m.	Mr. W. Skinner and Mr. E. Skinner. Daily, 6	Dr. Nesham, Mr. J. Armstrong, and Mr. J. Russell. Four days weekly. 8.45 a.m.
DEMONSTRATIONS AND DISSECTIONS	Dr. Jolly and Mr. Pope. Daily	Mr. Chute, Mr. Lawrence, Mr. T. Elliott, and Mr. C. Elliott. M. W. F. 8.30	Mr. Ogleby, Mr. Robinson, and Mr. McGill. Daily	Mr. Harris. Daily, 11 to 1, and 2 to 4	Mr. S. M. Bradley. Daily	Mr. Clarke, Mr. Skinner, and Mr. T. H. Morton. M. W. F. 11.30	Mr. Reoch. Daily, from 10 to 4
CHEMISTRY	Dr. Hill. Tu. Th. F. 12	Mr. Coomber. M. W. F. 8.30	Mr. T. Fairley. M. Tu. Th. F. 11	Dr. J. C. Brown. M. Tu. Th. F. 10.15	Dr. Roscoe. Daily, 11.30	Mr. Allen. M. W. F. 11.30	Mr. Freire-Marreco. Four days a week, 4
MEDICINE	Dr. Russell and Dr. Foster. Tu. W. F. 3	Dr. Martyn and Dr. E. L. Fox. M. W. F. 8.30 a.m.	Dr. Heaton and Dr. Albutt. M. Tu. Th. F. 5	Dr. Waters. M. W. F. 9.15	Dr. Roberts and Dr. Morgan. M. Tu. W. Th. 12	Dr. Frank Smith. Tu. Th. S. 6	Dr. Charlton and Dr. Philipson. M. W. F. 6
SURGERY	Mr. Pemberton and Mr. F. Jordan. Tu. W. F. 4	Mr. Coe and Mr. Tibbits. Tu. Th. S. 8.30 a.m.	Mr. Wheelhouse, Mr. Teale, and Mr. Jessop. M. W. S. 9	Mr. R. Harrison. M. W. F. 4	Mr. G. Southam. M. Tu. Th. 2; Mr. Land. Tu. 1; F. 12	Mr. W. F. Favell, Mr. Parker, and Mr. A. Jackson. M. W. F. 8 p.m.	Dr. Heath. M. W. F. 6
HOSPITAL PRACTICE	GENERAL HOSPITAL (d) QUEEN'S HOSPITAL (c) Daily, 9 to 12	ROYAL INFIRMARY (c) GENERAL HOSPITAL (f) Daily, 1 to 3	LEEDS GENERAL INFIRMARY (b) Physicians of Infirmary (g) F. 5. Clinical Class: Dr. Albutt. Tu. S. 11.30 to 1	LIVERPOOL ROYAL INFIRMARY (k) Physicians, Royal Infirmary (k). Weekly	MANCHESTER ROYAL INFIRMARY (m) Daily 10 to 1	SHEFFIELD GENERAL INFIRMARY (o) Physicians of Infirmary (o). Tu, 8 p.m.	NEWCASTLE INFIRMARY (q) Physicians of Infirmary (q)
CLINICAL MEDICINE	Physicians of Hospitals (b, c)	General Hospital: Three days weekly, 2.30	Surgeons of Infirmary (g). Tu. S. 6	Physicians, Royal Infirmary (k). Weekly	Physicians Royal Infirmary (m)	Physicians of Infirmary (o). Tu, 8 p.m.	Surgeons of Infirmary (q)
CLINICAL SURGERY	Surgeons of Hospitals (b, c)	Royal Infirmary: F. 12	General Hospital: W. 3	Surgeons, Royal Infirmary (k). Weekly	Surgeons, Royal Infirmary (m)	Surgeons of Infirmary (o). Tu, 8 p.m.	Surgeons of Infirmary (q)
SUMMER SESSION.							
MATERIA MEDICA	Mr. Wilders and Dr. Mackey. M. W. F. 4	Dr. Burder. M. Tu. Th. F. 9	Dr. Eddison. M. W. Th. F. 11	Dr. J. B. Nesbitt. Tu. Th. S. 8.30 a.m.	Mr. Somers. Tu. W. 19; Dr. Thorburn. Tu. W. F. 12.30	Dr. Young. M. W. F. 8 a.m.	Dr. Humble and Dr. Gibson. Daily, 4.45
MIDWIFERY, ETC.	Mr. Clay and Mr. Bassett. M. Tu. Th. F. 1	Dr. Swayne. Daily, exc. S. 8 a.m.	Mr. W. Hall. M. Tu. Th. F. 4	Dr. Steele. M. W. F. 8.30 a.m.	Dr. W. Carter. Tu. Th. S. 9.30	Dr. Hime. M. W. F. 8 p.m.	Dr. H. E. Armstrong. M. W. Th. F. 8.45
BOTANY	Dr. W. Hinds. M. W. F. 8	Dr. Keall. M. W. Th. F. 7 a.m.	Mr. E. Atkinson. Tu. Th. F. 12; Tu. 10	Dr. F. Whittle and Dr. J. C. Brown. M. W. F. 9	Mr. G. M. Harrison. M. W. 1; F. 1.30	Mr. Birks. Tu. Th. 8 a.m.	Dr. B. Bramwell. M. Tu. Th. 11
FORENSIC MEDICINE	Mr. Swain and Dr. Hill. Tu. Th. F. 12	Mr. Keall. M. W. Th. F. 9 a.m.	Mr. Scatford. M. W. Th. F. 11	Dr. F. Whittle and Dr. J. C. Brown. M. W. F. 9	Mr. G. M. Harrison. M. W. 1; F. 1.30	Mr. Baker and Mr. Harrison. Tu. Th. 4	Dr. Freire-Marreco. Daily, 10 to 5
PRACTICAL CHEMISTRY	Mr. Anderson. Th. 1	Mr. Coomber. Daily, exc. S. 8 a.m.	Mr. Fairley. M. Tu. Th. F. 4	Dr. J. C. Brown. M. W. Th. 10.30	Dr. Roscoe	Mr. Allen	Dr. Freire-Marreco. Daily, 10 to 5
COMPARATIVE ANATOMY	Dr. Savage. Th. 3	Mr. Atchley. M. W. Th. F. 12	Mr. Wheelhouse and Dr. Eddison. M. W. Th. F. 12	Dr. Caton (twice weekly)	Mr. Bradley	Mr. W. Jackson. F. 5	Dr. Gibb. W. 6.45 (Sum.)
PATHOLOGY	Mr. Rickards (at Gen. Hospital)	Dr. Martyn and Dr. Fox (Sum.) M. W. F. 7	Mr. Wheelhouse, Mr. Teale, and Mr. Jessop. Tu. Th. 2	Dr. Davidson (Win.) Th. 4	Dr. Simpson (Win.) Th. 12; (Sum.) M. Th. 12	The House-Surgeon at Infirmary	Dr. Heath (Sum.)
OPERATIVE SURGERY	Mr. Solomon (Sum.) Tu, 4	Mr. Coe and Mr. Tibbits (see above)	Mr. Nunnely, Mr. Seaton, and Dr. Land	Mr. Harrison (see above)	Mr. Hunt (Win.) M. 10 a.m.	Mr. W. F. Favell & Mr. Parker. Tu. Th. 11	Dr. Gleibrist
OPHTHALMIC SURGERY AND THE OPHTHALMOSCOPE	Dr. Jolly and Mr. Pope. Daily	Mr. Chute, Mr. Lawrence, Mr. T. Elliott, and Mr. C. Elliott. M. W. F. 8.30	Mr. Ogleby, Mr. Robinson, and Mr. McGill. Daily	Mr. Harris. Daily, 11 to 1, and 2 to 4	Mr. S. M. Bradley. Daily	Mr. Clarke, Mr. Skinner, and Mr. T. H. Morton. M. W. F. 11.30	Psychological Medicine: Mr. T. O. Wool
MISCELLANEOUS	Diseases of Women etc.: Mr. Berry and Dr. R. C. Jordan (Sum.) M. 12; Tu. 3	Mr. Atchley and Dr. Foster. Tu. W. F. 4	Mr. Wheelhouse, Mr. Teale, and Mr. Jessop. M. W. S. 9	Mr. R. Harrison. M. W. F. 4	Dr. Roscoe	Mr. W. F. Favell, Mr. Parker, and Mr. A. Jackson. M. W. F. 8 p.m.	Practical Physiology: Mr. J. Reoch
	Dental Surgery: (Sum.) Mr. Hawkins	Mr. Coe and Mr. Tibbits (see above)	Mr. Nunnely, Mr. Seaton, and Dr. Land	Mr. Harrison (see above)	Mr. Hunt (Win.) M. 10 a.m.	Mr. W. F. Favell & Mr. Parker. Tu. Th. 11	Practical Pharmacy: Mr. Proctor. Tu. 7.30

(d) Physicians: Dr. Bell Fletcher, Dr. Russell, Dr. Wade, Dr. Foster. Surgeons, Mr. A. Baker, Mr. O. Pemberton, Mr. T. H. Bartlett, Mr. Goadall, Mr. R. Jolly. Operations, W. 12.

(e) Physicians: Dr. Fleming, Dr. Johnston, Dr. Heslop, Dr. Sawyer. Surgeons, Mr. West, Mr. Gamgee, Mr. F. Jordan, Mr. J. St. S. Wilders. Assistant-Surgeon, Mr. J. Clay. Dental Surgeon, Mr. C. Sims. Operations, S. 1.

(f) Physicians: Dr. Brittan, Dr. Fairbrother, Dr. E. I. Fox, Dr. Beddoe. Surgeons, Mr. C. Leonard, Mr. T. F. Clark, Mr. Tibbits, Mr. Steele, Mr. Board. Assistant-Physician, Dr. W. H. Spencer.

(g) Physicians: Dr. Martyn, Dr. Burder, Dr. Frupp. Surgeons, Mr. Coe, Mr. F. P. Lansdown, Mr. Atchley, Mr. Dobson. Physician-Accoucheur, Dr. Swayne. Operations, Th. 1.30.

(h) Physicians: Dr. Heaton, Dr. Clifford Albutt, Dr. Eddison. Surgeons, Mr. Wheelhouse, Mr. T. P. Parson.

(i) Physicians: Dr. Charlton, Dr. Embleton, Dr. Philipson. Surgeons, Dr. Heath, Mr. Russell, Dr. Anison, Mr. L. Armstrong. Assistant-Surgeons, Mr. A. Bell, Dr. Hume, Mr. J. Hawthorn, Mr. C. Jeaffreson.

(j) Physicians: Dr. T. R. Jessop, Mr. J. Seaton. Surgeons to the Eye and Ear Department, Mr. J. A. Nunneley, Dr. R. T. Land, Mr. Oglesby.

(k) Physicians: Dr. Jumbull, M. Th. 12.15; Dr. Waters, W. S. 12.15; Dr. Glynn, Tu. F. 12. Surgeons, Mr. Stubbs, Tu. 12.30; F. 1; Mr. Bickerseth, M. Tu. Th. 1; Mr. Hakes, Tu. W. S. 1. Assistant-Surgeon, Mr. K. Harrison. Dental Surgeon, Mr. Waite. Pathologist, Mr. Banks. Operations, Tu. 1.

(m) Physicians: Dr. Eason, Wilkinson, Dr. Watts, Dr. Browne, Dr. W. Roberts, Dr. H. Simpson, Dr. J. F. Morgan. Surgeons, Mr. W. Smith, Mr. Southam, Mr. F. A. Heath, Mr. Land, Mr. Bowring. Assistant-Physicians, Dr. Leech, Dr. ———. Assistant-Surgeons, Mr. Headley, Mr. W. Whitehead. Ophthalmic Surgeon, Mr. P. Windsor. Obstetric Physician, Dr. Thorburn. Dental Surgeon, Mr. G. W. Smith.

(n) Physicians: Dr. de Barolomee, Dr. Law, Dr. Frank-Smith. Surgeons, Mr. Barber, Mr. W. F. Favell, Mr. Parker.

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see pp. 330-31. The letters (W.) and (S.) in this Table denote respectively Winter and Summer Courses.

LECTURES, ETC.	ABERDEEN UNIVERSITY.	EDINBURGH UNIVERSITY. (d.)	SCHOOL OF MEDICINE, EDINBURGH. (g.)	GLASGOW UNIVERSITY. (l.)	GLASGOW, ANDERSON'S UNIVERSITY. (g.)
ANATOMY	Dr. Struthers, 11 (W.)	Mr. Turner, 1 (W.)	Dr. Handyside, 1 (W.)	{ Dr. Allen Thomson and Demonstrator, jun. 11; sen. 2; (W.); 11 (S.)	Dr. G. Buchanan, 5 (W.)
ANATOMICAL DE- MONSTRATIONS..	Dr. Struthers, and De- monstrator, 9 (W.); 2 (S.)	Mr. Turner, 4	Dr. Handyside, 4 (W.) 11 (S.)		Dr. G. Buchanan and Mr. Clark, 1 (W.) r
DISSECTIONS	9 to 4 (W. and S.)	Daily (W. and S.)	9 to 4 (W. and S.)	9 to 4 (W.); 7 to 2 (S.)	Daily (W. and S.)
PHYSIOLOGY OR INSTITUTES OF MEDICINE	Dr. Ogilvie, 4 (W.)	Dr. Bennett, 11 (W.)	Dr. Bell Pettigrew and Dr. McKendrick, 11 (W.)	Dr. Buchanan, 4 (W.)	Dr. E. Watson, 12 (W.)
CHEMISTRY	Mr. Brazier, 3 (W.)	Dr. Crum Brown, 10 (W.)	Dr. S. Macadam, 10 (W.)	Dr. Anderson, 10 (W.)	Dr. Thorpe, 10 (W.)
PRACTICAL CHE- MISTRY	Mr. Brazier, 10 A.M. (S.)	Dr. Crum Brown (W. and S.)	Dr. Macadam, 9 to 5 (W. and S.)	Dr. Anderson, 12 (W.); 10 (S.) m	Dr. Thorpe, 10 to 4 (S.)
MATERIA MEDICA	Dr. Harvey, 3 and 4 (S.)	Sir R. Christison, 9 (W.) e	Dr. T. R. Fraser, 9 (S.)	Dr. Cowan, 11 (W.)	Dr. Morton, 3 (W.)
BOTANY	Dr. Dickie, 9 (S.)	Dr. Balfour (S.)	...	Dr. Dickson, 12 (S.) n	Mr. Hennedy, 10 (S.)
NATURAL HISTORY	Mr. Nicol, 2 (W.); 11 (S.) a	Dr. Carus for Dr. W. Thomson (S.)	...	Dr. Young, Zoology, 2 (S.)	
MEDICINE	Dr. Macrobin, 3 (W.)	Dr. Laycock, 3 (W.)	Dr. R. Haldane and Dr. C. Muirhead, 3 (W.)	Dr. Gairdner, 12 (W.) o	Dr. McCall Anderson, 5 (W.)
SURGERY	Dr. Pirrie, 10 (W.)	Mr. Spence, 10 (W.) Operative in Summer	Dr. P. H. Watson, Dr. J. Bell, Dr. Chiene, and Dr. John Dun- can, 10 (W.) h	Dr. G. H. B. Macleod, 1 (W.)	Dr. Dunlop, 11 (W.)
MIDWIFERY	Dr. Inglis, 2 (W.)	Dr. A. Simpson, 11 (W.)	Dr. Keiller, 10 (S.); Dr. M. Duncan, 11 (W.); Dr. A. Macdonald, 10 (S.)	Dr. Leishman, 3 (W.)	Dr. J. G. Wilson (S.)
FORENSIC MEDI- CINE	Dr. Ogston, 9 (W.) b	Dr. D. MacLagan (S.)	Dr. Littlejohn, 2 (W.); 11 (S.)	Dr. P. A. Simpson, 4 (W.)	Dr. A. Lindsay
PRACTICAL PHY- SIOLOGY & HIS- TOLOGY .....	...	Dr. Bennett (W. and S.)	...	Dr. J. Coats, 3 to 5 (S.)	...
PATHOLOGY	Dr. Rodger	Dr. Sanders, 2 (W.); and in Summer	Dr. John Wyllie, 4 (W.); 9 (S.)	Dr. J. Coats, 2 (W.)	...
HOSPITAL PRAC- TICE	Royal Infirmary, c Daily, 12	Royal Infirmary, i	Royal Infirmary, i	Royal Infirmary, r 9 A.M.	Royal Infirmary, 9 A.M.
CLINICAL MEDI- CINE	Dr. Smith, Dr. Beve- ridge, and Dr. A. Fraser	Drs. Bennett, Laycock, MacLagan, & Sanders, M. Tu. Th. F., 12 to 2	Drs. R. Haldane, G. W. Balfour, and Grainger Stewart, 12 (W.); Tu. F., 12 (S.) k	Physicians of Royal In- firmary, M. Th.	Physicians of Royal Infirmary, twice weekly, 9 (W. and S.)
CLINICAL SURGERY	Dr. Pirrie, Dr. Kerr, and Dr. Fiddes	Mr. Lister, M. Th., 12 (W.); also in Sum.	Dr. P. H. Watson and Mr. Annandale, 12 (W.); M. Th., 12 (S.)	Surgeons of Infirmary, Tu. F.	Surgeons of Infirmary, twice weekly, 9 (W. and S.)

a. Zoology with Comparative Anatomy.

b. With Medical Logic.

c. ABERDEEN ROYAL INFIRMARY: Physicians—Dr. J. W. F. Smith, Dr. Beve-
ridge, Dr. A. Fraser; Surgeons—Dr. Pirrie, Dr. D. Kerr, Dr. Fiddes; Junior
Surgeon—Dr. A. Ogston; Ophthalmic Surgeon—Dr. Davidson; Dental Surgeon—
Mr. Williamson.

d. Medical Psychology and Mental Diseases, with Practical Instruction at an
Asylum, Dr. Laycock (S.)

e. With Dietetics.

g. Vaccination, six weeks' courses in Winter and Summer, Dr. Husband.
Diseases of Children, Dr. Stephenson (S.) Diseases of the Eye, Dr. A. Robert-
son (S.) Insanity, Dr. Batty Tuke (S.), Sat., 3.

h. Operative Surgery and Surgical Appliances, Dr. J. Bell (S.), 4: Operative
Surgery and Surgical Anatomy, Dr. Chiene (S.), 3: Practical Surgery, Dr. J.
Duncan (S.), 4.

i. EDINBURGH ROYAL INFIRMARY: Physicians—Dr. Bennett, Dr. Laycock,
Dr. MacLagan, Dr. J. M. Duncan, Dr. Sanders, Dr. R. Haldane, Dr. G. W. Balfour,
and Dr. T. Grainger Stewart; Assistant-Physicians—Dr. C. Muirhead and Dr. T.

R. Fraser; Consulting Surgeon—Dr. J. Dunsmuir; Surgeons—Mr. J. Spence,
Dr. J. D. Gillespie, Dr. P. H. Watson, and Mr. Annandale; Ophthalmic Surgeons
—Mr. Walker and Dr. D. A. Robertson; Assistant-Surgeons—Dr. J. Bell and Dr.
John Duncan; Dental Surgeon—Dr. J. Smith; Pathologist—Dr. J. B. Pettigrew.

k. Dr. M. Duncan gives Clinical Lectures on Diseases of Women.

l. Operative Surgery, Dr. Macleod, M., W., F., 1 (S.); Lectures on Eye, Dr. T.
Reid, Tu., Th., 1 (S.)

m. Chemical Laboratory from 10 A.M. to 4 P.M. (W. and S.)

n. Demonstrations in the Botanical Garden, 6.30 P.M.

o. Dr. Gairdner lectures in the Summer at 12 noon on Tuesdays and Fridays, on
Diseases of the Nervous System.

p. GLASGOW ROYAL INFIRMARY: Physicians—Dr. Gairdner, Dr. Steven, Dr. Perry,
Dr. McCall Anderson, and Dr. Scott Orr; Surgeons—Dr. Macleod, Dr. G. Bu-
chanan, Dr. Morton, Dr. E. Watson, and Dr. Dewar.

q. Ophthalmic Medicine and Surgery, Dr. J. R. Wolfe.

r. Surgical Anatomy, Dr. Buchanan, 12 (S.) Osteology for Beginners, Dr. Bu-
chanan (S.)

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

In addition to the Tables of the Classes, etc., and hours of attendance, given at pages 320-323, we subjoin Abstracts of the Programmes issued by the several Medical Schools. We have extracted those points of information which are of most interest to the student, in addition to those given in the tables. It will be seen, that many of the Schools make arrangements by which the course of instruction required by the Examining Boards for the general practitioner can be compounded for, by paying a sum either at once or in periodical instalments. For the information of those who may wish to attend separate classes in any school for one or more sessions, we give the respective fees demanded in each school. To avoid repetition, and save space, the titles of the classes are indicated by letters, thus:

- a. Anatomy and Physiology.
- b. Descriptive and Surgical Anatomy.
- c. Anatomical Demonstrations.
- d. Chemistry.
- e. Medicine.
- f. Surgery.
- g. Materia Medica.
- h. Midwifery and Diseases of Women.
- i. Botany.
- k. Forensic Medicine.

- l. Practical Chemistry.
- m. Comparative Anatomy.
- n. Pathology and Morbid Anatomy.
- o. Dental Surgery.
- p. Ophthalmic Surgery.
- q. Operative Surgery.
- r. Practical Physiology or Histology.
- s. Mental Diseases.
- H.P. Hospital Practice.

ST. BARTHOLOMEW'S HOSPITAL.—Aggregate Fee, £105, or three instalments of £36 15s. each in the first winter, first summer, and second winter.—For general subjects for students of Dental Surgery, £52 10s.; or, first winter, £26 5s.; first summer, £26 5s.—Separate Classes: a and b, single, £7 7s.; perpetual, £10 10s.; c, one course, £3 3s.; one session, £5 5s.; d, e, f, r (Practical Physiology), single, £5 5s.; perpetual, £7 7s. (Histology), one course, £2 2s.; g, h, single, £5 5s.; perpetual, £6 6s.; i, k, single, £3 3s.; perpetual, £4 4s.; l, one course, £2 2s.; m, n, o, p, s, one course, £2 2s.; perpetual, £3 3s. (the lectures on Dental and on Ophthalmic Surgery and on Mental Diseases, are free to students of the Hospital); q, one course, £4 4s. Practical Surgery: one course, £5 5s.; perpetual, £7 7s. H.P., Medical—3 months, £8 8s.; 6 months, £12 12s.; 2 years, £18 18s.; unlimited, £26 5s. Surgical—3 months, £10 10s.; 6 months, £15 15s.; 12 months, £21; unlimited, £26 5s. House-Physicianships and House-Surgeons, £26 5s. Dresserships—3 months, £12 12s.; 6 months, £18 18s.; 12 months, £26 5s.

The Anatomical Museum, and the Museum of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M. The Reading Room is open every day; during winter from 10 to 5; summer, 9 to 5; vacations, 10 to 2.30. Subscription to Library, one year, £1 1s.; 4 years, £2 2s.

College.—Students are admitted to residence on the recommendation of a medical officer of the Hospital, which may be obtained on adducing satisfactory evidence of good moral character. The entrance-fee is £2 2s. Information regarding the College may be obtained on application to the Warden, Mr. W. Morrant Baker.

Exhibitions, Scholarships, and Prizes.—Open Scholarship in Science, value £100, for one year, to be competed for on September 25th, by candidates under twenty-five years of age, who have not entered to the medical or surgical practice of any medical school. The subjects are Physics, Chemistry, Botany, and Zoology. **First Year.**—Preliminary Scientific Exhibition, on October 27; subjects as above; value £50, for one year; confined to students of less than six months' standing. The holder of the Open Scholarship is not eligible. **Jeaffreson Exhibition:** £20 yearly, tenable for two years. Confined to students of less than six months' standing. Examination on October 20th, 1873: Subjects those of Preliminary Education appointed by the General Medical Council. Seven Scholarships are awarded. Two Senior Scholarships, value £50 and £25, in Medicine, Surgery, and Materia Medica and Therapeutics. Two Senior Scholarships, of the same value, in Anatomy, Physiology, and Chemistry. Three Junior Scholarships, of the value of £50, £30, and £20, after the general examinations in first year's subjects at the end of the summer and winter sessions. **Treasurer's Prize** for Practical Anatomy, junior. **Second Year.** **Foster Prize** for Practical Anatomy, senior. **Second or Third Year.** Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. **Wix Prize:** subject, "The Healing Art, so far from tending to Materialism, confirms, by its induction of accumulated evidence of design, Man's Instincts of Natural Religion; and thus, on St. Paul's showing, prepares his mind for the reception of Revealed Religion." **Hichens Prize:** subject of examination, Bishop Butler's *Analogy*. **Third or Fourth Years.** **Lawrence Scholarship** and **Gold Medal**, value £42:

subjects, Anatomy, Mineral and Vegetable Physiology, Chemistry, and Medicine and Surgery. Two Brackenbury Scholarships in Medicine and Surgery. Bentley Prize, for the best report of not less than twelve surgical cases occurring in the wards of the hospital during the previous year. The Kirkes Gold Medal for Clinical Medicine. The conditions under which the exhibitions, scholarships, and prizes are awarded, will be found in the prospectus of the College.

Appointments.—Four House-Physicians and four House-Surgeons (who must be qualified to practise) are appointed annually. Fee £26 5s. Each of these officers receives a salary of £25. Two Midwifery Assistants are appointed every six months. An Ophthalmic House-Surgeon is appointed for six months. (The preceding are provided with rooms.) Sixteen dressers to the surgical in-patients and the surgical casualty department are selected each year from the students of the second year. Other dresserships may be obtained by payment of the usual fees. The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheurs, are chosen from the most diligent students. There are also Clerks to the Assistant-Physicians and the Assistant-Surgeons in the special departments.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers and demonstrators. An examination of all students of the first year is held at the close of the first winter and first summer sessions.

CHARING CROSS HOSPITAL.—First year: a, b, £4 4s.; c, £3 3s.; d, £5 5s.; e, f, £2 2s.; H.P., £10 10s.; Matriculation, £2 2s.—total, £36 15s. Second year: a, b, c, k, n, £2 2s.; e, £4 4s.; f, h, £3 3s.; H.P., £10 10s.—total, £31 10s. Third year: e, f, £2 2s.; H.P., £10 10s.—total, £14 14s. Matriculated students receive a deduction of eight per cent. Dental Surgery; Composition Fee, £42 2s. H.P. matriculated students for full period required by Examining Boards in London, £31 10s.; non-matriculated students, either medical or surgical, 3 months, £6 6s.; 6 months, £10 10s.; 12 months, £15 15s.; full period, £21; both medical and surgical, 3 months, £10 10s.; 6 months, £15 15s.; 12 months, £21; full period, £31 10s. For a longer period, £5 5s. for each additional winter, and £3 3s. for each additional summer session.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, value £30 and £20, tenable for one year, awarded after examination in English, Latin, French or German, and Mathematics, with (optional) either Chemistry, Mechanics, German, or French.—The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year. Examination at the end of the second summer session, in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.—The Golding Scholarship, £15 a year, tenable for two years, open to all matriculated students who have just completed their first year. Examination at the end of the first summer session, in Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.—The following Medals are awarded annually: The Governors' Clinical Gold Medal; Silver and Bronze Class Medals and Certificates of Honour in all the classes.—Free Scholarships are awarded to sons of professional men of reduced circumstances and position, or of gentlemen in a corresponding station of society. Two of the free scholarships are annually placed at the disposal of the authorities of the Royal Medical Benevolent College.

Appointments.—The office of Medical and Surgical Registrar is open to students of Charing Cross Hospital who have a medical or surgical qualification; salary, £40 a year. The offices of House-Physician, House-Surgeon, and Resident Accoucheur, with six months' rooms and commons in the Hospital, are awarded to senior students (qualified men being preferred), after competitive examination.—Clinical Clerks and Dressers are appointed by competitive examination for three months.—A Pathological Assistant is appointed for three months.

The Library contains the standard medical and surgical works and the current medical periodicals, and is furnished with a cabinet of Materia Medica and Osteological Preparations. It is open daily from 9.30 A.M. to 4.30 P.M.

ST. GEORGE'S HOSPITAL.—Perpetual Fee, £105,* or £115 10s. from those who have paid by instalments.—Aggregate Fees, £42 for first year, £42 for second year, and £10 10s. for each succeeding year.†

* Perpetual Pupils are entitled to admission to the practice of the Physicians and Surgeons, to all the Lectures except Practical Chemistry, to compete for all Prizes and Exhibitions, to hold the appointments of House-Physician, House-Surgeon, and Assistant House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods. This payment must in all cases be made at the time of entry.

† By payment of these Fees, a Pupil is entitled to hold the offices of Clinical Clerk and Dresser, but not to become House-Physician or House-Surgeon, or to compete for the "William Brown Exhibition" and the "Clinical" Prizes.

Lectures and Hospital Practice for Diploma in Dental Surgery, £45 (none of these fees include Practical Chemistry).—Separate Classes.—*a*, *b*, *c*, *d*, single, £6 6s.; perpetual, £7 7s.; *e*, single, £6 6s.; perpetual, £8 8s.; *f*, single, £4 4s.; perpetual, £5 5s.; *g*, single, £5 5s.; perpetual, £6 6s.; *h*, single, £3 3s.; perpetual, £4 4s.; *i*, single, £4 4s.; *n*, single, £3 3s.—H.P. Physicians', 6 months, £8 8s.; 3 years, £16 16s.; perpetual, £25 25s.; Surgeons', 6 months, £15 15s.; 3 years, £21; perpetual, £42.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, half-yearly, from among the perpetual pupils. The House-Physicians and House-Surgeons hold office for twelve months, and reside and board in the hospital free of expense.—An Obstetric Physician, who must be a legally qualified practitioner, is appointed annually. He resides and boards in the Hospital, and receives a yearly salary of £100.—An Ophthalmic Assistant, an Orthopaedic Assistant, a Curator of the Pathological Museum, a Medical and a Surgical Registrar, and a Demonstrator of Anatomy, are appointed annually from among the senior pupils. The Curator, Registrars, and Demonstrator of Anatomy, have each a salary of £50. Every student is required to assist the Curator for one month in performing *post mortem* examinations.—Two Assistant Medical Registrars are appointed every six months by competition. This office must be held before competing for that of House-Physician.

Clinical Instruction.—The pupils of the hospital are divided into classes under the superintendence of the physicians and surgeons in rotation, and are placed in charge of cases as Clerks and Dressers.

The Library and Reading Room and the Museum are open daily. Annual Subscription to Library, 10s. 6d.

Exhibitions and Prizes.—The William Brown Exhibitions: (1) £100 *per annum* for two years to a perpetual pupil of the hospital under the age of 25, who has become entitled to be registered as a medical practitioner within two years previously. 2. £40 *per annum* for three years to students of the third and fourth winter sessions.—Brackenbury Prizes in Medicine and in Surgery, each £40, open to all pupils who have not completed the fourth year.—Sir Charles Clarke's Prize, interest of £200 annually, for good conduct.—The Thompson Silver Medal, and the Treasurer's Prize, for proficiency in clinical examinations in three Medical and three Surgical cases.—Sir Benjamin Brodie's Clinical Prize in Surgery, for the best report (with notes) of not more than twelve surgical cases in the hospital during the preceding twelve months.—Dr. Acland's Clinical Prize in Medicine, for the best record of not more than twelve cases of disease treated in the preceding twelve months.—The Henry Charles Johnson Memorial Prize, for Practical Anatomy.—General Proficiency Prizes, £10 10s., for students of each year: subjects for first year, Anatomy, Physiology, Chemistry, and Botany; for second year, Anatomy, Physiology, Chemistry, and Materia Medica; and for third year, Medicine, Surgery, Pathology, and Midwifery.

GUY'S HOSPITAL.—First year, £40; second year, £40; third year, £20; each succeeding year, £10. Perpetual ticket, £105. Pupils attending practical courses are charged for the materials used. Single courses, *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *n*, *q*, each £5 5s.; *g*, *i*, *k*, *l*, *m*, *r*, each £4 4s.; Hygiene and Natural Philosophy, each £4 4s.; H.P., either medical or surgical, 3 months, £10 10s.; 6 months, £15 15s.; perpetual, £26 5s.

Prizes.—Voluntary examinations are held as follows. 1. At entrance, in Elementary Classics, Ancient and Modern History, and Mathematics. The first three of the successful candidates receive £25, £20, and £15. Examination on October 7th. 2. At end of first summer session, in Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Comparative Anatomy. Three prizes of £30, £25, and £10 10s. 3. At end of second summer session, in Anatomy and Physiology, Medicine, Surgery, Midwifery, Chemistry, and Therapeutics. Two prizes of £35 and £30. 4. At end of third summer session, in Medicine, Surgery, Midwifery, and Medical Jurisprudence. Two prizes of £40 and £35. Honorary certificates are given to those candidates who pass creditable examinations. Special certificates are given to gentlemen who have attended 100 cases of Midwifery.—Two Gold Medals given annually by the Treasurer to students who have completed the third and not exceeded the fourth year, for proficiency in Clinical Medicine and Clinical Surgery.

Clinical Instruction.—Two wards, containing together forty beds, are especially devoted to clinical teaching in Medicine. The Surgeons lecture upon selected cases during the winter, and the Assistant-Surgeons in the summer. The Obstetric Physicians, and the Ophthalmic, Dental, and Aural Surgeons, also give clinical and practical instruction. Special demonstrations and instruction are also given in Cutaneous Diseases. Every facility and encouragement is given for clinical study and reporting. All students have opportunities of becoming Ward-Clerks to the Physicians and Surgeons.

Under the superintendence of the Registrars, accurate records are taken and preserved of all cases admitted.

Pupils' Appointments.—All these appointments are given according to the respective merits of the candidates, and without payment. Four House-Physicians are appointed by the Treasurer in each year. They hold office for six months each—two months as junior, four as senior. Six House-Surgeons and twelve Obstetric Residents every year. The former hold office each for four months, the latter for two months. The Senior House-Physicians, House-Surgeon, and Obstetric Resident, reside in the hospital, and are boarded free of expense.—The Clinical Assistants are selected from those students who have been medical ward-clerks.—The Dressers are selected from those who have been surgical ward-clerks. They hold office for six months each. During their weeks of special duty, they reside in the hospital, and board free of expense.—The Dressers in the Eye-Wards hold office for four months each.—The Assistant-Surgeons' Dressers and Dressers in the Surgery are appointed for three months.—Dressers are appointed to the Dental and the Aural Surgeon respectively for two months.—The *Post Mortem* Clerks are selected from students who have completed their second year. They hold office for two months each.—Extern Obstetric Attendants are appointed monthly to attend the cases of Midwifery, in addition to the casual attendants.—The Reporters or Ward-Clerks are chosen from those students who have been diligent in their earlier studies.—Clerks to the Assistant-Physicians and Assistant-Surgeons are also appointed.—Two Clerks are appointed to attend in the Electricity Room.—A special honorary certificate is given to every gentleman who has diligently performed the duties of the various offices.

Museums, etc.—The Museum of Human Anatomy is divided into an anatomical department, containing about 2,000 preparations; and a pathological department, containing upwards of 5,000 specimens, with more than 2,000 drawings.—The Museum of Comparative Anatomy contains 2,000 specimens.—In the Physiological Laboratory, experiments are prepared for practically illustrating the lectures on Physiology.—The Museum of Materia Medica contains specimens of the drugs in general use.—A Laboratory is adjacent.—The Laboratory for Practical Chemistry is open during the summer months.—The Library contains upwards of 5,000 volumes, and is open to the students daily from 10 A.M. to 4 P.M.

The Pupils' Physical Society meets on alternate Saturdays, at 7.30 P.M. A prize of £5 from the funds of the Society is given at the end of the session to the member who sends in the best essay and report of cases. Two other prizes of £5 and £10 are given to the members who are judged to have read the best essays before the Society. A fourth prize of £5 is given to the member who has most distinguished himself in the debates.

KING'S COLLEGE AND HOSPITAL.—Aggregate Fee for Matriculated Students, £105.* This payment covers two courses of Anatomy, Medicine and Surgery, and one course each of Physiology, Practical Physiology, Chemistry, Practical Chemistry, Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Pathological Anatomy, as well as attendance at the Hospital for three years from the beginning of the first Winter Session. The payments may be made by one sum of £100 on entrance; or £52 10s. on entrance, £42 at the beginning of the second winter session, and £10 10s. at the beginning of the third winter session. For each additional year, £10 10s. For right to attend perpetually on Hospital Practice and all the courses of lectures above mentioned, with Comparative Anatomy, £120 on entrance; or £60 on entrance, £40 at the beginning of the second winter session, and £30 at the beginning of the third winter session. Instruction in Dental Surgery: For students who have attended the course of study required for a medical practitioner, £31 10s. For those who take only the curriculum required for the Dental Diploma of the College of Surgeons, £95 1s. 6d. on entering, or £60 on entrance, and £40 at the beginning of the second winter session. Separate classes, *a*, *b*, *d*, single, £7 7s.; unlimited, £10 10s.; *c*, *f*, single or unlimited, £7 7s.; *g*, *h*, *i*, *k*, single, £4 4s.; unlimited, £5 5s.; *l*, single, £4 4s.; perpetual, £7 7s.; *m*, single, £3 3s.; unlimited, £4 4s.; *n*, single, £2 2s.; unlimited, £3 3s.; *p*, single, £3 3s.; *r*, (win.) single, £3 3s.; perpetual, £5 5s.; (sum.) single, £2 2s.; perpetual, £3 3s. Analytical and experimental Chemistry (exclusive of materials), one month, £4 4s.; three months, £10 10s.; six months, £18 18s. Tutor's Class, £3 3s. H.P.—Three

* Students are recommended to add £14 for Medical Tutor's fee; and £8 5s. for those preparing for the Preliminary Scientific Examination of the University of London. Attendance on the Medical Tutor is compulsory on resident students during their first year. The Principal requests each student, on entering his second term, to contribute £14 towards the expenses of the restoration of the College Chapel.

+ Each student attending the Practical Physiology Class must pay £14 each course for the use of a microscope, unless he have furnished himself with one approved by the Professor.

years' course, matriculated students, £31 10s.; not matriculated, £42; perpetual matriculated students, £42; not matriculated, £52 10s. Medical practice—3 months, £6 6s.; 6 months, £10 10s.; 18 months, £15 15s.; perpetual, £20 5s. Surgical practice—3 months, £10 13s. 6 months, £15 15s.; 12 or 21 months, £21; perpetual, £31 10s.

Clinical Instruction is given in the wards and by lectures in the medical and surgical departments; also in the Diseases of Women and Children, in Dental Surgery, in Diseases of the Eye, in Throat-Diseases and in Skin-Diseases.—Demonstration and practical instruction in Morbid Anatomy are given in the *Post Mortem Theatre*.—Students may obtain practical instruction and certificates in Vaccination by the payment of a small fee. Special Instruction is given in Medical Chemistry and the Microscope by the Physicians. The Medical Tutor assists, by instruction and examination, all students in the subjects of the first winter and summer sessions, as well as those preparing for the preliminary examination of the University of London.

The Museums of Anatomy, *Materia Medica*, Natural History, etc., are open daily from 10 till 4. The *Medical Library* is open daily.

Resident Medical Officers, Clinical Clerks and Dressers, are chosen by examination from matriculated students who are pupils at the hospital.

A permanent record of every case received into the hospital is kept by the Sambrooke Medical and Surgical Registrars.

Scholarships and Prizes.—Two Warneford Scholarships, £25 *per annum* for three years, for the encouragement of previous education; and one Warneford Scholarship of £25 *per annum*, for two years, for resident medical students.* College scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, open to students of the second and third year; three for £20 for one year, open to students of the first year. The Daniell Scholarship, open to students who have worked in the laboratory six months, £20 *per annum* for two years. Sambrooke Registrarships, annual value £50, tenable for two years. Leathes' Prizes: Interest of £300, applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated students. Warneford Prizes: £40, in medals and books, to two matriculated students. Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of the same value. Todd Medical Clinical Prize: Bronze Medal and Books to the value of £4 4s. Jelf Medal, to the candidate of the senior scholarship examination who is second in order of merit. Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students. The cost of the academical year varies from £50 to £60. Some of the professors, etc., receive pupils into their houses. There is a dining hall in the college.

LONDON HOSPITAL.—Aggregate Fee, £90, payable in two instalments of £45 each, at the commencement of the first and second years. Perpetual fee for lectures alone, £50; for both lectures and Hospital Practice, £100, payable in two instalments of £50 each, or two of £45 each, and one of £10. Composition fee for gentlemen who have spent their first year elsewhere, £70, payable in two equal instalments. Students who have paid the general aggregate fee can become perpetual at any time by paying the additional £10. Extra fees: Practical Chemistry (apparatus, etc.), £2 2s.; Library, £1 1s.; Practical Pharmacy, £4 4s. Separate classes: *a*, *b*, one session, £4 4s.; unlimited, £6 6s.; *b*, *c*, one session, £5 5s.; unlimited, £8 8s.; *d*, one session or unlimited, £7 7s.; *e*, *f*, one session, £5 5s.; unlimited, £6 6s.; *g*, *i*, *h*, *m*, *r*, one session, £3 3s.; unlimited, £4 4s.; *l*, one course, to students

of school, £2 2s.; to others, £3 3s.; *n*, one year, £3 3s.; perpetual, £6 6s.; *o*, one course, £2 2s.; Diseases of Throat, and Diseases of Eye, each, one course, £2 2s.; unlimited, £3 3s. H.P.—Medical: 6 months, £6 6s.; period required by Apothecaries' Hall, £12 12s.; unlimited, £21. Surgical: 6 months, including 3 months' dressership, £8 8s.; 12 months, including 6 months' dressership, £12 12s.; 18 months, including 12 months' dressership, £18 18s.; 3 years, including 12 months' dressership, £26 5s.; 3 years, including 2 years' dressership, £31 10s.; 12 months' dressership after the expiration of the above 3 years, £8 8s.

The Anatomical and Pathological Museum, the *Materia Medica* Museum, and the Library are open daily.

Scholarships and Prizes.—Seven scholarships will be offered for competition. 1 and 2. Two Buxton Scholarships, value £30 and £20, in October, after examination in the subjects of preliminary education.* These scholarships are open to full students of less than three months' standing. 3. A scholarship at the end of the winter session, value £20, to a first year's student: subject, Human Anatomy. 4. A scholarship, value £25, to a first or second year's student, at the end of the winter session: subjects, Anatomy, Physiology, and Chemistry. 5, 6, 7. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics; also a second prize, value £5, with certificate, for attendance on the largest number of Obstetric cases. The Duckworth Nelson Prize, value £10, at the end of the winter session, 1873-74, open to all students who have not completed their education: subjects, Practical Medicine and Surgery. Money prizes to the value of £60 *per annum* to the most meritorious of the dressers in the out-patient rooms. Special certificates to those gentlemen who have faithfully performed their duties in the hospital, and to those who have distinguished themselves at the examinations.

Appointments.—A Resident Medical Officer, qualified to practise Medicine, who receives £75, is appointed for twelve months. He is eligible for re-election, and then receives £100. A Junior Resident Medical Officer is appointed every six months. Four Medical Assistants, one for each Physician, are appointed every three months. Every student is expected to act as Clinical Clerk and Dresser in the out-patient department. A Resident Accoucheur is appointed for six months. Four House-Surgeons are elected, usually for six months. Any student may enter his name on the list as a Dresser. Two Dressers reside and board in the hospital every week. Two Clinical Assistants are appointed every three months for the medical and two for the surgical out-patients and patients in the special departments. They are eligible for re-election. Each receives £40 *per annum*. A Medical Registrar and a Surgical Registrar are appointed annually; the former receives 25, the latter 35, guineas. An Assistant-Dentist, *Post Mortem* Clerks, and two Prosectors of Anatomy, are also appointed. Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, are eligible for all scholarships, prizes, and appointments. Students who have commenced elsewhere, but who, at or before the beginning of the second winter session, become pupils of the hospital and college by paying the composition fee, will be eligible for the Dresserships, for three months as House-Surgeon, and for the offices of Ward Clerk, *Post Mortem* Clerk, Maternity Pupil, Clinical Assistant, and Registrar. All the appointments are open to students without fee. The holders of all resident appointments are provided with rooms and board.

Clinical Instruction.—Two medical wards, containing together thirty beds, have been set apart for clinical teaching. The Clinical Professor will meet his class twice a week. Bedside instruction will also be given by the physicians not on special clinical duty. Students requiring signatures for medical practice must attend the Clinical Professor. Dr. Davies will hold in the summer a class for Practical Auscultation and Percussion. In the out-patient department, the Physicians and Assistant-Physicians impart instruction at each visit. The surgeons make clinical observations on their cases, and a clinical lecture is given once a week.

Special Departments.—There are departments for instruction in Obstetric Medicine and Surgery, Vaccination, Diseases of the Eye and the Use of the Ophthalmoscope, Diseases of the Ear, Diseases of the Skin and of the Throat, Syphilis and Local Contagious Diseases, Mental Diseases, and Practical Pharmacy. Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Dr. Millar, at the Bethnal House Asylum.

* The subjects will be:—1. The English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. 3. Algebra, including Simple Equations. 4. Geometry—first Two Books of Euclid. 5. Latin—Cæsar, *De Bello Gallico*, Book II. 6. One of the following subjects at the discretion of the candidate: (a) Greek—Xenophon's *Anabasis*, Book I; (b) French—X. B. Saintine's *Picciotti*; (c) German—Schiller's *Wilhelm Tell*; (d) Natural Philosophy—Mechanics, Hydrostatics, Pneumatics.

* Two Scholarships, of the value of £25 *per annum* each, to be held for three years, will be given in October 1873. Candidates must be matriculated students of the Medical Department, and also perpetual pupils of the Hospital. Their first Winter Session must commence in October 1873. The examination will be in the following subjects. 1. Divinity: Old Testament History from Solomon to Ezra, and the books of Isaiah and Jeremiah; The Gospel of St. Matthew in Greek; The Prayer Book, its general history and structure. 2. Greek: Homer, *Iliad*, Book XVI. Latin: Livy, Book XXXIX, or Virgil, *Georgics*, and *Æneid*, IX. 3. English Language and Literature: Shakespeare, *Richard II*; Wordsworth, *The Prelude*. 4. Mathematics: Arithmetic; Algebra, as far as and including Quadratic Equations; Euclid, Books I, II (except props. 8, 9, 20), and III. 5. The Modern Languages: French, *De la Grandeur et de la Décadence des Romains*, par Montesquieu. German: Lessing's *Minna von Barnhelm* (Clarendon Press Series).—A Scholarship of the annual value of £25, tenable for two years, will be awarded at the end of the Winter Session 1873-74.

ST. MARY'S HOSPITAL.—Aggregate Fee, £89 5s. in instalments, or £84 in one sum.—Fee for all lectures required for ordinary examinations, £52 10s.; for hospital practice, £36 15s.; for lectures and hospital practice, £89 5s.—unlimited attendance on hospital practice and all lectures, £105 in instalments, or £99 15s. in one sum.—Separate classes, *a, i, k, r*, one course, £3 3s.; unlimited, £4 4s.; *b*, one course, £6 6s.; unlimited, £8 8s.; *c, l, i* 15s. first and second sessions; *d*, one course, £5 5s.; unlimited, £7 7s.; *e, f, g, h*, one course, £4 4s.; perpetual, £6 6s.; *l* (Organic), *n*, one course, £3 3s.; *m*, one course, £2 2s.; unlimited, £3 3s.; *o, p*, and Aural Surgery, one course, £2 2s.—H.P.—Medical: 3 months, £5 5s.; 6 months, £7 7s.; 12 months, £12 12s.; 18 months, £15 15s.; unlimited, £21. Surgical: 3 months, £6 6s.; 6 months, £9 9s.; 12 months, or time required by College of Surgeons, £21; unlimited, £31. Practical Pharmacy: 3 months, £3 3s.; 6 months, £6 6s.; 12 months, £10 10s.—Vaccination, £1 1s.—Library fee, £1 1s.

Special Courses are given on Ophthalmic, Aural, and Dental Surgery; also clinical demonstrations on Diseases of the Skin and of the Throat. The students are carefully trained to the use of the Microscope. A Histological Room is open daily.

Hospital Appointments are open to the pupils without additional fee. Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital.—A Demonstrator of Anatomy is appointed, with a salary of £50 a year; and a Medical Tutor, with a salary of £100 a year.—A Resident Registrar is appointed, with a salary of £100 a year; he holds office for two years, and may be re-elected.—All general students must act as clinical clerks and dressers for six months after passing the Primary Examination. Students of the third year are appointed to assist the Physicians and Surgeons in charge of the out-patients for three months each.

Clinical Lectures twice a week by the Physicians and Surgeons. The students are divided into three classes, each committed to the charge of a Physician and Surgeon for a definite period. The attendance of the students is noted at each visit.

The Medical Tutor assists the students daily in the wards of the hospital, and gives elementary practical instruction on medical and surgical cases. He also examines practically students who are preparing for their final examination.

Scholarships and Prizes.—A Scholarship in Natural Science, value £40, for three years, to be awarded at the beginning of the winter session; and an Exhibition of £20 for one year to the second candidate in order of merit. The successful candidates must enter as Perpetual pupils of the Hospital.—A prize of £4 4s. in Anatomy and Histology, and three of £2 2s. each in Chemistry, Practical Chemistry, and Materia Medica and Botany, to first year's students.—A Scholarship in Anatomy, value £20, for one year; a prize of £4 4s. for Anatomy and General Physiology; and a prize of £2 2s. for Midwifery; to students of the second year.—A Scholarship in Pathological Anatomy, value £20, tenable for one year, and prizes of £3 3s. each in Medicine and in Surgery, and one of £2 2s. in Comparative Anatomy, for third year's students.—A prize of £4 4s. for Clinical Medicine and Clinical Surgery to students of the third or fourth year.—Two Prosectors are appointed annually, who each receive a certificate and £5.

The Reading Room and Library are open daily. A fee of £1 1s. (perpetual) is paid on entrance by each student.—The Museum is open daily to students. It contains above 3,000 specimens of healthy and morbid anatomy. There are also a Materia Medica Department, and a collection of specimens illustrative of Comparative Anatomy.

MIDDLESEX HOSPITAL.—Aggregate Fee, £90 in one sum;* or in instalments of £35 at the beginning of the first and second sessions; £20 at the beginning of the third session; and £10 for each additional year, or separate fees for the hospital practice or lectures attended. Students who have completed one year in the University of Oxford, Cambridge, or Durham, are admitted on payment of £55 in one sum, or in two instalments of £35 and £20 at the commencement of the first and second winter sessions; for each additional year £10.—Aggregate Fee for hospital practice alone, £42.—Separate Classes—*a, c, d, e, f*, single, £6 6s.; unlimited, £8 8s.; *b*, without dissection, single, £8 8s.; unlimited, £12 12s.; with dissection, single, £10 10s.; unlimited, £14 14s.; *g, h, i, k*, single, £4 4s.; unlimited, £5 5s.; *l, m, s*, single, £3 3s.; *n*, single, £4 4s.; unlimited, £5 5s.; *q*, single, £6 6s.; *r*, single, £4 4s.—H.P.—Unlimited, £26 5s.; or in instalments of £10 10s. each at commencement of first and second years, and £5 5s. for each subsequent year. Medical or surgical practice separately, unlimited, £15 15s.;

one year, £8 8s.; six months, both, £7 7s.; either, £5 5s. Registration fee (occasional students), £1 6s.; Vaccination, £1 1s.; Dental practice (occasional students), £5 5s.; Pharmacy, without dispensing, 3 months, £4 4s.; with dispensing, 6 months, £5 5s.; 12 months, £8 8s.

Appointments, etc.—Two House-Surgeons are appointed after competitive examination, in April and October. Candidates must be 21 years of age, and must have obtained certificates of proficiency as in-patient dressers. The Junior House-Surgeon succeeds to the office of Senior House-Surgeon only if he have performed his duties satisfactorily. Each House-Surgeon pays a fee of £21; if he have not been a surgical pupil of the hospital, he pays £31 10s. Three Resident Physicians' Assistants are appointed annually. They must have a legal qualification. Each Resident Physician's Assistant pays £10 10s. on appointment; he must either be a medical pupil of the hospital, or pay half the fee for twelve months' medical practice. A Resident Obstetric Assistant is appointed for six months. He pays £10 10s. Clinical Clerks and Dressers are appointed for six months. The appointments are so arranged that every student may take both a clerkship and a dressership at some period. Each student must be an out-patient clerk and out-patient dresser for six months respectively before being eligible to an in-patient clerkship or dressership.

The College Tutor assists all general students of the hospital, especially those who are preparing for examination.

Clinical Lectures are delivered regularly by the Physicians and Surgeons, and by the Physician-Accoucheur and the Ophthalmic Surgeon.—Special instruction in Diseases of the Skin is given during the summer session.

Scholarships and Prizes.—Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the third year, for reports or comments on selected medical and surgical cases.—Two Entrance Scholarships, value £25 and £20, tenable for two years,* open to all gentlemen commencing their medical studies at the hospital in October 1873.—The Governors' Prize, value £21, to the student who, at the end of the third winter session, shall have been most diligent in the wards and have attained the highest proficiency in the periodical examinations.—Two Clinical Prizes of £6 6s. and £4 4s. to the candidates who stand third and fourth in the competition for the Broderip Scholarships.—Class Prizes are given in each subject.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens.—The Library and Reading Room are open to all general students. Occasional students may use the Library on payment of £1 1s.

ST. THOMAS'S HOSPITAL.—Aggregate fee (giving unlimited admission), £105 in one sum; or £40 each for the first and second years; £20 for the third; and £10 for each succeeding year. For students entering in their second year of study, £40; third year, £25; fourth year, £15; each succeeding year, £10. Those entering in their third year pay £30; next year, £15; each succeeding year, £10. Separate classes: *a, b, c, d, e, f*, single, £5 5s.; perpetual, £8 8s.; *h*, single, £4 4s.; perpetual, £6 6s.; *g, i, k, m, n*, single, £3 3s.; perpetual, £4 4s.; *o, p, s*, single, £2 2s.; perpetual, £3 3s.; *l, q, r*, single, £3 3s.; Physics, single, £3 3s.; perpetual, £4 4s.—H.P.—Medical or Surgical, three months, £5 5s.; six months, £9 9s.; nine months, £12 12s.; twelve months, £15 15s.; perpetual, £26 5s.—Medical and Surgical combined: three months, £8 8s.; six months, £14 14s.; nine months, £19 19s.; twelve months, £25 4s.; perpetual, £42.

Prizes.—The William Tite Scholarship, consisting of the interest of £1000 consols, awarded every third year, and tenable for three years; and College Prizes for each year's students, of £20, £15, and £10 each winter, and £15, £10, and £5 each summer.—The Cheselden Medal, annually, for Surgery and Surgical Anatomy.—The Treasurer's Gold Medal, annually, for general proficiency and good conduct.—The Grainger Testimonial Prize, value £20, biennially, to third or fourth year's students, for a Physiological Essay.—The Solly Medal, with a Prize of £10 10s., every two years, for Reports of Surgical Cases.

Appointments.—Clinical Clerks and Dressers, and Obstetric Clerks,

* The Examination will take place on September 27th and following days, and the result will be declared on October 5th. The following are the subjects for Examination. *Latin*.—Passages for translation into English, short passages for translation from English into Latin, and questions in Grammar and Ancient Geography.—*Greek*.—Easy passages for translation into English; questions in Grammar and Ancient Geography.—*French or German*.—Passages for translation into English, short passages for translation from English into French or German, and questions in Grammar.—*Mathematics*.—Arithmetic, Algebra up to and including Quadratic Equations, and Euclid, books i, ii, iii.—*Natural Philosophy*.—*Chemistry*.—*Botany*.—*Zoology*.—Huxley's Classification of the Animal Kingdom; Rudiments of Animal Physiology. Candidates will be examined in any three, and not more, of the above subjects which they may select; but only one Modern Language and two out of the last three subjects are permitted.

* The aggregate fee admits to the Library, to one course of Practical Chemistry and two courses of Dissections, to all the lectures, and to the instruction of the tutor; it includes also all charges for Clinical Clerkships and Dresserships.

are selected according to merit; the Dressers and Obstetric Clerks are provided with rooms and commons free of expense.—House-Physicians, House-Surgeons, and a Resident-Accoucheur are selected according to merit from gentlemen who have obtained their diplomas, and are provided with rooms and commons.—Two Hospital Registrars, with an annual salary of £40 each, are appointed from among gentlemen who have completed their studies in the school. Each Registrar, on completing his Annual Report to the satisfaction of the Physicians or Surgeons, receives £40.

Students have access to the Library and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

There are special departments, for Diseases of Women and Children, Diseases of the Eye, Skin, and Teeth, and for Vaccination.—Special courses on Mental Diseases are given by Dr. Rhys Williams; and on the Geographical Distribution of Disease, by Mr. Haviland.—

A limited number of Students can reside with some of the officers of the hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—Aggregate Fees, £106 16s.; or first winter session, £37 6s.; first summer session, £11 11s.; second winter session, £32 1s.; second summer session, £7 7s.; third winter session, £11 4s.; third summer session, £7 7s. Separate Classes: *a*, session, £7 7s.; first half session, £4 4s.; second, £3 3s.; perpetual, £9 9s.; *b* with *c*, entire session, £7 7s.; half session, £4 4s.; perpetual to Lectures, with three years' Practical Anatomy, £10 10s.; Practical Anatomy after the third year, every winter session, £1 1s.; Practical Anatomy without Lectures for three summer months, £2 2s.; *d*, whole course, £7 7s.; half course, £4 4s.; second half course, £3 3s.; perpetual, £9 9s.; *e*, session, £6 6s.; half session, £3 3s.; perpetual, £9 9s.; *f*, session, £5 5s.; half session, £3 3s.; perpetual, £6 6s.; *g*, *h*, *n*, single, £4 4s.; perpetual, £6 6s.; *i*, *k*, single, £3 3s.; perpetual, £4 4s.; *l*, elementary and senior courses, single (each), £4 4s.; perpetual (each), £7 7s.; summer matriculation course, £4 4s.; *m*, Comparative Anatomy, £4 4s.; Zoology, £4 4s.; perpetual to both, £9 9s.; *o*, *s*, single, £2 2s.; *p*, single, £1 1s.; *q*, single, £4 4s.; *r*, session, £7 7s.; perpetual, £9 9s.; in summer, first month, £2 2s.; each succeeding month, £1 1s.; Palæo-Zoology, single, £1 1s.; Organic Chemistry, £2 2s.; Hygiene and Public Health, single, £1 1s.—H.P.—Perpetual, £27; one year, £10; six months, £7. Practical Pharmacy, six months, £5 5s.; three months, £3 3s.—Students may attend the practice of the Middlesex Hospital on paying a sum which, with their previous payments for hospital practice, will make up £30.

Scholarships, etc.—Three Entrance Exhibitions, value £30, £20, and £10 per annum, tenable for two years, to gentlemen who are about to commence their first winter's attendance.*—The Atkinson-Morley Surgical Scholarship, £45 tenable for three years, for proficiency in Surgery.—The Sharpey Physiological Scholarship, annual value about £95.—The Filliter Exhibition of £30, annually in July, for Pathological Anatomy.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, with Certificates of Honour, at the end of the session.—The Liston Gold Medal, with Certificates of Honour, at the end of the session, for reports and observations on the Surgical Cases in the Hospital.—The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery.—The Cluff Memorial Prize, every second year, for Anatomy, Physiology, and Chemistry.—Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes.—Prizes to the value of £10 in the class of Hygiene.

Libraries and Museums.—The General and Medical Libraries, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, are open daily. There are also a Chemical and a Physiological Laboratory.

Clinical Instruction is given by the physicians and surgeons in the wards and in the out-patient department, and by lectures and examinations. Dr. Wilson Fox, the Holme Professor of Clinical Medicine, delivers Clinical Lectures, and trains the pupils in the practical study of disease. Dr. Roberts, Assistant-Teacher of Clinical Medicine, gives special instructions in Physical Diagnosis. Lectures are given once a week by Mr. Erichsen, the Holme Professor of Clinical Surgery; once

a fortnight or oftener by Mr. Marshall and Sir Henry Thompson. In the summer, Mr. Berkeley Hill and Mr. C. Heath will instruct first year's students in the observation of patients. Clinical Lectures on Midwifery and the Diseases of Women are delivered once a fortnight; also on Ophthalmic Surgery and on Diseases of the Skin. Arrangements are made for practical instruction in Vaccination.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons who receive boarders.

Offices.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, Ophthalmic Surgeons' Assistants, and Ward-Clerks are selected from among the pupils without additional fees. The Physicians' Assistants, the Obstetric Assistant, and the House-Surgeons reside in the Hospital, paying for their board. Six Dresserships at the Royal Free Hospital have been placed at the disposal of the College.

WESTMINSTER HOSPITAL.—Aggregate Fee, £78 at entrance; or two instalments of £40 each at commencement of first and second years; or four instalments, viz., first winter, £28 7s.; first summer, £14 14s.; second winter, £26 5s.; second summer, £13 13s.—Lectures and Hospital Practice for any single year, £35.—Separate Classes:—*a*, *d*, *e*, *f*, single, £5 5s.; perpetual, £7 7s.; *b* with *c*, single, £7 7s.; perpetual, £10 10s.; *c*, three months, £2 2s.; six months, £3 3s.; each subsequent session, £2 2s.; *g*, *i*, *k*, *n*, single, £3 3s.; perpetual, £4 4s.; *h*, *r*, single, £4 4s.; perpetual, £5 5s.; *l*, single, £3 3s.; *m*, *o*, single, £2 2s.; perpetual, £3 3s.; *p*, *s*, single, £1 1s.; Hygiene, £1 1s.; Diseases of Skin, £1 1s.; Natural Philosophy, single, £1 1s.; Vaccination, £1 1s.—Practical Pharmacy, three months, £5; six months, £8.—H.P.—Medical and Surgical Practice, six months, £12 12s.; twelve months, £18 18s.; eighteen months, £23 12s. 6d.; perpetual, £31 10s. Medical or Surgical separately, each, six months, £8 8s.; twelve months, £12 12s.; eighteen months, £15 15s.; perpetual, £21. Students can attend, without additional fee, the practice of the Royal Westminster Ophthalmic Hospital and of the National Hospital for Paralysis.

There are separate departments for Diseases of the Eye and of the Skin, and for Diseases of Women. A course of instruction in Electrical Therapeutics will be given to senior students, by Dr. Anstie. Dr. Sturges gives instruction in Auscultation.

The Anatomical Museum is constantly open to the Students. There are also a Pathological Museum and a Materia Medica Museum.—The Reading Room is open daily.

Arrangements have been made for the residence of students.

Appointments.—All these are made without fee.—A Medical and a Surgical Registrar are appointed annually, each with a salary of £40. A House-Physician, a House-Surgeon, and a Resident Obstetric Assistant are appointed by competition, and are provided with board and lodging free of expense.—An Assistant House-Surgeon is appointed from among the senior students. He is provided with commons at the hospital table.—A Physician's Assistant, Surgeon's Assistant, and Ophthalmic Assistant are appointed from students of the fourth year.—Clinical Clerks and Dressers are appointed in rotation.

Scholarships and Prizes.—Two Entrance Scholarships, value £20 and £10, tenable for two years.*—Exhibition in Anatomy and Elementary Physiology, value £10 10s.—A prize of £2 2s. (offered by Mr. Davy) to the first year's student who is most regular and diligent in the Dissecting Room.—Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator).—At end of third year, prizes of £5 each (or books or instruments) in Medicine and Pathology, and in Surgery and Pathology.—Chadwick Prize for General Proficiency, £21, to the most meritorious student or students of any year not exceeding the fifth.—Certificates of Honour in each Class.

* The next Examination will be held at the Hospital on September 25th and 26th. The following are the subjects:—Latin—Virgil: *Georgics*, Book I; and *Æneid*, Book IX; or Livy, Book XXXIV. The paper will contain passages for translation, questions in Grammar, and easy English sentences for translation into Latin. Arithmetic—including Vulgar and Decimal Fractions, and extraction of Square Root. Algebra—Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion, Arithmetical and Geometrical Progression, Simple Equations. Geometry—First four Books of Euclid, or the subjects thereof. French or German—The paper will contain passages for translation into English, and questions in Grammar (limited to the Accidence).

Notice of intention to compete, with a statement of the modern language in which the Candidate wishes to be examined, and a certificate of moral character, must be sent to the Dean not later than September 23rd.

* The subjects of examination are the following. Latin and Greek—Translation into English of passages from Cæsar and Xenophon; Translation of short English sentences into Latin. French or German—Translation into English of passages from Bossuet's *Discours sur l'Histoire Universelle*, or of passages from Schiller's *Geschichte des dreissigjährigen Krieges*. Mathematics and Natural Philosophy—the subjects required for the Matriculation Examination of the University of London, with the addition of Acoustics (Nature of Sound). The next examination will take place on September 25th and 26th, 1873.

NOTES CONCERNING THE PROVINCIAL AND SCOTCH HOSPITALS AND MEDICAL SCHOOLS.

UNIVERSITY OF OXFORD.—The instruction in Natural Science is carried on at the Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology, together with courses of lectures by the several professors; viz.—Regius Professor of Medicine—H. W. Acland, M.D., LL.D., F.R.S.; Geometry—H. J. S. Smith, M.A., F.R.S.; Natural Philosophy—Rev. B. Price, M.A., F.R.S.; Experimental Physics—S. Clifton, M.A., F.R.S.; Chemistry—W. Odling, M.B., F.R.S.; Physiology—G. Rolleston, M.D., F.R.S.; Zoology—J. O. Westwood, M.A., F.L.S.; Geology—J. Phillips, M.A.; Botany—M. Lawson, M.A.; Mineralogy—N. S. Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy—J. B. Thompson, B.A.

Large collections illustrate the several subjects; there is a pathological series, including the collection of Schroeder Van der Kolk, in the medical department, and a medical laboratory. The Radcliffe Library, containing nearly 20,000 scientific volumes, is open to all students daily from ten to four, and on certain evenings during term. There are also lectures and practical instruction in Botany at the Botanical Gardens; and clinical instruction at the Infirmary.

UNIVERSITY OF CAMBRIDGE.—The following courses of lectures will be delivered during the ensuing year. *Michaelmas, Lent, and Easter Terms.*—Physics, by Prof. Maxwell: Heat and Elasticity (Michaelmas); Electricity and Magnetism (Lent).—Chemistry, by Professor Living: Comparative Anatomy and Physiology, by Dr. Brossier; (Michaelmas) Catechetical, M. Th., 12; (Lent and Easter) Tu., Th., S., 12.—Medical Clinical Lectures (Michaelmas) Dr. Paget (Regius Professor); (Lent) Dr. Latham; (Easter) Dr. Bradbury: M., W., Th., F., 10.—Surgical Clinical Lectures (Michaelmas) Mr. Lestourgeon: Tu., Th., 11; (Lent) Mr. Carver; (Easter) Professor Humphry: Tu., Th., F., S., 11. *Michaelmas and Lent Terms.*—Zoology and Comparative Anatomy, by Professor Newton: M., W., F., 1. Anatomy and Physiology, by Professor Humphry: Tu., Th., S., 1. Practical Anatomy, by Professor Humphry and Dr. Wilson: 9 A.M. daily till Jan. 24; afterwards Tu., Th., S. Practical Physiology and Histology, by Dr. M. Foster: Tu., Th., S., 12. Qualitative Analysis, by Mr. Hicks. Botany, by Mr. Hicks. *Michaelmas and Easter Terms.*—Materia Medica and Therapeutics, by Professor Fisher and Dr. Latham: Tu., Th., S., 9. *Michaelmas Term.*—Spectroscopic Analysis, by Professor Living: M., W., F., 1. Organic Chemistry, Mr. Main: Tu., Th., S., 12. Volumetric Analysis, by Mr. Apjohn: Tu., F., 2. *Lent and Easter Terms.*—Principles and Practice of Physic, by Dr. Paget (Regius Professor). Pathology, by Dr. Bradbury: Tu., 10. Elementary Chemistry, by Mr. Main: Tu., Th., S. Quantitative Analysis, by Professor Living, M., W., F., 1. *Lent Term.*—Qualitative Analysis, by Mr. Apjohn: Tu., F., 2. *Easter Term.*—Elementary Inorganic Chemistry, by Mr. Hicks. Organic Analysis, by Mr. Apjohn: Tu., F., 12. Practical Elementary Biology, by Dr. Foster: Tu., Th., S., 12. Botany, by Professor Babington: M., Tu., Th., F., 1.

The dissecting-rooms and museums of anatomy are open daily during the vacations as well as in the terms, and the professor and demonstrator are in attendance. Courses of Practical Histology, Practical Anatomy, and Clinical Instruction are given in the long vacation.

The Chemical Laboratory is open daily; and demonstrators attend daily to give instruction, alternately morning and evening. Practical instruction in Comparative Anatomy is given in every term by the demonstrator. The Museum of Materia Medica at Downing College is open daily to all medical students.

In order to obtain certificates of attendance on the medical practice and medical clinical lectures at Addenbrooke's Hospital, pupils must have attended the physicians' practice three times at least in each week, during term time, inclusive of the clinical lecture on Friday, and must also have taken notes of such cases as may be assigned to them by the physician; and for the certificate of attendance on the surgical practice and clinical lectures, pupils must have attended the surgeon's practice three times in each week, inclusive of the clinical lecture on Thursday.

Students entered to the practice of the hospital are admitted to the clinical lectures without additional fee.

Opportunities for clinical instruction in mental diseases will be afforded at the County Asylum, Fulbourne, by Dr. Bacon, during the Michaelmas and Lent Terms.

Forms for registration, abstracts of regulations, schedules, and other papers, may be obtained from the attendant at the Anatomical Schools, Pembroke Street, Cambridge.

Attendance on the lectures on Chemistry, Botany, Materia Medica, Anatomy, Physiology, and Dissections, is recognised by the Royal College of Surgeons of England. Hence all the courses required for admission to the first professional examination at that College, as well as for admission to the second examination for M.B., may be attended in Cambridge.

BIRMINGHAM.—QUEEN'S COLLEGE.—Aggregate Fee for all lectures required, £52 10s., payable in two equal instalments at entrance and at commencement of second year.—Separate Classes, *a, b, c, f*, single, £5 5s.; perpetual, £8 8s.; *c, d, h*, single, £4 4s.; perpetual, £6 6s.; *g, i, k, l*, single, £3 3s.; perpetual, £5 5s.; *m, o, p* (not included in composition fee), single, £3 3s.; two courses, £5 5s.—Rooms and board, £50 per annum, payable in three instalments.—Caution money, £2.—H.P.—*General and Queen's Hospital* (amalgamated for purposes of instruction): Medical and Surgical Practice, 4 years, £31 10s. (or in two equal sums at entrance and at commencement of second year): one year, £15 15s.; six months, £10 10; Midwifery and Diseases of Women, £2 2s. (optional); Dental Fee, £1 1s. (optional). Students must attend six months alternately at each Hospital.

Clinical Instruction.—Clinical Lectures and lectures in special departments are given at both Hospitals. At the Queen's Hospital, there are wards for Diseases of Children and Venereal Diseases.

Appointments.—*General Hospital*: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable six months: all after examination, and with board and lodging. *Queen's Hospital*: Resident Medical, Resident Surgical, and Resident Obstetric Assistant, tenable six months.

The Museums of Anatomy and Pathology, and the Library, are open to the students.

Prizes.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery.—Warden's Prize, £5 5s., to the most proficient student of the first year.—The Percy Prize, books of the value of £5 5s., for the best examination in German.—Medals and Certificates of Honour, annually, in each class after examination.

Clinical Prizes.—Two Senior Medical and two Senior Surgical Prizes (third and fourth years), value in each department £6 6s. and £4 4s.; two Junior Medical and two Junior Surgical Prizes (second year), values £5 5s. and £3 3s.; Midwifery Prizes (second year), £4 4s.

BRISTOL MEDICAL SCHOOL.—Perpetual Fees to Lectures (except Comparative Anatomy), £57 15s. Separate Classes: *a, b, c, f*, single, £5 5s.; perpetual, £8 8s.; *d*, single, £5 5s.; perpetual, £7 7s.; *g, h*, single, £4 4s.; perpetual, £6 6s.; *i, k, l*, single, £3 3s.; perpetual, £5 5s.; *m*, single, £1 4s.; *n*, single, £3 3s.; perpetual, £4 4s.—H.P.

Royal Infirmary. Surgeon's pupil, 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Dresser (extra fee), 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Physician's pupil, 3 months, £8; 1 year, £15; 18 months, £20; perpetual, £25. Entrance Fee, £5 5s. Library, £1 1s. per annum. Apprenticeship to House-Surgeon, including five years' residence, and attendance on Hospital Practice, £315. Home-Pupils, £52 10s. per annum, with fee of £32 10s. to House-Surgeon.—*General Hospital.* Medical or Surgical Practice, 6 months, £6; 1 year, £10; perpetual, £20. Extra Fee for Clinical Clerk or Dresser, £5 5s. for six months. Library Fee, £1 1s. per annum. Resident pupils, £100 for the first year; £60 for each subsequent year; or five years, with apprenticeship, £260.

Clinical Instruction, etc.—Clinical Lectures are delivered at the Royal Infirmary and the General Hospital.

The Royal Infirmary and the General Hospital each contain a Library and a Museum.

Prizes.—Prizes and Certificates of Honour will be distributed at the end of the winter session, after examination in all the subjects of each year.—Prize and Certificates of Honour for Practical Anatomy.—*Royal Infirmary.* Suple's Medical Prize, and Suple's Surgical Prize, each a gold medal value £5 5s. and about £7 7s. in money. Clark's prize (interest of £500) to the prizeman of the third year in the Medical School, if he have attended the Royal Infirmary. The Pathological Clerk will receive a prize of £3 3s. if his duties have been performed satisfactorily.—*General Hospital.* Guthrie Medical Scholarship and Clarke Surgical Scholarship, each £15, annually. Sanders Scholarship (interest of £500) for Proficiency in Medicine and Surgery.

LEEDS SCHOOL OF MEDICINE.—Aggregate Fee for Lectures required by examining bodies, £46 4s., payable either at once or in two instalments at the beginning of the first and second winter sessions. Entrance Fee to Library and Reading-Room, £1 1s. Separate Classes:

a (including practical course), 1st session, £5 5s.; 2nd session, £5 5s.; *d, f*, 1st session, £4 4s.; 2nd session, £3 3s.; *b*, 1st session, £6 6s.; 2nd session, £5 5s.; *e*, 1st session, £5 5s.; 2nd session, £3 3s.; *g, h*, 1st session, £4 4s.; 2nd session, £2 2s.; *i, k*, 1st session, £3 3s.; 2nd session, £1 11s. 6d.; *l*, each course, £3 3s.; *m*, each course, £2 2s.; *n* (three months), £3 3s. Vaccination, £1 1s.—H.P.—Leeds Infirmary, Medical or Surgical, each—a winter session, £7 7s.; a summer session, £6 6s.; 12 months, £12 12s.; 18 months, £15 15s.; 3 years, £21.

Clinical Lectures are delivered by the Physicians and Surgeons of the Infirmary.—Courses of Practical Physiology and Practical Surgery are given.—Demonstrations of Skin-Diseases, Ophthalmoscopic Demonstrations, and Demonstrations of Aural Diseases, are given.—The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures will be given during the summer.—Students can also attend the practice of the Leeds Public Dispensary and the Fever Hospital. There are several Resident Appointments at these Institutions. There is a large and well-fitted Chemical Laboratory, where instruction in Practical Chemistry is given. The fees are: 1 month, £4 4s.; 2 months, £7 7s.; 3 months, £10 10s.; 4 months, £13 13s.; 5 months, £15 15s.; 6 months, £17 17s.; 9 months, £21.

Hospital Appointments.—Every student in turn must hold the offices of Clinical Clerk and Dresser. Three Assistants are elected to work under the direction of the Resident Medical Officers. They are selected from the senior students who have shown industry and skill as Dressers and Clinical Clerks.

Prizes.—At the close of each Session, Silver and Bronze Medals, Books, and Certificates of Honour, are awarded according to merit.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prize of £10, for the best reports of surgical cases, during the winter session.—The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Aggregate Fee for Lectures, £47 5s., or in two equal instalments. Separate Classes, *a, b, e, f*, first and second courses, each £4 4s.; third course, £2 2s.; *c, l*, each course, £3 3s.; *d*, first course, £5 5s.; second and third, each £2 12s. 6d.; *g, h*, first course, £4 4s.; second and third, each £2 2s.; *i, k, n*, first course, £3 3s.; second and third, each £1 11s. 6d.; *m*, first course, £2 2s.; second and third, each £1 1s.; *o*, each course, £2 2s.; *p*, each course, £1 1s.; Dental Mechanics, each course, £2 2s. Vaccination, £1 1s. Practical Pharmacy, £2 2s.—H.P.—Royal Infirmary, Medical—6 months, £5 5s.; 12 months, £6 6s.; Surgical, 6 months, £3 6s.; 12 months, £8 8s.; perpetual to both, £33 12s.—Northern Hospital: perpetual, £31 10s.; a year, £12 12s.; 6 months, £9 9s.; 3 months, £6 6s. For either the medical or the surgical practice separately, half the above fees.

Appointments: Royal Infirmary.—Six Dressers and six Clinical Clerks are elected annually. Two Post Mortem Clerks are appointed for six months. Four Apprentices are admitted to reside and board in the Infirmary for one, two, or three years, on payment of 70, 130, or 190 guineas.

Clinical Lectures are given weekly at the Infirmary. For the study of Mental Diseases, a class will be formed to attend the practice of the Rainhill Asylum, where instruction will be given by Dr. Rogers.

There are a Museum containing specimens of Morbid and Comparative Anatomy; a collection of Wax Models and a collection of Materia Medica; Library and a Reading Room.

Exhibitions and Prizes.—Four Exhibitions, value £31 10s. each, consisting of free board and residence in the Royal Infirmary for six months, with Dressership.—Medals and Certificates of Honour in the various classes.—Clinical Prize to be awarded by the Surgeons of the Infirmary in May, 1874, value £5, for the best report of twelve surgical cases in the Infirmary.

MANCHESTER ROYAL SCHOOL OF MEDICINE, INCORPORATED WITH THE OWENS COLLEGE.—Aggregate Fee for Lectures, £42, with additional fee of £4 14s. 6d. for Practical Physiology. Separate classes for one course, *a, b, e, f, g, h, k, n*, £4 4s.; *c, m*, £3 3s.; *d, l*, £4 14s. 6d.; *i*, £2 12s. 6d.; Hygiene, £2 12s. 6d.; *p*, £2 2s.—H.P., Royal Infirmary, composition fee, £42, or two instalments of £22 each; or Medical Practice, £18 18s.; Surgical, £31 10s.; Practical Pharmacy, 3 months, £3 3s.; 6 months, £5 5s.

The courses of Systematic and Practical Chemistry and Physiology, and of Botany, are given in Owens College. Connected with the

School are Museums of Human and Comparative Anatomy and of Materia Medica.

Appointments.—Each student is required to fill the offices of Dresser and Clinical Clerk in the Royal Infirmary. Two House-Surgeons and four Physicians' Assistants are appointed annually, with board, residence, and Salary.

Prizes.—In addition to three scholarships, value £20, £15, and £10, for perpetual students, prizes and Certificates of Honour will be given for General Proficiency.—Two Platt Physiological Scholarships, £50 each, tenable for ten years, to students who have attended Physiology in the Laboratory of Owens College during one session.—Dumville Surgical prize, value £20, at end of Winter Session, to students of two years, who have attended four courses, including at least one on Surgery.—Medical and Surgical Clinical Prizes, value of each £6 6s., are given for reports of cases.—A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, to the candidate standing highest in the Matriculation Examination of the University of London in June, if in the Honours Division; or two of £25 each to the first two candidates in the First Division.

SHEFFIELD MEDICAL SCHOOL.—Aggregate Fee for Lectures, £10. Separate classes: *a* and *b*, first course, £6 6s.; second course, £4 4s.; *d*, each course, £4 4s.; *e, f*, first course, £4 4s.; second course, £2 2s.; *g, h, i, k, l*, each course, £3 3s.—H.P., Sheffield General Infirmary, Medical or Surgical, 6 months, £6 6s.; 12 months, £10 10s.; Perpetual—Medical, £15 15s.; Surgical, £21.

Further opportunities for practice may be obtained at the Sheffield Hospital and Dispensary, and at the Sheffield Hospital for Diseases of Women.

The Infirmary contains a Museum of Pathology, a Library, and a Post Mortem Theatre, with Microscopes and all the appliances for clinical research.—The Library of the Medical School is open to students.

Prizes to the amount of £30, and Certificates of Honour, are given annually.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—Fee for all the Lectures (except Practical Pharmacy): one payment, £52 10s.; two payments, each £28 7s.; three payments, each £21. Single courses, £4 4s. each. Chemistry and Practical Physiology are excepted from the courses included in the composition fee. Vaccination, £1 1s. H.P., Newcastle Infirmary: 3 months, £4 4s.; 6 months, £5 5s.; 12 months, £7 7s. Perpetual Fee, £17 17s.; or by instalments, first year, £7 7s.; second year, £6 6s.; third year, £5 5s.

Two Resident Clerks, and four Resident Dressers and four Non-resident Dressers, are elected half-yearly. They are provided with board and apartments free.

Midwifery can be attended at the Newcastle Lying-in Hospital, and Diseases of the Eye at the Eye Infirmary.—Lectures on Psychological Medicine will be given at the Dunston Lodge Asylum.—The Chemical Laboratories are open daily throughout the year, from 10 to 5 o'clock. Students can attend laboratory practice and receive instruction in analysis for—6 days weekly, £31 10s. per annum; 4 days, £21 per annum; shorter periods, by arrangement.—The Libraries and Museums are open daily.

Pharmacy.—Special arrangements have been made for instruction in Pharmacy. The curriculum will consist of courses of lectures in Botany, Materia Medica, Chemistry, and Pharmacy. Fee for curriculum, perpetual, £6 6s.; separate courses, each £4 4s.

Prizes.—A medical Scholarship, annual value £25, tenable for four years, in October, 1873, to students who have been registered at Durham.—The Dickinson Memorial Scholarship, value £15 annually, after the first examination of a licensing board.—A Silver Medal and Certificates of Honour in each class.

UNIVERSITY OF ABERDEEN.—Fee to each class, £3 3s., except Practical Anatomy and Demonstrations, £2 2s. Matriculation fee, both sessions, £1; summer session alone, 10s.

ROYAL INFIRMARY, ABERDEEN.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. Pathological Anatomy, £2 2s.—The General Dispensary and the Lying-in and Vaccine Institutions are open daily, and the Eye Institution three days in the week.—Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

UNIVERSITY OF EDINBURGH.—Minimum Expenses for Lectures and, Hospital Practice (including also £21 for degrees of M.B. and C.M.)

£104 18s.: Annual Fee for each subject required in the ordinary curricula (including Clinical Medicine and Clinical Surgery), £4 4s.; except Anatomical Demonstrations, £1 1s.; Practical Midwifery, £1 4s.; Practical Pharmacy and Dispensary, each £2 2s.; Practical Anatomy and Practical Chemistry, each £3 3s.—Every Student, before entering with any Professor, must produce a matriculation ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session.—The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 o'clock.

Medical Fellowships, etc.—Falconer Memorial Fellowship, value £100, tenable for two years, open to Graduates in Science or Medicine of the University of not more than three years' standing. The next appointment will be made in October, 1873. Syme Surgical Fellowship, value about £100, tenable for two years, open to Bachelors of Medicine of not more than three years' standing, who shall present the best Thesis on a Surgical subject, giving evidence of original research. The first competition takes place in 1874. Sibbald Scholarship, value about £40, tenable for four years. The next vacancy will be in 1875. Abercromby Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Sibbald Bursaries £30 each, tenable for four years, open to the sons of duly registered medical men practising, or who may have practised in Scotland, and to the sons of parents who are or may have been householders in Edinburgh. Grierson Bursary, £20 per annum for three years, at end of first Winter Session: Subjects of Examination—Chemistry, Botany, and Natural Philosophy. Greener Bursary, value £20 for two years, at end of second year: Subjects—Anatomy and Physiology. Tyndall-Bruce Bursary, £25 for one year, at end of third Winter Session: Subjects—Materia Medica and Pathology. Ettles Medical Prize, value £40, to the most distinguished Graduate in Medicine of the year. Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £40, to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the degree of M.A. The successful candidate must continue to prosecute his medical studies in the winter session succeeding the award. The Ellis Prize for the best Essay on the Respiration of Plants as distinguished from their Nutrition, open to students or graduates of five years' standing. Value, proceeds of sum of £500 accumulated for three years. Goodsir Memorial Prize, to be founded in commemoration of the late Professor Goodsir.—Gold Medals are given on Graduation to Doctors of Medicine whose Theses are deemed worthy.

EDINBURGH ROYAL INFIRMARY.—Fees: 6 months, £3 3s.; 1 year, £5 5s.; perpetual, £10 10s. Clinical Medicine and Clinical Surgery, each £4 4s. for the course.—No fees for any medical or surgical appointment. Four Resident Physicians and Four Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist.—Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—The courses qualify for examination for various diplomas and licenses, and for degrees in those years in which University residence is not required.

Fees.—For the first of each Winter Course of Lectures, £3 5s.; second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Second Course of Midwifery, £1 3s. Practical Chemistry and Practical Anatomy, each £3 3s. Anatomical Demonstrations, £2 2s.; with Practical Anatomy, £1 1s.; perpetual, £4 4s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months. Vaccination, £1 1s. Summer Courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including demonstrations, Operative Surgery, Diseases of the Eye, and Insanity, each £2 2s.—The minimum education cost in this school for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £90 4s., payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £80.

Practical Instruction.—Royal Infirmary, noon daily; perpetual, £10; annual, £5 5s.; separate payments for two years entitle the student to a perpetual ticket.—Sick Children's Hospital: three months, £1 1s.; perpetual, £2 2s.—Dispensary: Royal Public Dispensary and New Town Dispensary, each, first six months, £3 3s.; three months, £2 2s., each subsequent three months, £1 1s.—Practical Midwifery: Royal

Maternity Hospital, Royal Public Dispensary, £1 1s.; New Town Dispensary, £1 3s.—Diseases of the Eye, Ear, and Teeth: Dispensaries, and the Edinburgh Eye Infirmary.—Practical Pharmacy: Royal Public Dispensary, New Town Dispensary, six months, £3 3s.

UNIVERSITY OF GLASGOW.—Fees, each course, £3 3s.; except Lectures on the Eye, £1 1s.

GLASGOW ROYAL INFIRMARY.—Fees, 1st and 2nd years, each £3 3s.; 3rd year, and perpetual, £1 1s.; 6 months, £2 2s.; 3 months, £1 11s. 6d. Vaccination, £1 1s.; Practical Pharmacy (6 months), £3 3s. Clinical Lectures in Medicine or Surgery: 1st and 2nd winter courses, each £3 3s.; 3rd course, £1 1s.; summer course, £1 11s. 6d.

GLASGOW EYE INFIRMARY.—Fee, 6 months, £2 2s.; to students who are attending or have attended the Lectures on the Eye in the University, £1 1s.

Instruction may also be obtained at the Glasgow University Lying-in Hospital and Dispensary for Diseases of Women and Children; and at the Dispensaries for Diseases of the Skin and Ear; and the Royal Lunatic Asylum, Gartnavel, is open to students on payment of a small fee.

GLASGOW—ANDERSON'S UNIVERSITY.—Fees for all the Lectures required for the Diplomas of Physician and Surgeon, £50. Class Fees for each course of Lectures: 1st session, £2 2s.; 2nd session, £1 1s.; afterwards free. Anatomy Class Fees, for Lectures and Demonstrations: 1st session, £1 4s.; 2nd session, £1 4s.; perpetual, £8 8s. The Dissecting-room is free for two sessions to those who attend both courses of Anatomy; after the second year, £1 1s. per session. There is a Matriculation Fee of £1 1s. at the beginning of each Winter Session.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

The next meeting of the above district will be held on Friday, the 19th instant, at Eastbourne; Robert Colgate, Esq., in the Chair. Dinner will be provided as usual; charge, 5s., exclusive of wine.

Notice of intended communications is requested by the Honorary Secretary on or before Thursday, the 11th instant, in order that they may be inserted in the circular concerning the meeting.

THOMAS TROLLOPE, M.D., *Honorary Secretary*.

35, Marina, St. Leonards-on-Sea, September 2nd, 1873.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

The next meeting will be held (by permission of Dr. Yellowlees) at the County Asylum, Bridgend, on Friday, the 19th instant. Members of the Council will meet at noon, and the general meeting will commence at 12.20.

The day will, so far as practicable, be spent in clinical observation at the Asylum.

Dinner will be provided at the Wyndham Arms, Bridgend. Tickets, five shillings each.

Members intending to be present are requested to send their names to one of the undersigned on or before the 16th inst.

ANDREW DAVIES, Swansea, } *Secretaries*.
ALFRED SHEEN, M.D., Cardiff, }

September 5th, 1873.

NORTHERN BRANCH.

The autumnal meeting will be held at the Central Hall, Darlington, on Thursday, September 25th, at half-past 1 P.M.

Dinner at the King's Head Hotel at 4 P.M. Tickets, exclusive of wine, 6s.

Notice of Motion.—Mr. H. G. Hardy will move, "That in future the annual subscription to the Branch be five shillings."—Dr. Eastwood will move as an amendment: "That in future the annual subscription to the Branch be four shillings."

The following papers have been promised. 1. Mr. James Mackie: On the Working of the Public Health Act. 2. Dr. Eastwood: On the Water Supply of the Tees Valley. 3. Mr. C. S. Jeaffreson: On Osteoid Cancer.

Gentlemen who intend to read papers or introduce patients are requested to communicate their intention to the Secretary without delay.

G. H. PHILIPSON, M.D., *Honorary Secretary*.

Newcastle-upon-Tyne, September 2nd, 1873.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch will be held at Oundle, on Thursday, the 30th instant.

Gentlemen who intend to read papers or communications are requested to forward the titles of the same as early as convenient to Dr. Bryan, President.

W. MOXON, *Honorary Secretary.*

SHROPSHIRE SCIENTIFIC BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch will be held in the Museum, Shrewsbury, on Wednesday, October 8th, at two o'clock. DR. GREVILLE THURSFIELD, President-elect.

Papers will be read, etc.

The Dinner will take place at the George Hotel at four o'clock. Members may introduce friends.

SAMUEL WOOD, *Hon. Secretary.*

PARIS.

Female Medical Students in Paris.

A CORRESPONDENT writes: "It was mentioned in your pages recently that Mrs. Henry Lawson has passed the first examination of the *fin d'année*, with credit. May I add that four ladies have been admitted recently to examination at the Faculty of Medicine at Paris, which shows, in this respect, a rare and admirable liberality and good sense. Two of the Edinburgh ladies—Miss Dakin and Miss Bovell—have been up for examination here. Finding that the authorities of the Edinburgh University had 'gone back upon them,' as an American friend of mine expresses it, these ladies resolved to leave the Land o' Cakes, and to take refuge in this most learned and most liberal university. The Paris Faculty has behaved with its usual justice and liberality. This Faculty decides habitually scientific questions upon scientific grounds. It has always granted its degrees upon adequate proofs of competency; and it has never refused the privilege of being tested as to scientific competency, to Hindoos, Japanese, South Americans or North Americans, all of whom have competed for the honour of its highly esteemed diploma, and to all of whom it has been granted on equal terms. It has never been pretended that the diploma affords proof of 'masculine qualities,' which, I observe, one authority considers necessary for success in medicine; and it is willing to leave it open for proof rather than to decide on theoretical grounds, whether masculine or feminine qualities will prove more useful in some branches of medicine, such as Midwifery, and the treatment of Diseases of Women and Children. The only question which it pretends to decide by its examinations is, whether the candidate has obtained the necessary knowledge, and is well versed in the medical sciences, and in medical and surgical art. It adopts the same tests for men and for women; and if both be equally well able to satisfy them, it has not thought itself justified in withholding its certificate of the fact. It leaves to the logic of facts the settlement of the subsequent and independent question, whether women are, from any physical reason, disqualified from practising their art as continuously, as universally, and with as much profit to themselves as men. The career of the first female graduate of Paris, Mrs. Elizabeth Anderson, contributed some facts towards the settlement of that question. The Faculty has, by admitting the ladies now studying to the benefit of their courses of instruction and examination, shown that they are not dissatisfied with their past experience. The four ladies now studying here, have passed their respective examinations so far with much credit; Mrs. Lawson and Miss Baird receiving the note, *bien satisfait*. They are all reported to be working seriously and well; and the conduct of the students towards them is that of educated gentlemen, and leaves nothing to be desired. I have noticed the discussion raised in the *Times* by Mrs. Anderson and Miss Jex-Blake. The latter lady may be right in saying that, if the English ladies who are desirous of studying medicine with professional objects, take refuge in Paris, where they are treated with justice and courtesy, the British Universities and examining bodies will never be brought to accord to them the privileges which the ladies may have been weaned into ceasing to ask. On the other hand, as an observer of the proceedings at the Faculty of Medicine at the University of Paris, I may say that the ladies studying here at present are, by their serious, careful and studious demeanour, and by their success in their studies, solving the Edinburgh question at a distance from Edinburgh, by showing that the evils which were there prophesied do not ensue; that they are, at least, mentally well-fitted for the career on which they desire to enter; and that they have personally so much confidence in their physical aptitude for some form of medical practice, that, upon the prospect of success in it, they are willing to stake a considerable expenditure, and five years of time and labour, at periods of life often devoted to pursuits more agreeable and less onerous."

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 13TH, 1873.

FOREIGN REPORTS OF THE ANNUAL MEETING.

It will, we think, be agreeable to our associates to transcribe some extracts from the notices of the recent general meeting of our Association in foreign journals. We append some extracts from notices appearing in our French medical contemporaries. They are marked by the graceful courtesy characteristic of the country. Without accepting literally all the kindly compliments conveyed, it is agreeable to observe that the spirit and character of the meeting have been entirely appreciated; that its importance in raising and affirming the social and political influence of the Association is estimated by foreign observers not less highly than by ourselves; and that the reception given by our invited guests has been accepted with the same cordial sentiments with which it was offered, and has proved to be a source of mutual pleasure and a means of uniting the profession in different countries in new bonds of fraternal union. It was, indeed, no mean source of pleasure to see Virchow and Noel Gueneau de Mussy sitting in representative capacities on the same platform and at the same table, uniting to propose the same resolution, and fully accepting the sacredness of that brotherhood of medical science which affords an indestructible platform for usefulness and a common ground on which a common object binds all who meet there to union and to joint efforts for the main objects of existence—truth and progress. It is satisfactory also to know that everything in the reception combined to make our guests feel that the characteristic greatness of each country was fully appreciated and esteemed, and that each had its full part of friendly and discriminative recognition.

Dr. Cornil, *Professeur agrégé* of the Faculty, and *Médecin des Hôpitaux de Paris*, writes in the *Journal des Connaissances Médicales* of August 15th, 1873. After giving a general account of the objects and work of the Association, he says: "The British Medical Association thus corresponds to our Association Générale for all that relates to professional interests, and to our Association Scientifique in the impulse which its meetings give to the development of the medical sciences....From the account of the meeting will be gathered how much the medical body has gained by the help of the Association of late years in England....We cannot now give an account of the sectional work; we shall on a future occasion give an analysis of the more important. We desire only to direct the attention of our readers to the extra-scientific reunions of the Association; and these are not the least interesting, for they prove the considerable importance which this medical corporation has achieved in the state in respect to its favourable position and its political influence." Dr. Cornil then describes in a very animated and picturesque manner the *soirées* at the

Mansion House, the Royal College of Surgeons, and University College. He was particular in observing the great variety of scientific objects collected for the amusement of the company at the Mansion House. The main interest centered in the dinner at Lincoln's Inn. "This grand and beautiful Gothic dining-hall, lofty as a church, with its elegant roof, lighted by painted windows and hung with armorial shields, was filled with the music from an orchestra placed in a gallery. Sir William Fergusson was seated in a raised chair at the centre of the table of honour. At his right was Mr. Gladstone, Prime Minister and Chief of the Cabinet; on his left, the Bishop of London. Several of the invited strangers—MM. Virchow and Langenbeck, MM. Gueneau de Mussy (chief Physician of the Hôtel Dieu) and Cusco—were seated at the same table. Mr. Gladstone was saluted, on entering, with the applause of all present. The presence of the Prime Minister at this banquet was, indeed, no small matter; and, in coming to it, he paid to the Association an honour which he had already refused to other corporations. Mr. Gladstone holds in his hand the greater part of the executive power in England. At the end of the session of Parliament he is exceptionally fatigued, and had, therefore, declined to attend public dinners. Four ministers, his colleagues, had surrendered their powers into his hands; he was at the same time First Minister and Chancellor of the Exchequer, and he was engaged in soliciting persons to fill vacant offices of Government. To see him engaged in animated conversation with his two neighbours, Sir William Fergusson and Professor Virchow, no one would have supposed that the cares of Government weighed upon his head. After the dessert and the grace, the toasts commenced. That was the grand attraction of the dinner. And excellent as were the viands; delicious as were the wines of France, served without limit throughout the dinner, the toasts were awaited with impatient curiosity. Our appetites were sharpened for both by the cards on the table, which bore, printed on one side, the name, on the other, the toasts." The substance of the toasts is then well reported. Dr. Cornil is well pleased with the terms offered to the guests. Dr. Cornil concludes his review of the meeting thus. "From this view of the fêtes given in London to the British Medical Association, it is easy to judge of the influence which it enjoys in a political and social point of view. The elected first magistrate of the city, the Lord Mayor, puts at its disposition the Mansion House, and receives it as sovereigns are received. The First Minister of the Crown, the most powerful political personage in the kingdom, honours himself by taking his place at the banquet, and pays it a magnificent public tribute. Public and private institutions alike think it their duty to place at the service of the Association the resources at their disposal. Thus the members of the Association are enabled, by mere presentation of their cards, to gain admission everywhere and to find everywhere guides; to the post and telegraph offices, and public and private museums, to the chapels and closed crypts of the churches, to the princely mansions of London and its environs, to the great system of sewers of the city, etc. The Association has conquered this position of importance by its cohesion as much as by the personal position of its members; and, as the Prime Minister said, it has reached a degree of elevation which may sustain a parallel with any other corporation in the State."

M. Roubaud (*La France Médicale*), commenting on the faithful report of M. Cornil, of the important public features of this meeting, attributes the influence of the Association not only to its cohesion and the individual character of its members, but

also to its complete independence. It occupies so powerful a position in the state, because it asks nothing from it and has nothing to expect from it. In France, where the profession is entirely dependent on the State for the regulation of education, and the collation of its grades, the State treats it with indifference, and subordinate officials with contempt.

M. de Valcourt of Cannes has given a very complete report in the *Gazette Médicale de Paris* of August 16th and 23rd. He records the objects and describes the organisation of the Association, and accurately reflects the character and acts of the meeting. He points out that, for the annual subscription of 26 francs 50 cents, each member receives in return the BRITISH MEDICAL JOURNAL, a weekly sheet of the form of the *Gazette Médicale*, and of more than twice its number of pages (the subscription to the *Gazette* being 36 francs a year); and observes that the present editor "has powerfully contributed to the development of that interesting publication". After paying a tribute to the importance of the scientific and professional character of the Association, "which ought to be known in all its diverse phases in France", he describes the leading features of the meeting. Speaking of the great number who attended, he says: "Cette affluence a un peu embarrassé les organisateurs; mais par des prodiges de zèle et d'activité, ils ont, non-seulement suffi à tout, mais surpassé les prévisions de ceux qui connaissent le mieux et leur dévouement et leur générosité." Of the reception of guests he adds: "I believe myself to be the faithful interpreter of the French physicians who came to London, when I say that we have admired the welcome given by our English brethren, and that we should be happy to return it." He points out that the Association becomes more and more not only the defender of professional interests, but the organ and means of provoking and publishing scientific researches, and spreading throughout the profession the results of scientific labours and observations in medicine and the allied sciences. Of the receptions, excursions, and other pleasure arrangements, he speaks in detail, and concludes that "nothing could be better done", and that they essentially illustrated the English genius in mixing the useful with the agreeable. He quotes with assent the expressions of the *Times*, that "this great medical congress held in London cannot fail, sensibly to increase the consideration and influence of the medical profession", and draws from it the lesson that the *Association Générale de France* should assimilate itself in its constitution to the British Medical Association, in order to attain a like measure of success.

THE Library of the Royal Medical and Chirurgical Society was reopened on Thursday the 11th instant.

TWENTY-SIX cases of typhus fever were admitted last month into the Metropolitan Fever Hospital at Stockwell.

A DEATH from cholera is reported to have occurred at the Hague in Holland.

MR. BECK's case of aneurism, treated by galvanism at University College Hospital, has relapsed in its unfavourable symptoms. The operation was accordingly repeated on Wednesday.

PRESENTATION TO MR. PICK.

THE students of St. George's Hospital lately presented their able and popular teacher of Practical and Operative Surgery, Mr. Pick, with a very handsome silver-gilt claret jug of antique design, "as a token of their good wishes for his happiness in his approaching marriage, and as a mark of their gratitude for his exertions on their behalf as a teacher."

THE TYPHOID OUTBREAK AT BRIGHOUSE.

It is gratifying to hear that the epidemic, so far as fresh cases are concerned, has been completely arrested. The last victim to the contaminated milk was taken ill last week. No deaths have occurred during the last few days, and all the cases are improving.

THE TYPHOID OUTBREAK AT WOLVERHAMPTON.

MR. LOVE, the medical officer of Wolverhampton, reports to us that the epidemic, which had been clearly traced to milk-contamination, has been stayed by cutting off the supply of pump-water used by the milkman. The proper sanitary measures have been adopted in preventing the spread of the disease by other media, and he thinks that there is now no further cause for alarm.

THE GUILDFORD ACCIDENT.

MR. FRANCIS WARNER, House-Surgeon to the Guildford Hospital, informs us that eight cases in all were brought to the hospital from the scene of the railway accident, and of these three were removed by their friends, the injuries received not being severe. Five cases are now in the hospital: 1. Compound comminuted fracture of the wrist, necessitating primary amputation of the forearm; 2. Simple fracture of the radius; 3. Fracture of the humerus and contusions; 4. Injury to the nose, and general shock; 5. General shock, but no further injuries. All the cases are progressing favourably.

CUT-THROAT FROM A TEACUP.

A LITTLE girl, about five years of age, was brought to the Westminster Hospital the other day, who had met with her death in the following unusual manner. She had been sent out for some treacle by her mother, and was returning upstairs with a teacupful in her hand, when she stumbled and fell. The cup was broken, and a triangular-pointed fragment penetrated the child's neck just behind the angle of the jaw, and wounded the internal jugular vein. She was able to run up one flight of stairs after the accident, blood pouring from the wound; she then fainted, and died in two or three minutes in her mother's arms. Had there been no witnesses, the case might easily have been mistaken for one of murder. Certainly no one would have thought that such a deep clean cut wound, exposing the artery, could have been done with a fragment of teacup.

CHOLERA IN ITALY.

ACCORDING to an Italian contemporary, the cholera, after being nearly stationary in Venice for a fortnight, underwent a marked decrease from August 10th to 23rd, few cases only occurring during that period. The outbreak of the disease at Treviso has been of only temporary duration. In Friuli, the disease was spreading, but was comparatively mild. In Padua, it continues with oscillations. Dr. Ragazzini, professor of chemistry in the University, has died of it, at the age of 74. The epidemic has been very severe at Pavia, where more than half the cases have proved fatal. Vicenza was, at the time of the report, free; so also was Verona up to August 22nd, when two cases (said to be sporadic) occurred. Several cases have also occurred in various parts of Polesina. In Parma, the epidemic has declined as rapidly as it appeared; and in Trieste it spreads slowly. Genoa has become infected; while Brescia has hitherto escaped. The death-rate is said to be generally high.

ANOTHER DEATH FROM CHLOROFORM.

WE have for the past few weeks had the painful duty to perform of recording in almost every issue of the JOURNAL the occurrence of a death from chloroform. We have again this week to report another fatal accident at Guy's Hospital from the inhalation of chloroform. The patient was a man aged 37, admitted into the clinical ward under the care of Dr. Fagge, with an enlargement of the liver, the nature of which was not quite clear. Mr. F. C. Turner says: "I administered chloroform to the patient by Dr. Fagge's desire, with a view to the exploration of the tumour by puncture. The patient went on well until the conclusion of the convulsive stage, the pulse being fair and the re-

spiration good. At this point the pulse suddenly failed, the patient turned blue, and gasped. Restorative measures were immediately employed, but without success, though artificial respiration and galvanism were continued for nearly an hour. It is right to say that, the patient being on his bed and up in a corner of the ward, the first attempts at artificial respiration were somewhat embarrassed. By *post mortem* examination, the liver was found greatly enlarged, lardaceous, and containing numerous gummatous masses, and closely adherent to the diaphragm. The heart was apparently healthy."

INQUIRY INTO CHOLERA IN GERMANY.

IN accordance with the recommendations of the special commission lately appointed to inquire into the causes of cholera and the means of obviating them, the Chancellor of the German Empire has requested the governments of the confederated states and the chief of the Admiralty, General von Stosch, to institute an investigation of certain subjects. A plan has been drawn up, embracing the following points:—1. The time and place of appearance of cases of cholera; 2. The nature of the materials to which the cholera-poison may adhere, and by which it may be carried from place to place; 3. Individual liability to the disease; 4. The subjects named under 2 and 3 in special circumstances (in mines, hospitals, schools, factories, garrisons, or town-works); 5. The influence of telluric and atmospheric conditions on the epidemic occurrence of cholera; 6. The means of preventing the outbreak and arresting the extension of the disease.

HIPPOPHAGY.

It would be interesting to know the cause of the unpopularity of horse-flesh in this country. It is said that, in the tenth century, the missionaries of Hagen the Good of Norway, who first endeavoured to establish Christianity in that country, denounced most strongly the eating of horseflesh, which indicated belief in Odin. It has been further alleged that the repugnance to hippophagy still felt by all nations of the Germanic family, has its origin from this. There is certainly some evidence in favour of such an opinion; for we find that hippophagy has been pretty extensive amongst the French, a neighbouring nation, and that horse-flesh continues more and more to be considered suitable food in that country; and that the consumption of horseflesh, both in Paris and the provinces of France, appears to be on the increase. According to an official return just published, during the first half of the current year, 5,186 horses, mules, or donkeys, have been eaten in Paris; that is to say, 883,840 kilogrammes (about 2 lbs. each) of meat, exclusive of heart, liver, brains, tongue, etc., which are eaten in the same way as those of oxen. During the first six months of 1870 (before the war), 1,992 such animals were slaughtered in the French capital, and only 893 in the corresponding period of 1867. Probably the experience during the two sieges of Paris, explains the markedly increased consumption. But, however that may be, the strange fact remains that, although we are becoming fastidiously desirous of variety in our dietary, we decline, at least knowingly, to avail ourselves of the excellent flesh of several of our well known herbivora.

LAY-INSPECTORS OF PUBLIC HEALTH.

A CORRESPONDENCE which has just been published relating to the sanitary condition of Sierra Leone shows that the principles which have hitherto influenced the Local Government Board of our own country, have extended to this distant colony. There, as in England, it is deemed necessary that an Inspector of Public Health should possess an education and a previous career, which of themselves insure his knowing nothing about the subject with which he will have to deal. The sanitary condition of Sierra Leone has for a long time been very serious, especially now, in consequence of the prevalence of malignant small-pox. In these circumstances, Mr. J. H. F. Roberts, "Inspector of Public Health", not knowing how to act, writes to Dr. R. Waters, a physician residing in the colony, stating that he is "naturally anxious to get any skilled advice" he can, and asking for information concerning matters with which a person holding his position should be thoroughly

acquainted. Dr. Waters replies that he is not a colonial officer, and that he does not wish to interfere in matters pertaining to the colony; but, as the subject is one of vital importance, he assists the Inspector as far as he can. Mr. Roberts then applies to the colonial surveyor for advice as to the means of getting rid of what will soon be "a great accumulation of foul and festering matter", which "it appears" to him will cause most mischievous results. He seeks the surveyor's opinion as to the proper disposal of public sewage and excreta; and he concludes by referring to the prevalence of malignant small-pox, and by asking for the benefit of the surveyor's large experience. The surveyor, evidently possessing some of the information required, explains how sewer-gas escaping will become a nuisance, enters into the "chemical effect" of salt water on deposits thrown into the bay, and otherwise aids the inquirer. Now surely all this is very painful, when a person appointed for a specific purpose is obliged to admit his ignorance as to the simplest of his duties, and turns hither and thither for help.

GUY'S HOSPITAL.

NUMEROUS improvements have recently been made in the anatomical department, with the view of affording additional accommodation and conveniences to students engaged in dissection; and a separate demonstrating table has been added to the dissecting-room to facilitate the business of the practical courses. A weekly journal continues to be conducted by students only. It is published every Saturday, and contains full details of cases of interest that may have occurred during the week, as well as other matter interesting to students, and bearing chiefly on the progress of their studies.

DIARRHOEA AND FEVER IN LONDON.

THE deaths from diarrhoea, which in the preceding week declined to 362, further declined last week to 277, but exceeded by 77 the corrected average weekly number. The 277 cases included 253 of children under five years of age, of whom 195 were infants aged under one year. To simple cholera 12 deaths were referred, against 17 and 16 in the two preceding weeks; 10 were of children under five years of age. The deaths referred to fever, which, in the four previous weeks, had increased from 22 to 32, rose last week to 38, this being 12 below the corrected average weekly number; they included 7 as typhus, 26 as typhoid or enteric, and 5 as simple continued fever.

THE FODDER OF SEWAGE-FARMS.

SOME interesting information with regard to the experience gained at Edinburgh of the effect in a sanitary point of view of feeding cows on grass grown on the Craighentinny meadows by means of sewage-irrigation will be found, says the *Pall Mall Gazette*, in the evidence given by Dr. Littlejohn before the Rivers Pollution Commission lately printed. Dr. Littlejohn, who is medical officer of Edinburgh, gives it as his opinion that typhus fever is the result of overcrowding, and typhoid fever the effect of sewer-gases. The former, therefore, is common in the dwellings of the poor, while the latter is chiefly found in houses of a better description where there are pipes communicating with an external drain. In the case of the very poor, whose houses are deficient in drainage arrangements, typhoid fever is rarely seen. Practically, Dr. Littlejohn has failed to detect any bad effects resulting from the use by cows of grass grown on the Craighentinny meadows. All the cows fed on sewage-grown grass find their way to the slaughter-houses, where they are examined by Dr. Littlejohn and a staff of inspectors, who do not find that any of those appearances which are met with in what is called "diseased" meat are more frequent in these animals than in others. Sewage-grass is, so far as his observations have gone, no objectionable as food for cattle. He thinks that, if there had been anything in the idea that sewage-grass leads indirectly to entozoic disease, which is remarkably rare in Edinburgh, it has had plenty of time to develop itself; and, Edinburgh not only being the seat of a great medical school, but medical observation being carried to the highest point in that city, it would at once have been detected. Edinburgh is

occasionally subject to attacks of diphtheria, which occur in various parts of the town; and Dr. Littlejohn has had to inquire as to the milk supplied to families which have been affected, but he says he "has failed to trace connection between any disease arising from the use of any particular kinds of food with a special attack of diphtheria, or in fact, any other disease." The evidence of Mr. Hope, Dr. Rees Phillips, Dr. Alfred Carpenter, and others with regard to sewage-grass is to the same effect. It is, indeed, the unanimous evidence of all who have had any experience of the subject.

FALSE CHOLERA ALARM.

DR. EDWARDS, of Newcastle-under-Lyne, has very imprudently, we think, alarmed that town and neighbourhood by reporting the death of a man, from English cholera, as one of Asiatic cholera, without any sufficient grounds for doing so.

CHOLERA IN FRANCE.

THE reports from Havre at the end of last week stated that cholera still prevailed in the town, and that a number of cases had been rapidly fatal. The disease attacked chiefly persons worn out by excesses and living in the midst of insalubrious conditions. Diarrhoea and choleric-form affections have been prevalent in Caen for some time; and two deaths from cholera were reported to have occurred some days ago. At Bretteville, a small place at a short distance from Caen, there are said to have been five or six deaths. In Rouen, from August 27th to 30th, there were 38 deaths from cholera (15 males and 23 females) and 14 from cholericine (5 males and 9 females). On August 30th, there were 42 cases were under treatment in the hospitals. Numerous cases have occurred in the neighbourhood. On September 1st, twenty deaths had occurred at Bolbec. Eight deaths from cholera are reported to have occurred in Paris from the 5th to the 7th instant.

TYPHOID FEVER AT BRENTFORD.

A SERIOUS outbreak of typhoid fever has occurred at Brentford, thirty cases having occurred within a small radius of the Ealing sewage outfall. Conclusive evidence of the cause of the outbreak has not yet been adduced, but, in the meantime, notice has been served upon the Ealing Local Board to abate the nuisance within seven days.

THE CHOLERA IN GERMANY.

IN Berlin, from August 28th to September 4th, 220 cases came under treatment in the nine municipal districts of the city; making, with 127 remaining under treatment, a total of 347, of whom 223 died. In the hospitals during the week ending August 30th, there were in all 381 cases, of which 105 died and 98 recovered. On September 2nd, there had occurred since the previous day, 19 cases of cholera and 9 deaths. From the outbreak of the epidemic to September 9th, the number of cases was 463, of which 297 proved fatal. In Königsberg, from August 24th to 30th, 381 cases and 175 deaths were officially reported to have occurred. In Wartenburg, a town of 4,000 inhabitants, cholera had, on August 31st, prevailed with great severity for several weeks; more than 20 cases, and an average of 15 deaths, occurring daily. At Schwieben and Wischnitz in the circle of Gleiwitz, cholera has been very severe; in the first named village, the houses in the lower part are the chief seat of the epidemic, those on the high ground being free. In the city of Dresden, up to August 17th, there were 125 cases and 76 deaths—13 cases and 10 deaths having occurred in the week from August 11th to 17th. In the districts of Dresden, Döhlen, Tharandt, Radeberg, Meissen, Lommatsch, and Bautzen, in Saxony, the number of cases up to the same date was 489, and that of deaths 195. In Mecklenburg-Strelitz, three cases (all fatal) occurred in the village of Wustrow between August 10th and 19th. At Calvörde in Brunswick, there were 4 cases, one of which was fatal, between August 4th and 12th. In the circles of Ballenstedt and Köthen in Anhalt, there had been 11 cases—all fatal—up to September 2nd. In Munich, the disease was reported on August 30th to be on the increase,

so far at least as regarded the number of cases. On the 29th, there had been 38 cases and 14 deaths. The following table has been prepared chiefly from an abstract of official reports published lately in a Berlin medical contemporary. In the periods embraced in the returns, the first date indicates the day on which the epidemic first appeared.

Province.	District, etc.	Period.	Cases.	
Prussia	Königsberg	June 22 to August 9	892	352
" "	Gumbinnen	July 2 to August 9	19	14
" "	Danzig	June 2 to August 8	573	323 (a)
" "	Marienwerder	May 22 to August 18	2515	1333 (b)
" "	Elbing	(?) to August 30	168	105
Brandenburg ..	Berlin (city)	July 21 to August 26	182	127
" "	Potsdam	July 10 to August 4	241	137
" "	Frankfort (on Oder)	July 9 to August 10	61	38 (c)
Pomerania.....	Stettin	August 3 to August 8	7	3
" "	Stettin	August 20 and 30	13	7
Posen.....	Posen	July 27 to August 9	700	51
" "	Bromberg	May 26 to August 7	1170	648 (d)
Saxony.....	Magdeburg (city)	July 16 to August 14	621	264 (e)
" "	(dis.)	July 18 to August 7	560	150 (f)
Silesia.....	Breslau	June 21 to August 12	747	78 (g)
" "	Oppeln	June 11 to August 16	363	172
Hanover.....	Lüneburg	July 17 to August 12	85	57

(a). 248 cases and 110 deaths from July 31st to August 8th. (b). 1161 cases and 539 deaths from August 8th to 18th. (c). From August 4th to 10th, 20 cases and 8 deaths. (d). From July 24th to August 7th, 611 cases and 297 deaths. (e). 407 cases and 173 deaths in the second week of August. (f). 539 cases and 150 deaths in Buckau during the second week of August. (g). From July 29th to August 12th, 73 cases and 31 deaths.

SCOTLAND.

THE Edinburgh Board of Supervision have issued a "Memorandum as to the Treatment of Diarrhoea and Cholera", prepared by their medical officer, Dr. H. D. Littlejohn, for the information and guidance of local authorities and sanitary inspectors.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of the session 1873-74 was held in the Faculty Hall on the 5th instant. The following are the office-bearers. *President*: Dr. Robert Scott Orr. *Vice-Presidents*: Dr. Andrew Fergus and Mr. John Reid. *Council*: Mr. J. Pollock, Dr. R. Renfrew, Dr. George Miller, Dr. T. D. Buchanan, Dr. R. Stewart (Coatbridge), Dr. James Scanlan, Dr. Alex. Patterson, and Dr. James Dunlop. *Secretaries*: Dr. Robert Perry and Dr. Joseph Coates. *Treasurer*: Dr. H. R. Howatt.

IRELAND.

COOTEHILL UNION.

AT a meeting of the guardians of this union, held lately, a sealed order from the Local Government Board was read, directing the salaries of the medical officers of the union to be increased from £85 to £100 per annum. The guardians, with very bad taste, protested against the increase, and sent a communication, stating the objections, to the Local Government Board.

STATUE OF DR. STOKES.

WE learn from the *Medical Press and Circular* that the full-length statue of Dr. Stokes, which is, with those of Marsh and Corrigan, to complete the tripos in the hall of the Dublin College of Physicians, is now completely modelled. If it be transferred to the marble in as perfect a state as it now stands, it will prove to be one of the most successful efforts of Mr. Foley. The statue is in academic costume, and Mr. Foley has caught one of Dr. Stokes's most characteristic attitudes—the head slightly stooped, and the hands crossed together in front. The likeness is such as hardly to admit of a suggestion to improve it, and, as a whole, the statue is one which gives every promise of being a credit to the sculptor, a satisfaction to the subscribers, and an ornament to the College Hall.

THE DAIRY REFORM COMPANY AND THE TYPHOID OUTBREAK IN LONDON.

SINCE the publication, in this JOURNAL, of most of the letters between Sir William Jenner, Dr. Murchison, and Dr. Whitmore, on the one hand, and the Dairy Reform Company on the other, the directors have issued the complete correspondence. We now are enabled to publish those portions which were not previously in our possession, and which have been forwarded to us by the Company.

No. 1.—[Stated by Dr. Whitmore to have been dated in error and really written on the 4th.]

Department of Medical Officer of Health,

Court House, St. Marylebone, W., August 3 (? 4), 1873.

Sir,—Since my interview with you this morning, I have been informed of several other cases of typhoid fever in families who are supplied with milk from the Dairy Reform Company.

Without presuming to express any opinion as to the cause of this outbreak, I nevertheless feel that the occurrence of so many cases of the disease amongst children and others who habitually drink your milk is, to say the least, a remarkable coincidence; and, as medical officer of health of this parish, I feel it my duty to suggest for your serious consideration the necessity of your at once ceasing to supply the public with milk obtained from your present sources, and until it can be shown that the outbreak has its origin in other causes.

I remain, sir, your obedient servant,

(Signed)

J. WHITMORE, M.D.,

Medical Officer of Health, St. Marylebone.

To the Manager of the Dairy Reform Company.

No. 2.

Dairy Reform Company (Limited),

29, Orchard Street, W., August 5, 1873.

Sir,—I beg to acknowledge the receipt of your letter of last evening, for which I am obliged.

Since your visit yesterday afternoon, I have made a very full investigation in all the districts which we supply with milk, and I find that we have no complaints whatever, and no loss of customers, except in that part of Marylebone which you referred to in your conversation, and where, since your visit, we have lost four customers—all medical gentlemen.

As you are aware, the amount of care and attention which is paid to this business far exceeds that which is practised in the ordinary routine by any dairyman in London; so much so that I cannot believe the cases of typhoid fever which have come under your notice can really be traceable in any way to the produce which we send out to our customers. The allegation against us, however, is of so serious a nature, and even when proved to have no foundation, in fact, would so materially affect us (because many of those people who heard the charge might never hear the refutation), that I have deemed it advisable to summon by telegraph a meeting of our directors this afternoon, in order that they may consider what steps should be taken.

In the meantime, and in order to assist them in arriving at a decision, I shall feel much obliged if you will kindly let me have the following information:—

1. When did the cases mentioned by you first come under your notice, and which was the first one?
2. How long had the outbreak in each case appeared before you became aware of it?
3. Have any other cases come under your notice except in houses where the milk was supplied by this Company?
4. Have you had any opportunity of analysing the water supplied to the houses in which the outbreak occurred?

I am, sir, your obedient servant,

(Signed) D. S. D. MACONCHIE, Secretary and Manager.

To J. Whitmore, Esq., Court House, Marylebone Lane, W.

No. 3.

Department of Medical Officer of Health,

Court House, St. Marylebone, W., August 5, 1873.

Dear Sir,—As I understand you to say that you have summoned your directors to attend a meeting this afternoon, perhaps it would be better that I should attend, and personally answer the questions contained in your letter, especially as I shall probably have some questions to ask.

Perhaps you will be good enough to inform me of the time of meeting.

Yours very truly,

D. S. D. Maconochie, Esq.

(Signed)

J. WHITMORE.

No. 4.

Dairy Reform Company (Limited),
29, Orchard Street, W., August 5, 1873.

Sir,—In reply to your letter of this morning, I beg to say that I hope some of our directors may be here at three o'clock this afternoon, and I have no doubt they would be gratified to have the pleasure of meeting you.

I remain, sir, your obedient servant,
(Signed) D. S. D. MACONCHIE, Secretary and Manager.
To John Whitmore, Esq., M.D., Court House, Marylebone Lane, W.

No. 5.

Questions submitted to Dr. Whitmore at a meeting of the Directors of the Dairy Reform Company on the 5th August, and the replies given by him :—

Have you ever analysed the Company's milk?—Yes, twice.

Did you ever find any deleterious substance?—None.

Did you ever find the Company's milk diluted?—Never.

Do you consider it good milk?—Yes.

Have you ever analysed the water supplied to the houses infected?—Yes, weekly.

By what Company are they supplied?—West Middlesex.

When did the outbreak come to your notice?—Six weeks ago.

Have any cases come under your notice except in houses supplied by this Company?—Yes, one.

No. 6.

Dairy Reform Company (Limited),
29, Orchard Street, W., August 7, 1873.

Dear Sir,—In accordance with instructions given at our Special Board Meeting, on Tuesday, the accompanying memorandum* was drawn up. I am now desired by my Directors to forward it to you, without waiting for the map† referred to, which is being prepared, and shall be forwarded to you, if possible, to-day.

I should feel obliged if you would be so good as to furnish me, as early as possible, with the result of your investigation (should you deem it necessary to make it) into the health of our *employés*.

A meeting of our directors will be held early on Saturday morning, and it would be satisfactory to them to have any further information which you are able to give.

I regret to say that the loss of custom and damage to our business, in consequence of the hypothesis that our milk has originated typhoid fever, is most serious. Severe as the loss must be, it is, however, of far less consequence to us than the slur on our good name.

I remain, dear sir, yours faithfully,
(Signed) D. S. D. MACONCHIE, Secretary.

To J. Whitmore, Esq., M.D., Court House, Marylebone Lane, W.

P.S.—In order that you may be in possession of the information which has come to our notice, and which in our judgment bears just as materially upon the question as the health of our own *employés*, I am desired to point out to you that there is at the present moment typhoid fever in the house of a medical man in Nottingham Place, who is not a customer of ours.—D.M.

* The two letters which follow, one from Dr. Whitmore, dated August 7th, and the reply to it from Mr. Maconchie, were appended to the latter gentleman's letter, dated August 11th, already published in the Special Edition of the JOURNAL of August 30th, and in the issue of September 6th, in which also the remainder of the correspondence appeared.

CORRESPONDENCE.

THE DAIRY REFORM COMPANY.

[The following is the letter referred to at page 296 of last week's JOURNAL. A long communication has just been received from Mr. Maconchie, which shall appear without delay.]

SIR,—I am requested by my brother directors to reply to your second edition of Saturday last; and I do so very readily, because I am sure that nothing is farther from your intention than to produce a mistaken impression upon the minds of your numerous and influential readers as to our conduct during the very trying circumstances in which we have recently been placed.

First; I must be allowed to say that, though I fully accept the acts of the board as if they were my own individual acts, and am prepared to defend them against all attacks, still I am only one of three, and,

in the first instance, had the greatest difficulty in getting my colleagues to admit, or rather to discuss, for they would not admit, the possibility of our milk, which we know to be unadulterated in the commercial sense, being nevertheless poisonous. To them such a proposition seemed simply "visionary," and the chairman took the suggestion quite as an aspersion on his good name. Indeed, his lordship was not a little cross at my having made a suggestion in our interview with Dr. Whitmore on the 5th of August, endeavouring to account for the possibility of contamination.

While not at first sharing the incredulity of my colleagues as to the theoretical possibility of contamination, I confess I did think that it was practically all but impossible that such contamination could, as a matter of fact, have taken place; and when, after the interview with Dr. Whitmore was over, I heard from them (for I was not present at the commencement) that he had come under the full persuasion that our milk came from my Romford, or some other, sewage farm, I became quite as incredulous as they were; perhaps even more so, for I was touched in my tender point; and of course we know nothing as to the number of minutes during which Dr. Whitmore had been labouring under this erroneous impression. My colleagues understood that this belief had been at the root of the whole hypothesis as to the milk.

After that interview, which, it should be remembered, quieted Dr. Whitmore's suspicions for two days, we all regarded the affair as a false alarm, and hearing nothing further from Dr. Whitmore, dismissed the subject from our minds, after directing letters to be written to inquire as to the health of the people on the farms, and directing certain information to be got out for Dr. Whitmore.

At this interview on the 5th August, Dr. Whitmore told us very little, and, I am quite satisfied, had been told very little himself. His whole manner was that of a man who was *désillusionné*, and who was in consequence not merely suspending his judgment, but who, while unable entirely to banish a few lingering doubts, yet thought that his suspicions had been hasty, and could not in sober fact be sustained.

I heard nothing more after this interview from Orchard Street until summoned thither by telegraph on the morning of the 8th. I then found Dr. Whitmore's official letter of the 7th, and I confess my first impulse was to accept it as sufficient proof, thinking we must immediately close all our establishments, and destroy all the milk on hand. I found, however, that my colleagues took a radically different view, and looked upon the letter as a symptom of panic, and nothing more; and they told me so many facts in support of their view, that as, up to that time, we had heard of only eleven cases attributed to our milk, and had not been told of any remarkable facts connected with them, I entirely came round to the views of my colleagues.

But I pointed out that, whatever the facts might be, we ought to offer to close our business on receiving from the vestry an undertaking to pay compensation, and that such an offer would test the strength of the belief of their medical officer.

Accordingly I wrote the draft of the reply, and in that I said, "We still utterly disbelieve the allegation as to typhoid fever, which is absolutely unsupported by any evidence whatever, on the other hand we now have overwhelming evidence to the contrary." And I say that this sentence was a true and faithful statement of the case, so far as it had been communicated to us at that moment.

I farther say, and I must really ask Dr. Murchison and our other critics to believe me when I make a public statement, in the name of my colleagues as well as myself, that no farther facts connected with the milk in London, or with its consumers, were ever communicated to us at all by any one, tending in any way to throw suspicion upon it, while facts were apparently accumulating every day on the other side.

The really important facts we heard of for the first time when we read them in the columns of your JOURNAL on the 16th, or twelve days after Dr. Whitmore's first visit.

Hearing that Mr. Ernest Hart had called at Orchard Street for me on either the 11th or 12th, I forget which, I called on him early the same day, and we talked the thing over. But he did not communicate any important fact in the nature of evidence against the milk, while he told me one or two that were strongly in its favour. Indeed, I am induced to think, and am pretty confident, that he did not himself know many facts at that time; for, first, it was only two, or at most three days after, the following editorial sentence appeared in your JOURNAL on the 9th alluding to the outbreak: "Its cause is still in doubt"; and secondly, his own mind was certainly not made up on the subject. Our interview, moreover, was not a long one, as he was on the point of going out, and we walked out together round the corner to Dr. Murchison's house, at whose door I left him, saying that I should very much like to examine all the pipes and drains to see if they really were all quite perfect.

* Describing the details and organisation of the business at Orchard Street.

† Map showing the districts supplied by the Dairy Reform Company.

This little incident he will recollect perfectly; and, looking back upon the history of the affair, I am strongly of opinion that it was at the interview which he had with Dr. Murchison after we parted that he himself first heard the evidence.

Here it is well to remind your readers that it was on the evening of the 12th that we received Dr. Corfield's telegram, saying that his suspicions were excited against the Chilton Grove Farm, which, however, he had not then visited, and on that telegram we stopped the milk coming to London. I may further say that I do not think that the exact *modus operandi* by which the infection got into the milk on the farm has been proved, and as this is a point evidently of considerable public importance, I am about to investigate it very carefully in the hopes of throwing some further light upon it.

I regret most exceedingly that Dr. Murchison did not come to us himself, as far back as the 4th of August, and lay the whole of the facts before us, for we did not even know that there were any facts of which we were ignorant; and further, that, when—after the affair was in the hands of the Government—he did write to us, he did not do one of two things, either pronounce a positive opinion without giving any reasons, or go fully and exhaustively through the whole case. As it was, he told us either too much or too little. His first letter was an argument, but it was on the face of it incomplete, at variance with what little information we had received from Dr. Whitmore, and it contained one important inconsistency, whilst its language implied that his own opinion was still quite uncertain.

In reply to that letter, we at once wrote a very long and full statement of the facts within our knowledge, and I am glad to find that our impressing upon Dr. Murchison the serious nature of the proposal he made, that we should close our business "until the cause of the outbreak had been thoroughly investigated," while neither being fortified by a positive and responsible professional dictum, nor being supplied with the evidence, meets with an approval so general, as to be all but universal.

We never trifled with the case from the time of Dr. Whitmore's visit; we never lost a moment; we concealed nothing; and we spared ourselves no trouble. But we thought, and we still think, that Dr. Murchison's curt reply of the 12th to our long, full, and careful letter of the 11th was neither courteous, nor in the interest of the public; and I am sure he must now think so himself, on looking back upon it and remembering that we were left from the 4th to the 16th without any details or evidence worthy of the name.

I therefore confidently expect that Dr. Murchison will now make—what Englishmen always so much appreciate—a handsome admission that he has erroneously imputed blame where it was in no way deserved; and if, by coming forward individually at the request of my colleagues, I can not only vindicate my own conduct, but throw oil on waters which never ought to have been troubled, I shall not grudge my night's work, although coming at the end of a very long day.

I am, sir, your obedient servant,

Parsloes, September 3rd, 2 A.M.

W. HOPE.

. The substance of Mr. Hope's letter, of which we announced the reception last week, has been communicated to Dr. Murchison. He has nothing to add to, or to retract from, his letters published with the correspondence in the *BRITISH MEDICAL JOURNAL* of August 30th; and he feels—as most others will feel—that, as an English gentleman, it would be impossible for him to reopen a discussion with a representative of the Dairy Reform Company, until that representative stated that he disapproved of, and was in no way responsible for, Mr. Maconochie's letter in the *Times* of September 3rd. The letter has also been communicated to Mr. Ernest Hart, who writes that he called on the Dairy Reform Company on Monday the 11th of August, in the morning, and saw one of the directors, on whom he personally urged the necessity for suspending the sale of milk, on the now well-known grounds connected with the facts relating to thirty-five families. They had previously heard as much from Sir W. Jenner and Dr. Murchison, but did not consider the case proved against them. Mr. Hart admitted that it could not be decisively proved at that date, but urged that enough was already patent on the face to show that the facts had brought conviction to the minds of Sir William Jenner, Dr. Murchison, Dr. Whitmore, and himself, and that suspension of the inculcated supply was an incumbent duty, and possibly even desirable from the pecuniary point of view. The gentleman seen stated that he had perfect confidence in the milk himself; and, to quiet the alarms of the workpeople, who had got wind of what was going on, had that morning drunk a tumbler of it before them. It seemed of little use to argue at much greater length with a gentleman who regarded it as an act of heroism to drink the milk which was being supplied to his customers, and who could not see that the very gravity of

the suspicions which made him proud of his coolness and pluck in so dealing with the difficulty among his workpeople, was a strong ground for abstaining from submitting all his unconscious customers to a similar trial. Next morning Mr. Hope called on Mr. Hart, having expressed a wish to see him in the hope that he would take a different view. To him Mr. Hart pointed to the list of thirty-five families then lying before him on the desk, and mentioned some remarkable facts. Mr. Hope's mind was, however, set on sewers as the cause, and he recited the reasons for his belief subsequently alleged in Mr. Maconochie's letter in the *Times*, including the argument as to children and servants being nearer the drains, to explain the great proportion of children and servants attacked. In reply to the observation that there were, independently of the figures collected up to that time, very strong facts, he observed that "he was aware of it, but he regarded them as mere coincidences." Mr. Hart left his house with Mr. Hope, telling him that fresh cases were coming in every day, and that he was going to see Dr. Murchison to hear what new cases had come to notice. Mr. Hope expressed no desire either to hear of new facts or to investigate further any details of what had occurred, but, as he says, quite characteristically expressed a desire to examine the pipes and sewers of Dr. Murchison's house. This was in reference to statements from Mr. Hart that in some of the houses in which the fever had occurred among the Dairy Reform customers—mentioning four, of which Dr. Murchison's was one—the water-supply and sewers could not be implicated, because they had been specially and most carefully set in order—two of them by Mr. Rawlinson. Among the cases specially mentioned to Mr. Hope was the Gipsy Hill case.

We do not well understand the plea that the Company were kept in ignorance of any facts; or that Sir William Jenner and Dr. Murchison's letters were not authoritative. The suspicion that the fever was due to the milk first arose in Dr. Murchison's mind on the morning of August 4th. Within a few hours he ascertained that, of eleven families then suffering from typhoid fever in his neighbourhood, every one was supplied with milk from the Dairy Reform Company. He lost no time in communicating these facts to Dr. Whitmore, who at once proceeded to the offices of the Company in Orchard Street, and within twenty-four hours the Company were in possession of all the facts then known to Dr. Murchison; and the directors acknowledge possession of this information in their letter of August 11th, paragraph 6. Mr. Hope blames Dr. Murchison for not communicating at the outset to Dr. Whitmore and the Company the facts published in the *BRITISH MEDICAL JOURNAL* of August 16th. It was impossible for him to do so, for many of them were then unknown to him. But as fast as fresh cases came to Dr. Murchison's knowledge, they were communicated to Dr. Whitmore, Mr. Radcliffe, Mr. Hart, and any others who called upon him for information; and they would have no doubt been communicated to Mr. Hope, had he expressed any wish to that effect. Dr. Whitmore, also, in his letter of August 7th, writes to the Company that he has heard of fresh cases. The facts known on August 4th may not have sufficed to satisfy the directors, but they were sufficient to satisfy Dr. Murchison. The fact that two-thirds of the directors, as Mr. Hope says, *would not admit, and were not even disposed to discuss, the possibility of their milk being at fault*, may explain their subsequent action; but it is very doubtful how far it excuses it; at all events, it makes it clear that Dr. Murchison took the right course in communicating, not with them, but with the medical officer of health of the district, and the medical officer appointed by the Privy Council. It is difficult, moreover, to reconcile Mr. Hope's statement that the letters of Sir William Jenner and Dr. Murchison were not sufficiently authoritative, with the other complaint that they were so far too much so as to be curt and discourteous; nor is it easy to see how he could claim a more positive and responsible professional dictum than the dicta addressed to the directors in the prior communications from those gentlemen and from Dr. Whitmore, the official medical officer of the district. We are of opinion, moreover, that the attention of the directors having on August 4th been called to the suspicion attaching to their milk, it was their duty, not Dr. Murchison's, to search for fresh facts against the milk as well as in its favour. With a knowledge who were their customers, and with the assistance of Dr. Corfield, it would have been far easier for them than for Dr. Murchison to collect the evidence published in the *BRITISH MEDICAL JOURNAL* of August 16th; but it is noticeable that in their correspondence they set up every imaginable hypothesis wide of the mark which might direct attention from what was asserted, and has been proved to be, the *vera causa*. Had not Dr. Murchison volunteered to investigate the cause of the epidemic, a task which in no way devolved upon him, the number of victims, instead of being five or six hundred, would probably by this time have reached as many thousands. To Dr. Murchison the public are under a debt of obligation for pointing

out the cause of the epidemic, and thus at once arresting its progress; and few are likely to sympathise with the angry tone of the letters of the Dairy Reform Company as regards his conduct in the matter.

Dr. Murchison is called upon by Mr. Hope to withdraw the imputations he has made upon the Company. They are two: 1. That their milk was the source of the fever; 2. That they addressed their pecuniary interests as an argument for not suspending the issue of their milk. He believes himself unable to withdraw either of them; and we do not see how he could well do so, the former being now admitted by the Company, and the latter being contained in their own letters. Mr. Hart, on his side, adheres to the statements which we have connected with his name.

ANTISEPTIC SURGERY.

SIR,—Mr. Wood's address at the recent meeting of the British Medical Association, and your editorial remarks upon it in the JOURNAL of August 30th, if left unnoticed by myself, might lead your readers to suppose that I had relaxed in my efforts to promote antiseptic surgery. I therefore beg leave to state through your columns, that during the two years which have elapsed since the delivery of my address at Plymouth, I have been steadily endeavouring to lay more broadly and deeply the foundation upon which the antiseptic system is based, to improve our methods and to cheapen our materials.

For some fruits of my labours in pursuit of the first of these objects, I may refer to *Nature* of the 10th and 17th of last month, which contain an abstract of a communication—"On the Germ Theory of Putrefaction and other Fermentative Changes"—which I made in April to the Royal Society of this city, and which I am now engaged in preparing for publication *in extenso* in their *Transactions*. The results of my endeavours to promote the other two scarcely less important objects I hope to lay in due time before my professional brethren, together with evidence of their value in practice. Meanwhile, I must content myself with the general statement that we are attaining, with greater constancy than ever before, the entire exclusion of putrefaction from our wounds, and that we are consequently able to undertake with confidence operative procedures which without efficient antiseptic measures would be simply homicidal, while the grand fact of perfect immunity from pyæmia and hospital gangrene remains in its integrity in my crowded wards.

Why it is that Mr. Wood should have obtained results so widely different, I must leave your readers to infer; merely remarking that, of the many strangers who have witnessed my practice since his address was given, not one appears to have had any hesitation in arriving at the true explanation.

I am, etc.,

JOSEPH LISTER.

SIR,—Will you kindly give me a little of your valuable space to reply to some remarks made by Mr. Callender at the meeting of the British Medical Association, and reported in your JOURNAL of August 30th. Speaking of Mr. Lister's "antiseptic method," Mr. Callender gives statistics to prove the success of a method of treatment which Mr. Lister successfully practised and taught some years ago, when antiseptic surgery was in its early infancy. He then imputes a doctrine to Mr. Lister for which I should be glad to have his authority. I have been a pupil of Mr. Lister for four years, and have read all his published writings on the antiseptic system, and I never knew that it was a part of that system to exclude the air; and I know how annoyed Mr. Lister is by such statements being made by those who profess to understand his treatment. Air is freely admitted, but deprived of its septic qualities by passing through an antiseptic atmosphere. Mr. Callender procures this roughly by the vapour, which is given off by his strong lotions and dressings; Mr. Lister, surely and safely by means of a cloud of carbolic spray. Which method is most agreeable to the patients, I will leave them to decide. I have no fear of the verdict: a cloud of cooling spray and light gauze dressing, or I to 20 lotion and heavy greasy dressings.

I am, etc.,

AN OLD HOUSE-SURGEON OF MR. LISTER'S.

London, September 6th, 1873.

THE SURGEONSHIP OF THE BIRMINGHAM BOROUGH GAOL.—No suitable candidate (not one in Birmingham) can be found at the reduced salary of £100 a year, and the visiting justices have now recommended the Council to offer £200 a year.

THE Finance Committee of the Aberdeen Parochial Board recently recommended that the salaries of the medical officers should be increased from £40 to £47 per annum; but the Board negated the recommendation by a majority of one, it being argued during the discussion that Poor-law medical appointments were not so much for money as to give a start to young doctors.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 4th, 1873.

Johnstone, Charles Richard, Haxby, Yorkshire
Vincent, Henry Bird, East Dereham, Norfolk
Waylen, George Swinfin Adee, Devizes

The following gentlemen also on the same day passed their primary professional examination.

Brummitt, Robert, Guy's Hospital
Gwatkin, Owen, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

BETHLEM HOSPITAL—Two resident Medical Students. Applications, 11th October, to A. M. Jefferison, Clerk.
BIRKENHEAD BOROUGH HOSPITAL—House-Surgeon: £80 per annum, board, and residence. Assistant House-Surgeon: £40 per annum, board, and residence. Applications, 15th instant, to Chairman of the Weekly Board.
DRIFFIELD UNION, Yorkshire—Medical Officer and Public Vaccinator for the Wetwang District: £21 per annum, and fees. Applications to Henry Botterill, Clerk to Guardians.
EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN—Assistant Physician. Applications, 25th instant.
EASTERN DISPENSARY, Bath—Resident Medical Officer: £80 per annum, rising to £100, furnished apartments, etc. Applications, 24th inst., to Francis Savage, Hon. Secretary.
ENNIS UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Crusheen Dispensary District: £90 per annum and fees.
GENERAL INFIRMARY, Leeds—A Resident Medical Officer. Applications, 17th inst., to the House-Surgeon.
GLENDALE UNION, Northumberland—Medical Officer for the Ford District: £10 per annum.
GUET HOSPITAL, Dudley—Resident Medical Officer: £120 per annum, furnished residence, board, etc. Applications, 26th inst., to E. Poole, Secretary.
HENSTEAD UNION, Norfolk—Medical Officer to the Workhouse: £24 per annum and fees. Applications, 15th inst., to — Simson, Clerk to Guardians, Tombland, Norwich.
HORNCASTLE UNION, Lincolnshire—Medical Officer and Public Vaccinator for the Wragby District: £35 per annum and fees. Applications, 16th inst., to Henry Lenton, Clerk to Guardians.
INVERNESS DISTRICT LUNATIC ASYLUM—Assistant Medical Officer: £70 per annum, bed, board, and washing. Applications, 15th instant, to Dr. Aiken, Medical Superintendent.
KANTURK UNION, co. Cork—Apothecary for the Newmarket Dispensary: £50 per annum. Applications, 5th October, to George Smith, Hon. Sec., The Cottage, Newmarket.
LANSPORT UNION, Somersetshire—Medical Officer to the Workhouse: £35 per annum. Applications, 25th inst., to J. E. H. Warren, Clerk to Guardians.
LIVERPOOL DISPENSARIES—Hon. Medical Officer to the South Dispensary. Applications, 24th inst., to W. Lister, Secretary.
MANCHESTER ROYAL EYE HOSPITAL—Three additional Medical Officers. Applications, 15th inst., to E. Goldschmidt, Chairman of the Board.
MANCHESTER ROYAL INFIRMARY—Pathological Registrar: £100 per annum. Applications, 26th inst., to the Chairman of the Weekly Board.
MORPETH DISPENSARY—House-Surgeon: £110 per annum, furnished house, etc. Applications, 1st Oct., to D. F. Wilson, Hon. Sec.
NEWPORT UNION, co. Mayo—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballycroy Division of the Achill Dispensary District: £100 per annum and fees. Applications, 7th October, to John Carr, Hon. Sec., Murlan, Achill.
NORTH BIERLEY UNION—Medical Officer for District No. 9.
POCKLINGTON RURAL SANITARY DISTRICT—Medical Officer of Health for the Pocklington Division: £45 per annum. Medical Officer of Health for the Market Weighton District: £22 per annum. Applications, 16th inst., to R. E. Bell, Clerk to the Authority.
ROTHERHAM RURAL SANITARY DISTRICT—Medical Officers of Health for the Rotherham and Kimberworth Divisions. Applications, 20th instant, to John Barras, Clerk to the Authority.
ROYAL LONDON OPHTHALMIC HOSPITAL—Curator; Assistant-Surgeon. Applications, 30th inst., to Robert J. Newstead, Secretary.
ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications, 20th instant, to A. D. Tritton, Treasurer, Clerk.
SUNDERLAND URBAN AND PORT SANITARY DISTRICTS—Medical Officer of Health: £500 per annum for five years. Applications, 25th inst., to Wm. Snowball, Town Clerk.
TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY—House-Surgeon: £50 per annum, board, lodging, and washing. Applications, 16th inst., to the Chairman of Committee.
THINGOE RURAL SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications, 17th inst., to James Spark, Clerk to the Authority, Bury St. Edmunds.
WHITCHURCH TRADESMEN'S FRIENDLY SOCIETY—Medical Officer for the West District: £40 per annum. Applications to R. B. Jones, Treasurer.
YORK COUNTY HOSPITAL—House-Surgeon: £100 per annum, board, and lodgings. Applications, 20th instant, to Robert Holtby, Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

KELLY, Vandeleur, Esq., elected Honorary Surgeon to the Westmeath County Infirmary, Mullingar.
WILLIAMS, J. T., Esq. (late Resident Surgeon of Rossall School, Fleetwood), elected Honorary Surgeon of the North Lonsdale Hospital, Barrow in Furness.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

LINDSAY.—At Mickleover, Derby, on September 2nd, the wife of *J. Murray Lindsay, M.D., prematurely, of a son.
SHEPARD.—On August 19th, at Ty Cornel, Usk, the wife of Alex. J. Shepard, Esq., Surgeon, of a daughter.

MARRIAGES.

MAXWELL.—ASHBY. On September 9th, at the parish church, Hove, Brighton, *Theodore Maxwell, M.B.Camb., B.Sc.Lond., Medical Missionary Ch. Miss. Soc., to Elizabeth Eyre, second daughter of the late John Eyre Ashby, LL.D., of Enfield.
WILSON.—WHITFIELD. On September 3rd, at the Old Meeting House, Birmingham, by the Rev. Charles Clarke, William Wright Wilson, M.R.C.S.Eng., eldest son of Joseph Wilson, of Acocks Green, Birmingham, to Emily Sarah, youngest daughter of Samuel Whitfield of Golden Hillock.

DEATHS.

HAYLES, George, Esq., Surgeon, at Alresford, aged 72, on August 23rd.
IRVING, James, Esq., for nearly fifty years Apothecary to the Athy Dispensary, at Athy, Kildare, aged 81, on August 28th.
WHEATCROFT, Thomas C. C., Esq., Surgeon, at Hednesford, Staffordshire, aged 29, on August 30th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

A SUBSCRIBER.—The M.D. of Heidelberg or Bonn ranks higher than one obtained at Brussels or any other Belgian University.

PROFESSOR SPIEGELBERG.—The matter shall be attended to.

DR. BELL TAYLOR (Nottingham).—It shall appear.

DR. COBBOLD (London).—Yes. The second paper shall appear.

J. M. asks:—Can you or any of your correspondents inform me where earth night-soils for use in a bedroom can be obtained, and where descriptions of out-door privies on the same system can be found?

"CHLOROFORMING HORSES."

SIR.—The following may contain a useful suggestion in case of a similar emergency. Passing down Gray's Inn Road on the morning of the 3rd instant, I observed a large and powerful draught mare cast upon the road, kicking furiously, and groaning as if in great pain. Her near hind leg was firmly jammed in the fore-carriage of the dray: she was lying upon her near side. The limb had passed over the bar, and under another part of the lock. It appeared that she had been down about an hour, and the united efforts of the drayman, several policemen, and bystanders, to raise her had proved quite futile; in fact, owing to her fearful plunges and struggles, the danger of breaking the imprisoned limb was imminent. Having obtained permission of the drayman, I administered chloroform to the animal by pouring some freely on to my handkerchief and placing it in a piece of rough canvas, which I held well over her nose as she lay on the pavement. After eight or ten minutes, the primary stage of excitement being strongly marked, the anæsthetic produced the desired effect, the relaxation of the muscles being complete; nevertheless, the leg was so firmly fixed that it was found necessary to saw through the cross bar of wood, and drive out the bolts with a heavy hammer, before the limb could be extricated. The animal recovered her consciousness in about

fifteen minutes, and stood up—a little "groggy" at first—with no bones broken, and only a few slight cuts and abrasions, though the liberated leg was bruised and sore. I am, etc., J. CLEMENT SOUTER, M.D.
St. Ann's Lodge, Nottingham.

INDUCTION OF UTERINE ACTION BY GALVANISM.

SIR,—I beg respectfully to correct an error which your contributor, Dr. B. R. Morris, has made relative to the use of galvanism to induce uterine action. He says: "The principle involved was introduced by Mr. Dancer of Manchester many years ago, for the purpose of arresting *post partum* hæmorrhage," etc. Now, Mr. Dancer is an eminent optician, and not a member of the medical profession. He constructed the apparatus and the vaginal conductor for me, and also for many others, after I had published my observations "On Galvanism applied to the Treatment of Uterine Hæmorrhage." My remarks were not limited to its use in *post partum* flooding, but applied to all kinds of this accident—to tedious labours from uterine inertia, and also, as suggestive of its powers of inducing uterine action *de novo*, to cause premature labour.

I beg to refer Dr. Morris to the *Provincial Medical and Surgical Journal* December 24th, 1844, vol. i, page 604. I am, etc., THOMAS RADFORD, M.D.
Manchester, Sept. 9th, 1873.

BRITISH EMPIRE MUTUAL LIFE ASSURANCE COMPANY.—The Directors have decided to alter the scale of payment for medical certificates, so as to include under the guinea fee the examination of proposals for £250 and upwards. For proposals under that amount, the fee will be half-a-guinea, as hitherto.

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S NAVAL AND INDIAN MEDICAL SERVICES.

AUGUST 1873.—*Anatomy and Physiology* (Mr. Busk).—1. Give the origin, course, relations, and distribution of the glosso-pharyngeal nerve, and describe the dissection required to expose it in its course below the base of the skull. 2. Describe the cartilages and intrinsic muscles of the larynx, and state the nerves by which the latter are supplied, and their actions. 3. Give an account of what is known respecting the structure, nature, and properties of the red and of the white corpuscles of the blood. 4. Give the dissection required to expose the posterior interosseous artery of the forearm in the whole of its course; mentioning, in the order in which they occur, the parts that must be removed in order to expose it. 5. State the organs to which the pneumogastric nerves are distributed, and give their special function in each organ. 6. Describe the minute structure of the cornea and of the iris, and state the mode in which it may be best displayed.

Surgery (Mr. Pollock).—1. Describe the local and constitutional symptoms and causes of acute periostitis; at what period of life it usually occurs; what treatment should be adopted; and what are the usual results on the bone affected. 2. A heavy cart-wheel passed over the middle of the thigh of a man; there being no external wound, by what symptoms would rupture of the femoral artery be diagnosed, and what should be the treatment? 3. Describe the symptoms which would be present if a small foreign body had slipped into the trachea. In what situation would it most probably lodge, and what treatment should be adopted for its removal? 4. Describe the progress of a cause of syphilitic iritis from its commencement, if allowed to continue without treatment, and what should be the treatment of a case in its various stages. 5. By what symptoms may an ovarian cyst be distinguished from ascites, dependent on a diseased liver, or from a fibroid tumour of the uterus. 6. Describe the symptoms by which cancer of the bladder may be detected, and for what conditions it might be occasionally mistaken.

Medicine (Dr. Parkes).—1. What are the views now entertained regarding phthisis and tubercle? Give the physical signs of a case of chronic phthisis passing through all its stages and ending in perforation into the pleural cavity. 2. What are the chief causes of anasarca? Describe the symptoms connected with the kidney and heart-diseases of the two chief forms. 3. What are the principal causes of severe pain in the loins? and give the distinguishing symptoms of the conditions you enumerate. 4. What are the symptoms of cancer of the liver? Give carefully the after-death appearances. 5. Give an account of the stages of a simple labour, and state what conditions might render it dangerous, and how you would meet them. 6. What is the composition of opium, and what is the action and use of its several ingredients?

Zoology (Dr. Thomson).—1. Give the characters and distribution of the principal races of man. 2. What are the principal differences between plants and animals? 3. Describe the structure of the heart in the different classes of vertebrata. 4. Give the principal characters of the class *Aves* and of its orders. 5. What are the chief modifications of the mouth of insects?—*Botany*. 6. Describe the different modes of dehiscence of capsules, giving examples of each. 7. Explain the mode in which pollen is formed, and describe the structure of pollen-grains. 8. What part in the vegetable economy is played by carbonic acid? 9. Describe the phenomena of conjugation in algae and fungi. 10. Give the most important characters of the natural order Cruciferae, and describe the various modifications of the fruit in that order.—*Physics*, etc. 11. What is the nature of the transit of Venus, and with what object is it to be observed next year? 12. What is an artesian well? 13. Explain the term specific gravity, and describe the mode in which it is determined. 14. What are the physical causes of the circulation of the sap in plants? 15. Describe the structure of a compound achromatic microscope.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Richard Ley, Newton Abbott; Mr. Matthew B. Sutton, Roseneath; Dr. Brantree, Colchester; Dr. Ransom, Nottingham; Dr. J. M. MacLagan, Hexham; Mr. Andrew Davies, Swansea; Dr. Britton, Halifax; Mr. Frederick Manley, Brandon; Professor Spiegelberg, London; Mr. Christie, London; Dr. Mackay, Elgin; Dr. Murray Lindsay, Derby; Dr. Webb, Wirksworth; Dr. Watt, Ayr; Mr. Wagstaffe, London; Mr. J. W. Langmore, London; Mr. J. Smith, Jersey; Mr. Barnardo, Arlington; Dr. Henry T. Castle, Newport; Mr. J. K. Thornton, London; Dr. J. C. Souter, Nottingham; Dr. C. Bell Taylor, Nottingham; An Associate; The Consul General of Brazil, Liverpool; M.R.C.S.; The Sanitary Commissioner, Punjab; Dr. A. P. Stewart, Lynn; Dr. Addison, Brighton; Dr. Prosser James, London; Mr. G. M. Stansfield, Bristol; Mr. James Allan, Fort William; Dr. Dowse, London; Mr. Chauncy Puzey, Liverpool; Dr. Alexander Ogston, Aberdeen; Mr. Townsend, Pitlochrie; Mr. Jessop, Leeds; Mr. Cooper Garman, Wednesbury; Mr. Steele, Abergavenny; Mr. Sufield, Hednesford; A Member; Mr. W. D. Christie, C.B., London; Dr. J. J. Gordon, London; Mr. F. C. Turner, Petworth; Dr. Alfred Carroll, New Brighton, United States; Dr. Radford, Manchester; Dr. Joseph Coats, Glasgow; Dr. Thomas, Glasgow; A Correspondent; Dr. Paget, Cambridge; Dr. Steele, London; Dr. Berkart, London; Messrs. West and King, London; Mr. Maconochie, London; Our Dublin Correspondent; Mr. Bursch, London; Dr. Parsons, Dover; Mr. Francis Grant, London; Mr. B. R. Wheatley, London; Mr. Francis Warner, Guildford; Dr. Philipson, Newcastle-upon-Tyne; Mr. Thompson Cooper, London.

PORTION OF A LECTURE

ON THE

DIAGNOSIS BETWEEN GENERAL PARESIS AND PROGRESSIVE LOCOMOTOR ATAXY.

Delivered at University College, Summer Session, 1873.

BY W. H. O. SANKEY, M.D. Lond., F.R.C.P.,

Lecturer on Mental Diseases at the College.

I HAVE formerly, when speaking of the diagnosis of general paresis (or general paralysis of the insane), satisfied myself with but a slight allusion to locomotor ataxy; believing that the phenomena were sufficiently distinct in character in each of these diseases to prevent any confusion between them, and such, indeed, is the case in a large majority of the examples met with.

The word ataxy literally means want of order, and, when applied to movements, it is called locomotor ataxy; a condition of such ataxy is met with in the insane occasionally as a symptom, and occurs as an accidental complication, just as we have also various other kinds of derangement of the nerve-function, as anaesthesia, convulsion, partial and focal paralysis, etc. I think that in some of such cases the ataxy has been engrafted upon the mental disease; in others, perhaps the insanity has occurred in an ataxic individual. I had a patient whose ataxic symptoms were strongly marked, and could, I think, be traced to a cause occurring subsequently to the attack of insanity. The patient was taken with the usual symptoms of melancholia with suicidal propensities, and she succeeded in throwing herself out of her first-floor window, and fell vertically upon her sacrum. Ataxic symptoms gradually appeared and increased, and she died about thirteen years after the commencement of the insanity. In a second case, the history, as gleaned several years after the events occurred, seemed to show a similar origin and course. But it is not so much perhaps these cases, with ataxy occurring symptomatically, which would put on the appearance of general paresis; but rather certain forms of the disease which have been variously named, but which is best known perhaps by its appellation of progressive locomotor ataxy.

I am fully disposed to believe that many cases of true locomotor ataxy have been considered to be general paresis. The diagnosis is easy enough when there are no cerebral symptoms; but, if any degree of mental disturbance existed in a case of ataxy, a mistake might be readily made. Some years ago, every case showing a degree of imbecility with impaired power of locomotion, would have satisfied the diagnosis of general paresis, and such cases would have been sent into the asylum. The removal of many of these cases into asylums has taken them from the observation of the general or hospital physician, and thus their frequency is not known to him; while the asylum physician, seeing chiefly another phase of the disease, is less likely to recognise the true relationship of his cases with those described without mental disturbance. I have of late met with several cases of progressive locomotor ataxy which, at the first glance, might be easily taken for cases of paresis; and some of them, indeed, have been so diagnosed by very competent men. I feel it to be the more important, therefore, that I should point out the distinction between these two diseases; and the diagnosis is of some consequence, for the future progress and duration of them differs considerably. The expectation of life in general paresis is from two to five years, while some cases of ataxy extend over ten, fifteen, and twenty years.

To avoid repetition, I will, in what is to follow, use the word ataxy instead of progressive locomotor ataxy, and paresis instead of general paresis (or paralysis) of the insane.

As I have already said, in typical cases without any mental disturbance, ataxy would not resemble paresis at all. The peculiar form of delirium, on the other hand—the *délire des grandeurs*—would, by its presence, pretty nearly decide that the case was one of paresis; but the fact is that, in certain cases of paresis, and in a certain stage of that disease, this symptom is not well marked.

There is also much variation in the symptoms of the disease, progressive locomotor ataxy. I will therefore give you a sketch of the forms in which it is to be met with, following M. Topinard in his work on the subject. I must premise, however, that what he describes is the disease as found in general hospitals. Nevertheless, he says that cerebral disturbance existed in several cases, and impairment of memory in one-tenth of the whole; and this I believe to be below the mark of cases generally. Earlier writers insisted much on the presence of

certain symptoms as essential to the diagnosis of ataxy, such as the inability of the patient to walk blindfold; and some considered that the case was not ataxy without this symptom. More recent writers give the disease a much wider range; and, indeed, they will tell you that that peculiar symptom is by no means a frequent one.

M. Topinard, in his work *L'Ataxie Locomotrice*, makes a summary of the phenomena observed in 150 collected cases. I will quote his description at length, by way of presenting you a contrast to the account given in a former lecture of general paresis. He arranges the whole of his cases into ten groups; and those who have seen much of ataxy, will readily recognise most of these typical forms. In our clinical meetings, I shall be able to show you several of them.

M. Topinard's arrangement is as follows.

First Type.—The patient is ataxic in the lower or upper extremities. He staggers, and is more awkward when he closes his eyes, and there is little more than this to be observed.

Second Type.—Besides the above phenomena, the patient is not conscious of the movements he executes, or of the position of his extremities, and has some cutaneous anaesthesia.

Third Type.—The patient is ataxic more or less manifestly. In most cases there are pain in the back, a little numbness, some retention of urine, and more or less true paralysis, etc. But the symptoms are rigorously confined to the lower extremities.

Fourth Type.—The patient is plainly ataxic; besides which, he has in his lower extremities excruciating nerve-pain (likened to the pain of toothache), of which the commencement may be traced sometimes to several years back; then come numbness, dulness of sensibility limited to the lower limbs, loss of sexual appetite, and pelvic complications (as want of control over the rectum and bladder). In general, there is no lumbar pain nor paralysis beyond that which one might describe as muscular weakness.

Fifth Type.—The nerve-pain (pain like toothache) continues some years, constituting, as in the previous type, a first stage of the affection; then there are added ophthalmic phenomena (amaurosis, diplopia, etc.); then follow embarrassment in speech, and even slight deafness or hardness of hearing, either transient or persistent. Next come anaphrodisia, and at length pelvic complications, which make up a second period. The numbness, ataxy, cutaneous and muscular anaesthesia (both more or less marked) attack the lower extremities, and later in the progress of the case the upper extremities. The commencement of the disease is insidious, its course irregularly progressive, and its duration indefinite.

Sixth Type.—The phenomena are the same as above (type 5), with the exception that the symptoms, or at least the principal symptoms, which characterise the first period, disappear in the second stage; thus suppressing or considerably diminishing the severity of the early symptoms.

Seventh Type.—The course and progress are the same as in the above, except that the commencement of the case showed itself by cerebral or spinal symptoms of acute or subacute kind; the evolution of the disease continuing in other respects as in the two previous types.

Eighth Type.—The same phenomena as the above, except that the course of the disease is interrupted by cerebral and spinal complication.

Ninth Type.—The same course as in 5, 6, 7, 8, only a complete or incomplete paralysis is added.

Tenth Type.—Obeying the course marked out in type 5, the case runs a more rapid course, and terminates by an absolute paralysis. (*De l'Ataxie Locomotrice*, par Dr. Topinard, Paris, 1864.)

Now, bearing in mind the phenomena as they present themselves to us in general paresis, and comparing them with the symptoms as given in M. Topinard's summary of locomotor ataxy, it would seem (I cannot in the present state of our knowledge use a stronger term) that the one set of phenomena began at one pole of the nerve-centres, and the other at the opposite; the phenomena of the one belong chiefly to the cerebral, and the other chiefly to the spinal, system. While the phenomena are thus polarised, they appear distinct, and the differences can be readily observed; but as the disease extends, the one, as it were, from below upwards, and the other from above downwards, the symptoms tend at the same time to assimilate or become of mixed character. There is, I think, in most cases of paresis at some stage a certain amount of ataxy or want of order; while, on the other hand, in cases of ataxy there is some degree of paresis or want of power, and in not a few some mental imbecility, amnesia, stammering, and imperfect articulation, which give a case a kind of resemblance to one of paresis.

The history of the cases, however, will enable you to distinguish between these diseases, even at their most resembling period. In paresis, the mental symptoms are always present, and always precede the motor phenomena (if the motor symptoms ever precede the mental, as they

are stated by some to do occasionally; it is certainly very exceptional. The first symptoms in paresis are chiefly cerebral; viz., mental excitement, great garrulity, noisy hilarity, bragging, early violence of behaviour, and very usually some exhibition of libidinous conduct; and on the subsidence of excitement, the mind is found to be weak, and the motor phenomena gradually make their appearance.

On the other hand, in ataxy, to describe the case most likely to be confounded with paresis, the commencement is in the spinal functions. There is first an attack of pain of some remote part—of pain likened to the pain of toothache—occurring most frequently in the lower extremities, and dating several years back, considered at the time perhaps to be rheumatic; this pain is worse towards evening, or when the patient is not mentally occupied; it may improve or disappear for a time and return. Then follows a slight degree of numbness of the part; the patient feels as if he trod on wool; occasionally "pins and needles" attack the part; in fact, those phenomena which we have all experienced after sitting in an awkward position, when one's own leg has "gone to sleep." There is, as most of us know, want of feeling, want of recognition of the member, especially as to its size, and even its ownership, then atrocious pain and pins and needles. In the disease, on the subsidence of the pain, the patients exhibit some awkwardness in gait; the ataxy or want of order on the movement is evident. These symptoms may extend over ten or twelve years with very little change. Except, perhaps, increasing awkwardness in gait, there is doubtless some numbness of the cutaneous surface in the course of the disease; the phenomena appear to spread upwards by involving the functions of the nerves higher up; the erection of the penis, and soon afterwards the sexual appetite are lost, and the disease ascends; the expulsive power of the bladder and rectum become impaired. All this occurs while little change takes place in the mental functions; but in other cases the mind appears imbecile, the memory is affected, and there is distinct alteration in behaviour and conduct; but there are no lofty ideas, no excessive excitement and garrulity, and in no case have I met with paroxysms of violence or libidinous ideas.

The differences may be better seen in a tabulated form.

<i>Paresis</i>	<i>Ataxy</i>
Runs its course in a few years.	Is much slower usually, and may last ten or even twenty years.
Commences with mental symptoms.	Commences with pain in a distal nerve.
Is attended with libidinous ideas.	Is attended with absence of sexual feeling.
The motor symptoms are secondary in the order of time.	The motor symptoms are the primary phenomena.
Is only rarely complicated with pelvic difficulties.	Pelvic symptoms are a prominent feature.
There often is great violence.	The mental phenomena are imbecility and impaired memory.

(*Brit. Med. Journal*)

REMARKS ON DISLOCATIONS OF THE CLAVICLE, HUMERUS, AND ELBOW.*

By WILLIAM BROWN, M.R.C.S., Callington.

IN August, 1846, I published in the *Medical Gazette* a case of dislocation of the clavicle at the sternal end. I was surprised then to find that the accident had been considered to be very rare. My case is referred to in *Druitt's Vade-Mecum*. I have since had three other cases of the same dislocation, which would seem to show that the accident cannot be so rare as it has been deemed, or that I have been singularly fortunate in regard to it. In regard to dislocation of the clavicle at the acromial end, however, I do not recollect ever having had more than one distinct case. Most authorities merely say now that dislocation of the clavicle may take place at either end, without giving the relative frequency. All my three fresh cases of dislocation at the sternal end were similar to my first case—forwards. The first of the three cases occurred in July, 1858, in an old man, and was occasioned by his falling from a load of hay. The other two cases occurred within the last two years. One of them was a very young man, and he received his accident by falling from a cherry tree and pitching violently on his shoulder. The last of the cases was that of an elderly man, who received his injury by falling over the surface tramway of a mine, a height of about fifteen feet, and who sustained also, at the same time, a bad fracture of both bones of the left leg. In both these last cases considerable swelling and much tenderness occurred after the injuries.

The treatment adopted, in all the cases except the last, was just that which I adopt in fracture of the clavicle. After pressing back the projecting end of bone as completely as possible, I apply a long strip of emplastrum roborans, to which pulvis opii or belladonna has been added, spread on leather, and drawn tightly obliquely from below upwards over the injury, and on over the top of the shoulder. This firm and tightly adhering plaster undoubtedly helps to keep the previously displaced parts in apposition, and also conceals from the notice of the patient any deformity at its worst period, when heightened by any swelling which may exist. I then place a wedge-shaped pad in the axilla, and apply the figure-of-8 bandage; and finally take means to confine the elbow firmly to the side, and also to support it, and thereby to keep the shoulder from dropping.

My case of dislocation at the outer or acromial end occurred in December, 1871, in a powerful young mason, who, while tipsy, was hustled out over the doorstep of one of our inns on to the pavement. In this case the end of the clavicle not only overlapped the acromion, but was so much tilted up, causing stretching and raising of the soft parts, that there was nearly an interval of an inch between it and the top of the acromion. In this case the treatment was the same as in the others, and the result was very satisfactory.

In reference to dislocations of the humerus at the shoulder, I have had a large number of cases, from various causes, or modes of violence. In one case a man was in the shaft of a mine, where the materials were being hauled up, standing on the ladder and further securing himself by holding by one hand to one of the bars, while he was performing some labour with his other hand, when a piece of wood fell down the shaft from the surface, descending upon the deltoid muscle of the limb by which he was holding, and thereby forcing the head of the humerus into the axilla. In this case the deltoid became so paralysed, and wasted away to such an extent, that the man did not recover the power to lift his arm, or the serviceable use of his limb, for quite fifteen months. I consider my mode of reducing these dislocations to be, in a great measure, new; and I further consider it to be exceedingly neat and easy, as well as invariably successful in all recent cases. The best proof of this is, that I have never used chloroform or any other anæsthetic in any one of my cases. I place the patient (with the injured limb stripped of all clothing, of course) sideways on a strong chair, the sound side of the patient resting firmly against the back of the chair. I then place a jack-towel around the patient, as far up under the arm as convenient, and give the ends, either through the bars of the chair, or over the top of the back of it, into the hands of a strong attendant. I then fasten another towel around the injured limb just above the elbow, by the clove-hitch (or the simple reeve-knot, which does quite as well), and deliver the ends of this towel to another attendant, who, when in action, stoops or crouches somewhat. I instruct the first attendant, when I am ready, to fix one of his knees, or both, against the chair, and to keep the patient firmly fixed against the back of the chair, while the other assistant makes steady extension downwards and outwards from the elbow. Or I may put two attendants to the towel fastened above the elbow, if necessary. I then place myself by the side of the attendant (but towards the back of the patient) who is to make extension at the elbow. When all other matters are ready, I place both my thumbs on the point of the shoulder, at the end of the acromion, and press the fingers of each hand, the one before and the other behind the arm, into the axilla under and inside the head of the humerus. I cannot bring it down and out from where it is lodged by the force of my own hands, as I bring it against the neck of the scapula, or the rim of the glenoid cavity; but almost immediately that I order the attendant, or attendants, having charge of the towel fastened above the elbow, to make steady extension downwards and outwards, I find the head of the bone to descend from its abnormal resting place, while I assist and guide it, and simultaneously with its escape from within the rim of the glenoid fossa it springs into the cavity with a very audible snap. When this is done, and I find that the reduction is complete, by gentle movement of the limb forwards and backwards, with one of my hands on the point of the shoulder, and the other at the elbow, and by tilting up the arm, etc., I place a wedge-shaped pad in the axilla, fastening it in the usual way over and under the other shoulder, confine the elbow closely to the side, put the hand in a sling, order an embrocation to be anointed over the injured shoulder, and enjoin this rest of the limb for a week or more. I think I may correctly say that all my cases of dislocation of the shoulder have been downwards into the axilla.

My plan has never failed me in any recent case, and has never required, as before stated, either anæsthetics, bleeding, or other relaxing means. I cannot conceive anything less agreeable to bystanders, or the patient, than to place the patient on his or her back on the floor, and to stick your heel, especially if the stocking should not be quite sound or clean, into his or her armpit, and then to begin pulling and

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

wriggling the patient's arm, while the operator assumes a very formidable posture and movements, staring horribly and getting red in the face with his exertions, to say nothing of the danger of causing traumatic aneurism of the axillary artery and other minor evils.

I have seen failure in two old standing cases, where, in fact, however, no plan could have succeeded with safety. In one of these cases I assisted my friend, Mr. Kemphorne. In this case, we even made use of pulleys for extension from the elbow. But here we found, as did I in my own case also, that not only might rupture of the axillary artery, and of other parts, have taken place from persistence in the efforts for reduction, but it became quite evident, on making the necessary extension, that the glenoid cavity had become unfit to receive again the head of the humerus, by the adhesion of the soft parts to it, etc. I should add, that Mr. Kemphorne's case was that of an elderly miner who had received his injuries some months before, and had been under the care of a practitioner resident in another town; and that my case was that of an economical old lady who had been standing on a chair and fallen from it, seven weeks before she had applied to me, and who had hoped, although she had suffered terribly, that she had only sustained a bad sprain.

I have found injuries of the elbow to be exceedingly frequent (and to cause me much anxiety, and often embarrassment), especially in children of various ages, and more particularly in boys; while I have found fracture of the shaft of the humerus, or of the humerus in the upper third, to be rather scarce. Probably most country surgeons have had experience similar to my own as to the frequency of injuries at the elbow in young persons, from the fact that children in the country have almost unlimited opportunities for roaming about, for play, wrestling, climbing, running, riding donkeys, horses, etc.; and labourers' boys, and often farmers' sons, are put to work also very early, and too frequently to kinds of work, as with horses in carts or otherwise, for which they are unfitted. One of the greatest difficulties in these accidents is the rapidity with which swelling takes place, and the extent often to which it proceeds, before the surgeon can get the opportunity of examining and dealing with the case. Of these elbow injuries, a considerable number of cases in my practice have been instances of fracture of the humerus at the epiphysis, or of the separation of the epiphysis (comprising the condyles and articulating end) backwards. These cases, when uncomplicated, I have found easy to deal with, by bringing the epiphysis and forearm forward into their proper position, and applying angular splints, made of leather, mill-board, or by using Hides's angular felt splints of suitable size, and applying also, as I always do, a hollow straight wood or zinc splint behind, and a very short hollow wood splint or firm pad in front. I have had a few cases also where the point of the olecranon is broken off, and this has occasionally happened with adults. I have also had some cases where the inner condyle has been broken off. But, perhaps, the most numerous cases I have had of elbow injuries have been those of dislocation, simple or complicated with fracture, of the end of the humerus in front of the coronoid process of the ulna—or of the ulna backwards. In these cases, and especially in those of dislocation complicated with fracture, as I have before said, there is rapid and great swelling, which is a great obstacle every way to the diagnosis and the reduction. In such cases, more even than in simpler cases, you must handle and manipulate the injured parts sufficiently to be quite satisfied, if possible, as to the nature and amount of the injury, and then, on applying the necessary force for putting the displaced parts right, I have more than once seen a very serious looking livid spot in the bend or flexure of the joint. Of course, when you are satisfied that you have an ordinary case of dislocation only, the best plan by far for the reduction is that usually recommended, of placing your foot on the chair on which the patient sits, somewhat sideways (with an attendant fixing his body to the back of the chair), and placing your knee in the hollow of the elbow, one hand grasping the humerus and the other the forearm, and then making steady extension with the latter. I have sometimes effected the reduction by the hands alone, either by fixing the humerus by one hand, and making extension on the forearm with the other, or by causing an attendant to keep the humerus fixed, while I have used both my own hands on the forearm, sometimes guiding the end of the humerus by one thumb. Having completed the reduction of the dislocation, and ascertained that the patient's forearm can be satisfactorily flexed on the arm, I order a liniment, have the limb lightly bandaged, or wrapped up in old flannel or cotton-wool, and put in a sling, of course in the semiflexed or rectangular position; and I almost invariably, either at once or in a day or two, according to the degree of swelling, put on angular (rectangular) splints, but not tightly. This is not only desirable to prevent the risk of recurrence of the displacement, but I find that the swelling and inflammation subside much faster and much more completely in splints—in fact, in some cases it seems doubtful whether the patient would not get persistent or chronic

disease without them. In many of these cases some alternative or saline febrifuge medicines are required.

But I have had two very complicated, as well as severe, cases of injury to the elbow-joint, of dislocation complicated with fracture. Both of these cases occurred in boys, one about fifteen years old and the other eleven; in both, there was excessive swelling, when I reached the patients, from delay as well as from the severity of the injuries; in both, so far as one could ascertain, there seemed lateral dislocation, as well as that backwards—the ulna seemed greatly too much external to the humerus. This remained partially the case after the reduction of the backwards dislocation had been effected, viz., the inner condyle projected too much inwards. Was this owing to the condyle being partially split off, or to the outer condyle being partially split off, and one side of the end of the humerus thereby separated, to a certain extent, from the remainder of the end of the bone, and the outer part carrying the ulna with it? or was the coronoid process of the ulna broken off and displaced, or drawn away by the brachialis anticus muscle, and thereby the anterior guide of the ulna, in its perfect movements, lost—by which means also the inner parts of the end of the humerus, of the trochlea, etc., would become more or less uncovered, and, in extension especially, project too much forwards? It was impossible to be certain on these points at the time, from the immensity of the swelling, and it was absolutely necessary to desist from any further manipulation, from the threatening discoloration in the bend of the elbow, etc. In these two cases the process of reducing the swelling was very slow and difficult; in one of them, especially, the feverish state and constitutional disturbance of the patient were rather grave. In both cases it remained absolutely impossible to perform any further manipulations for about a month, and then it would have been too late in young subjects like them to adopt fresh operative proceedings, as no doubt fresh inflammation and fresh swelling, etc., would have been induced, with the probability of permanent joint-disease; and, moreover, although the elbows were large and looked somewhat deformed on the cessation of treatment, and were incapable of allowing either complete flexion or complete extension, yet I could not, and cannot now, see what more could have been done had the time been still opportune for proceedings; and this conclusion was confirmed in one of the cases by another surgeon of judgment and experience. I need hardly say that in both cases the patients have strong, useful, but certainly somewhat damaged, limbs.*

Before closing this part of my subject, I would wish to remark that I have had many cases of fracture of the forearm, either of one or both bones, in grown persons as well as in boys and girls of all ages. In the latter cases, however, I have often found the bones bent instead of being completely fractured, like a tough stick, which has been so far broken as to be useless as a support, while yet the ends are not completely separated. I have also had numerous cases of Colles' fracture, and always found them more or less unsatisfactory to deal with, until the new system was taught of the long pistol-shaped splint on the dorsal surface of the hand and forearm, and the short straight splint on the anterior or palmar surface of the forearm.

Before concluding this, I fear, long paper, I beg further indulgence to refer particularly to one very striking instance, different from those before referred to, of injury to the arm near the elbow. The case was that of a boy about nine years old. He was, on a Sunday evening, of course without permission to do so, riding a donkey, and a larger boy was riding a horse immediately behind. The big boy rode on to, and beat, the donkey; the donkey kicked out, the small boy was thrown over his head; the horse scrambled in upon the boy; the boy was brought home, and I was sent for. I found the epiphysis at the lower end of the left humerus completely separated from the shaft of the bone, and carried backwards, and the shaft sticking out through the flesh on the front of the arm, close to the outer edge of the commencing tendon of insertion of the biceps, to the extent of about an inch, and quite denuded of periosteum. The accident had occurred about three hours before I could reach the boy's home. I found it impossible to return the end of the shaft of the bone into its proper place, or very difficult to do so, even if I had thought it important to do it; but, from the bone being quite stripped of periosteum, and having been exposed to the air

* I have very recently examined both these cases. In both, the articulations of the radius are perfect, and, consequently, its movements in pronation and supination are unimpaired. In both, extension can be made almost completely; but the power of flexion is less perfect, although the forearm can be brought up considerably above the rectangular position. In the larger boy, the inner condyle was evidently split off, and so bruised and injured, moreover, that about a fortnight after the accident the integuments gave way, and it has since developed a distinct exostosis, or second condyle. In the smaller boy the coronoid process was evidently broken off, as before suggested, and the inner portion of the end of the humerus appears to be thickened and enlarged—hypertrophied; consequently, on extending the forearm, the inner part of the trochlea becomes prominent—too much exposed to view and touch.

for about three hours, I deemed it better surgery to saw off the projecting portion, which I did, and then brought the arm and forearm into proper relative position. I dressed the aperture with water-dressing, and applied angular splints, and made the limb look quite nice. But, on the following day symptoms came on which caused the necessity of redressing the wound, readjusting the splints, and applying cold wet cloths; and, by the third day, great irritative fever, great swelling, and discharge of bloody serosity had resulted. I had to take off all my neat and nice appliances, to apply cold lotions, etc. On the twelfth day, from some unknown cause, the discharge became alarming—it had the colour of blood, but yet was not perfect blood or perfect hæmorrhage—some blood-corpuscles in a flood of liquor sanguinis. Still, it was so great, that I thought it necessary to plug the aperture and channel with a pledget of lint wetted with turpentine, and to apply a cold wet compress. The boy looked fearfully ill, hot skin, with quick, weak, jerky pulse, quick breathing, very foul tongue, offensive breath, and that indescribable pallor which indicates more than loss of blood—a peculiar form of fever. After an interval of a day or two, however, the discharge had lessened and become more serous; after a further interval, the feverish symptoms and the swelling began to abate; the patient was able to take some food. When the swelling began fairly to go down, its disappearance was rapid; all discharge gradually ceased; and in the end the boy made a very good recovery, with a shapely and useful limb, and perfect joint. There is some deficiency in attempting complete flexion, but not in any other movement. I have examined this boy during the last few days. The shortened shaft of the bone made complete bony union with the end or epiphysis. There is a hollow, deep, indrawn cicatrix where the shaft of the bone projected, from the adherence of the soft parts to the bone, and the limb is less muscular and powerful than the other, but as useful in all other respects.

I would sum up my paper by saying that I have a salutary dread of injuries at the elbow, and perhaps a greater one of those at the hip, especially in old persons.

CASE OF DOUBLE VENTRAL HERNIA:

ONE STRANGULATED ON ADMISSION; THE SECOND BECOMING SO FIVE DAYS AFTER OPERATION ON FIRST. SECOND OPERATION: RECOVERY.*

By EDWARD WOAKES, M.D., Luton.

GEORGE G., aged 61, was admitted into the Luton Cottage Hospital April 11th, 1873, having a hernia on each side of the linea alba, about two inches above the umbilicus. They were distant from each other about one inch and a half. That on the right side was strangulated, and had been so twenty-four hours; he had experienced difficulty in reducing it for nearly a fortnight.

He stated that he had been the subject of dropsy during the past winter, causing great distension of the belly, and that, on the subsidence of this, two months prior to admission, the ruptures became apparent.

When admitted, he had stercoraceous vomiting, a quick irritable pulse, intense pain in the back, and the tumour of the right side, which was about the size of a pullet's egg, was very tense and painful; that on the left side was easily reducible.

April 11th. At 1 P.M. he was put under chloroform, and, the right tumour being still irreducible, an incision two inches in length was made through the integument, half of it extending upwards towards the ribs in order to expose as little as possible of the sac. The ring, which was thus readily reached, was very tense, and when divided nearly a quart of ascitic fluid escaped, the remains apparently of his dropsy. The bowel, as seen through the sac, was exceedingly dusky; it was easily reduced. The wound was closed with sutures. After the operation he vomited once. He was directed to be fed very sparingly on iced milk, and ten minims of liquor morphie were given every four hours. A turpentine stupe was applied to the abdomen.

He progressed without a bad symptom, the pulse gradually falling to 60 up to April 15th; when the bowels not having been relieved, though he complained of weight and fulness in the rectum, with the desire to evacuate without the power to do so, I ordered him an aperient of calomel and rhubarb. In the night this operated, and, contrary to instructions, he got up to the nightstool. In this effort, the hernia of the left side became strangulated.

April 16th. This morning, the left hernia was found tense and irreducible. Ice was applied, but without effect, and during the day

severe symptoms of peritonitis supervened. The pulse rose to 120. There was great pain, referred to the back, but no sickness. In the evening, there being no abatement in his condition and collapse threatening, it was deemed desirable to operate. At 8 P.M. chloroform was administered, and a similar operation to the previous one performed. On this occasion, however, great difficulty was experienced in reaching the ring, owing to the overlapping of the gut on the side of the incision. Very little was seen of the sac during the operation. Reduction was effected after somewhat free division of the ring. He was given a grain of calomel and a quarter of a grain of opium every three hours. Besides iced milk, some brandy was added.

April 17th. He passed a good night. Pulse, 104. There were much tympanitic distension and tenderness in the region of the transverse colon. He was ordered to continue the calomel and opium.

April 18th. He passed a restless night. Pulse, 112. He had had three loose motions. The tympanites was diminished; the tongue less foul. He was a good deal exhausted. The brandy was increased to three ounces. Later in the day he had frequent stools containing bloody fluid. He was ordered to take the morphia draught as on the former occasion, instead of calomel and opium.

April 19th. Pulse, 104. He passed a quiet night. There was less purging, and he was altogether better. He was ordered to take beef-tea, milk, and arrowroot.

From this date he continued to improve, convalescence being apparently aided by a grain of quinine, with an eighth of a grain of morphia three times a day.

REMARKS.—Mr. Bryant, in his recent treatise on Surgery, lays down the rule that umbilical hernia always increases downwards, thus affording a guide to the situation of the incision when operating. Now, though this was the case in the right tumour of my patient, in the left the reverse condition presented itself, and added much to the difficulty of reaching the ring. It is worthy of note, therefore, that, though Bryant's law may be absolute in umbilical hernia, it does not always obtain in hernia, which, though very near the umbilicus, do not take place actually at this spot.

In view of the extremely unfavourable effects of opening the sac in such hernia, or of any undue interference with its contents, I was careful to see as little of the intestine as possible, and was fortunate in being able to reach the seat of constriction in both operations through an incision only long enough to allow the introduction of the finger.

In conclusion, I would testify to the good effect of opiates continuously administered, in checking the sequences of so serious a lesion of the intestine as happened in the above instance. I attribute the patient's recovery to the fact of his being kept in a state of narcotism for two or three days after the second operation. Under the influence of this drug, nature's bowel-splint, as it has been called, the intense congestion of the gut subsided, the surrounding peritonitis gradually disappeared, and the intestinal tube resumed its normal condition.

ON THE INOCULABILITY OF EPITHELIOMA.

By J. WICKHAM LEGG, M.D.,

Casualty Physician to St. Bartholomew's Hospital.

I WISH to place on record the results of a few experiments with the inoculation of epitheliomatous tumours, made about two years ago.

My observations were all made upon guinea-pigs and white rats. They differ from those which have hitherto been made, in the length of time which passed between the cutting out of the tumour and the inoculation. In the successful inoculation of malignant growths which have been recorded of late years by Follin (*Traité de Path. ext.*, 1, 303) and Goujon (*Journal de l'Anat. et de la Phys.*, 1867, p. 319), some hours must have gone by between the operation and the inoculation. It would thus seem probable that all life had left the tumour. It would then act as any dead mass would act, without any of the specific action supposed by some to belong to malignant tumours. In my own observations, I proceeded as follows. The animals were rendered insensible by the injection of three or four grains of chloral under the skin. The hair was then cut off some part of the skin, usually about the flank; and a cut about ten or twelve millimeters long was made through the skin into the subcutaneous connective tissue. By means of a probe, a space was made under the skin for a short distance, into which the inoculating matter was to be inserted. A suture of silk was then passed through both edges of the wound; but the thread was left quite free, not knotted. The animal was then ready for the inoculation. As soon as the tumour was loose, a thin slice, taken from where the tumour was most rapidly growing, was pushed under the skin, or in two cases into the peritoneal cavity; and the edges of the wound were at

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

once brought together by the suture. By this means, not more than sixty or eighty seconds passed between the separation of the tumour and its inoculation. The diagnosis of epithelioma was in all cases confirmed by the microscope. I do not speak here of observations upon other malignant growths which I have made.

EXPERIMENT I.—July 1st, 1871. A black and white guinea-pig was inoculated with epithelioma of the penis into the left flank, and also a black tan and white guinea-pig with the same material into the peritoneum. These animals were killed at Christmas 1871; but nothing unnatural could be discovered on examining their bodies. No tuberculosis was found.

EXPERIMENT II. August 9th, 1871. I inoculated a black and tan guinea-pig with epithelioma of the scrotum. It was found dead on October 19th. It was examined; but no new growths were discovered, or, indeed, any cause of death.

EXPERIMENT III.—November 8th, 1871. A guinea-pig was inoculated with epithelioma of the uterus into the left flank.

EXPERIMENT IV. November 22nd, 1871. Two white rats, aged three months, were inoculated with epithelioma of the tongue—one under the skin of the rump, the other into the peritoneum.

EXPERIMENT V.—January 6th, 1872. A piebald rat was inoculated under the skin of the flank.

The animals in these last three experiments were all killed and examined on May 10th, 1872. There were no discoverable lesions or new growths. It may be well to state that the places of inoculation, beyond the scar of the cut, showed a perfectly natural appearance. During the first few weeks that followed the inoculation, a hardness could generally be felt around the place; but, at the time of death, it always presented a perfectly natural appearance. No tuberculosis, either, as might have been expected, was found.

In conclusion, I wish to express my best thanks to Mr. Savory, Mr. Callender, and Mr. Thomas Smith, Surgeons to St. Bartholomew's Hospital, and to Mr. Nunn, Surgeon to the Middlesex Hospital, for the opportunities which they kindly gave me for making these observations.

ON A CASE OF SEBACEOUS TUMOUR IN THE EXTERNAL AUDITORY MEATUS.

By JOHN ST. S. WILDERS, M.R.C.S.E.,

Surgeon to the Queen's Hospital and the Infirmary for Diseases of the Ear and Throat, Birmingham.

ANNE B., aged 31, came under my care on December 1st, 1872, suffering from deafness. On examination, both ears were found to be affected. The tick of a watch was not heard on the left side on very close contact. On the right side, the hearing-distance was about the sixth of an inch. She attributed her complaint to frequent colds. The right ear had been affected five, the left four months. The tinnitus was very loud and distressing in both ears. In the right ear, she had severe pain, which extended to the jaw and down the right side of the neck. She had had a slight discharge from the right meatus; none from the left. At times she had severe attacks of vertigo. On examination with a Brunton's speculum, the right membrana tympani was opaque, lustreless, and concave. The membrane on the left side could not be seen, owing to the presence of cerumen in the meatus. The tuning-fork, when placed on the vertex, was heard most distinctly in the left ear. The ears having been syringed, some epithelial debris and purulent discharge were removed from the right, and a quantity of hardened wax from the left meatus. On the removal of the cerumen, I again examined the left ear, but was unable to see the membrane on account of a dirty white mass which entirely blocked up the posterior portion of the meatus. On resuming the syringing, a few silvery-looking scales were removed. Having introduced a Gruber's speculum made of gutta-percha, and illuminated it with an ordinary laryngeal mirror on my forehead, I seized the mass with a pair of tiger-toothed forceps, and succeeded by gentle traction in removing a tumour somewhat the size and shape of a large hazel-nut. The membrana tympani could now be seen; and, with the exception of its being more concave than normal, its appearance was healthy. In a short time, the hearing-distance on the left side was twenty-two inches. On a careful examination of the right ear, I found that the Eustachian tube contained a quantity of unhealthy mucus, which accounted for the condition of the membrana tympani on that side. The patient feeling rather giddy and faint, I sent her home, after applying iodine liniment to the back of the ear and the upper part of the neck on the right side.

On December 3rd, she reported herself greatly improved. The pain and tinnitus in the left ear had quite subsided. She said that the

hearing on that side was as good as ever; and the actual hearing-distance was three feet. The discharge from the right ear was diminished, but she still complained of severe tinnitus. The hearing-distance was two inches. The drums on both sides were inflated by means of Politzer's bag. The air passed freely into the cavity of both ears, but with a moist sound into the right. She was ordered to continue the painting, and to fill the right ear every night with the following lotion: R Acidi carbonici, zinci sulphatis, aa gr. xxiv; aquæ destillatæ ℥viij; and to take five grains of iodide of potassium and ten grains of ammonio-citrate of iron in water three times a day.

December 7th. The tinnitus in the right ear had considerably decreased. The hearing-distance was thirteen inches. On examination, the membrana tympani was normal in shape and less opaque. The cone of light, though somewhat dull, was to be seen. The left ear was in a very satisfactory condition; the hearing-distance was three feet three inches. Politzer's bag was used, and the treatment continued. The faucial opening of the Eustachian tube was sprayed with solution of nitrate of silver (fifteen grains to the ounce) by a silver tube perforated with fine holes passed through the nose. This treatment was steadily pursued for about a fortnight longer; and on December 31st the report was, that all tinnitus and pain in the right ear had ceased. The hearing-distance was two feet six inches; and the membrana tympani, with the exception of a slight opacity, was normal. The left ear, to use her own expression, was "as good as ever".

The tumour was about the size of a large hazel-nut. It was enclosed in a firm envelope consisting of areolar tissue. Under the microscope, it was found to be composed of flattened cells of a large size, arranged in layers.

These sebaceous tumours of the auditory meatus are very rare, and frequently occasion the death of persons suffering from them by causing so great an absorption of the bone that a communication is established in some cases with the mastoid cells, in others with the cavities of the brain or cerebellum. The late Mr. Toynbee records only ten such cases in his valuable work on the *Diseases of the Ear*; but, as mentioned by Mr. Hinton in the appendix to that book, he afterwards brought under the notice of the Royal Medical and Chirurgical Society twenty more cases; in five of these, the sebaceous tumour was the immediate cause of death. Three cases have been under Mr. Hinton's care, which all proved fatal. It is noteworthy, that in my case, although the tumour was very large, no absorption of the bone had taken place. This was probably owing to the fact that it was of recent origin, the woman having only experienced inconvenience for about five months. But that some such absorption would soon have taken place, I feel convinced, as the tumour, when removed, was very much compressed, and must soon have expanded in the direction of the bone, which in all these cases seems to give way in preference to the membrana tympani. To effect a radical cure, it is absolutely necessary that not only the sebaceous matter should be removed, but also the firm investing capsule, which, in the words of Mr. Hinton, "appears to be the parent of the cells." In this case, as in the removal of aural polypi, I found Allen's three-bladed tiger-toothed forceps far more efficient than the lever ring forceps, as I was unable to seize the growth with the latter, while with the former I did so with very great facility, without any incision into the cyst-wall. The affection of the right ear requires no comment, as it was simply due to catarrh extending to the Eustachian tube.

NOTES ON A CASE OF TUMOUR IN THE BRAIN.*

By E. F. FUSSELL, M.B., M.R.C.P.L.,

Assistant-Physician to the Sussex County Hospital; Physician to the Brighton and Hove Dispensary.

I WAS requested by the house-surgeon of the dispensary to see a tinman, aged 47, the father of five tolerably healthy children. He had never suffered from any serious illness. He imbibed considerably, but was never seen intoxicated. For some months he had complained of excessive pain in the right side of the head; this at times was so acute that he would hold his head with both hands, cry out, and declare that he should go mad and be sent to the county lunatic asylum. He had been excessively irritable. About five or six weeks ago he began to stagger in his walk, and one day at dinner he suddenly fell forwards on the table, but did not lose his senses. When first seen, he was thought to have incipient symptoms of delirium tremens. When I was called, he was lying on his back in a kind of semi-consciousness, his motions and urine passing involuntarily. By shaking him and talking very loud, he

* Read before the South-Eastern Branch.

could be roused; and, on being asked if he had pain, answered affirmatively, pointed to the right side of the head, and immediately relapsed into his partially comatose state. The temperature in the axilla was normal. He could swallow slowly. There was no vomiting, no spasms, or rigidity of the muscles. The pupils acted sluggishly. There was less muscular power on the left side than on the right. On being pinched, he drew both his legs up. There was no albumen in the urine. He had no blue line on the gums. He had no convulsions; but the stupor gradually became more profound, and he died comatose within a month of his being confined to bed.

POST MORTEM EXAMINATION.—The body was well nourished, and the chest broadly developed. The bones of the skull were quite free from any external swelling, and from caries on their internal surface. There was a tumour of the size of a pullet's egg under the right middle lobe, which was compressed and flattened; it was between the arachnoid and dura mater, adherent to the latter, but quite distinct from the brain-substance. The centre presented a yellowish aspect. Under the microscope it showed a number of corpuscular bodies embedded in a fibrous stroma, but no elements of a malignant type. After this microscopical examination, I again went to the house and looked at the organs of generation, but no scar of any kind could be detected on any of them, or in the groin. Permission was only given to open the head.

Tumours of the brain are not very uncommon; still there are points more than usually interesting in the above case: these led to a tolerably correct inference as to the cause and seat of the symptoms. 1. The pain, which was from the first the most prominent symptom throughout the illness, was confined to one spot, at a part precisely corresponding to the locality of the tumour; it was constant and very severe—these features being occasionally, but not invariably, specially characteristic of a tumour in the brain. 2. The tumour must have existed long before it gave any objective signs, yet the intellect and special senses were but slightly affected till within about three weeks of the patient's death—corroborating, by the long continued freedom from any very material symptoms, that which is so true in many of these cases; viz., that a considerable mass may exist in the encephalon, and the brain be softened, without any manifest evidence of such lesions. 3. As to the nature of the tumour, tuberculous deposits are for the most part located within the brain, but in my case the foreign body was quite apart from the brain-substance; and, as far as could be ascertained, there was no phthisical taint in the patient or in his family. Its position corresponded, perhaps, with that of a syphilitic deposit; but, apart from there being no history of syphilis, there were no nodes or carious spots in any part of the bones of the skull; the membranes were free from any exudation, and not adherent to the surface of the brain. The absence of any cancerous cachexia, and the non-existence of tumours elsewhere, excluded perhaps malignant disease. Moreover, the appearance of the tumour to the naked eye and under the microscope precluded the supposition of cancer. The tumour had a close connexion with the dura mater, and appeared to spring from it; and it contained no fat or pigment cells. Both in its seat and structure it corresponds to one recorded in the Catalogue of the Pathological Museum of St. George's Hospital, designated fibro-cellular; and from a review of the whole circumstances, I should class the preparation on the table under that head.

STRAY WORDS ON CHOLERA.

By GEORGE GASKOIN, Esq.,

Surgeon to the British Hospital for Diseases of the Skin.

LIVING under the daily apprehension of cholera, the present would seem a favourable moment to make a common fund of ideas on the subject. My name is already, fortunately, connected with that of Macpherson and others who have contributed to its history. In this JOURNAL I first broke ground on the question more than six years since under the signature of "G," and the particular line I struck out I have had the pleasure of seeing followed, both here and abroad, with full success in the study of Hindoo records. I now turn to English sources. The excellent letter-press of Lodge's *Portraits* (vol. i, p. 172, Cabinet edition, 8vo), reproduces the Journal of Edward the Sixth, in which we find as follows: "At this time came sweat to London, which was more vehement than the old sweat, for if one took cold he died within three hours, and if he escaped it held him but nine hours or ten at most. Also, if he slept the first six hours, as he should be very desirous to do, then he roved [wandered], and died roving. It grew so much; for in London, the 10th day, there died 100 in the liberties, and this day 120, and also one of my gentlemen; another of my grooms fell sick and died; that I retired to Hampton Court, with very few with me."

I put it to physicians—Is there any disease other than cholera that can kill thus in three hours? If they say Nay, but the sweating sickness. What do we know about that, I would ask, that can be affirmed with any precision? This contagion seems to me to have been no other than cholera, with some slight variety of constitution. I would further ask, What is the meaning of the term "surfeit," so often mentioned as cause of death in English history? Does not this answer to the word "indigestives," used freely in Hindostan, and especially applied to cholera in its sporadic form? Did cholera ever prevail in Western Europe, as a contagious disease, before 1831? I believe that it did, and that, with industry, proofs of it might be found; but I cannot produce them conveniently. Did the Romans ever experience cholera as a plague? There is the indirect evidence to be drawn from the great attention they paid to water-supply; not that it was ever the idea of Snow that only cholera was conveyed by this channel; he applied it to other contagions and diseases. What is the *rationale* of the Roman aqueduct? It seems clear, from Mr. Parker's recent explanations, that the Romans perfectly understood the hydraulic principle, and made use of it in their reservoirs by the side of their aqueducts. There was no poverty of resource. But did they not also understand the principle of the purification of water through motion and contact with air? and is not this what they aimed at? It would seem so, for the conduit was only two-thirds filled with water with space for air above. Why such care for perfection in their water-supply? See the *Pont du Gard*, and then the point of gathering of these waters in the city of Nismes, where they meet, one might say, in a hand-basin. What cost, what labour, what finish, in all this! And what kind of experience led them to it? If we find in Hippocrates anything like a description of cholera, it will be grouped, I think, among camp or filth diseases. The last new thing in cholera is Dr. Tholozan's assertion, (see *Practitioner*, August, 1873), that since 1865 or so, cholera has maintained its ground in Europe without any wave of invasion from Asia; with this it seems some Russian physicians agree; they also say it has never died out in Germany since that year.

Has Asiatic cholera ever at any time died out in England since 1831? I fancy not, and cordially agree with Dr. Tholozan, that cholera is sporadic, endemic, or epidemic. The outbreak at Southampton, and that at Nashville in America, strengthen the idea of its being endemic. I am able to give the following data from my notes. In the year 1850, the year following the epidemic 1847-9, the deaths from cholera in England were 887; in the year 1851, they rose to 1,312; in 1853, they were 4,419; in the next year, 1854, they rose to 20,097; in 1855, they were only 887; in 1856, 766; in 1857, their number was 1,150; in 1858, they were 673; in 1859, they were 887; in 1860, only 327; in 1861, they rose to 837; in 1862, they were 517; in 1863, they were 807; in 1864, the deaths were 934. Then followed an epidemic. Thus the number never fell to a lower point than 327, and was generally much above it. This question should be gone into more completely by those who have full possession of the data. How is it, I would ask, that with so many published works on cholera, we have no transcript of Prinsep's excellent description, in his history of the war in India under the Marquis of Hastings, in 1817. It has been never appealed to. It would be good service to give it *verbatim*, if not for our own sake, at least for foreigners. I have not yet met with an Indian physician who is acquainted with it; but this is one of the best descriptions of cholera that exists. The impurity of the water is here boldly suggested as a cause. We read of the cavalry seized, as the first symptom, with a dizziness, and falling from their horses. The whole, though written with historical brevity, is admirable, and taken, no doubt, from the life.

THERAPEUTIC MEMORANDA.

THE TREATMENT OF ASIATIC CHOLERA.

THE note of Mr. J. P. Oates, in the JOURNAL of August 2nd, proposing a chalybeate treatment of cholera, induces me to suggest another mode of medication, which seems more in accordance with an accepted pathological theory. Assuming the correctness of Dr. George Johnson's view, that the prime action of the cholera-poison is to induce spasm of the pulmonary arteries, the well proven influence of nitrite of amyl in relaxing involuntary muscular fibre would appear, *a priori*, to justify a hope that this substance may afford relief. Furthermore, the circumstance that it may be administered by inhalation gives it an additional advantage, since even on the approach of the algid stage of cholera, the function of absorption is so nearly abolished as to render medication by the mouth almost, if not quite, futile.

ALFRED L. CARROLL, M.D.

New Brighton, Staten Island, New York, Aug. 20th.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASES OF INVERSION OF THE UTERUS.

(Under the care of Dr. GREENHALGH).

Reported by Dr. HOPE.

CASE I. *Inversion of the Uterus of more than a year's duration: Replacement by Taxis: Recovery.*—JANE C., aged 41, was admitted on July 19th, 1873. She stated that she had been twice married, and was the mother of eight children. She had always had good labours, and made good recoveries, with the exception of the last one. She had had one miscarriage some years ago (did not remember when), after which she did well. Her last confinement was twelve months ago, at which time she was attended by a midwife. She had a very lingering labour, and ultimately a medical man was called in, who delivered her with forceps. She stated that she flooded violently after the birth of the child, and there seemed to have been some trouble in the extraction of the after-birth; but she could give no further account of herself, as she lost consciousness, and was for some time in a very prostrate condition. Ever since this, she had been almost entirely confined to her bed; and during that time, notwithstanding medical treatment, she had suffered from constant "loss," and often profuse hæmorrhages.

On admission, she had a very anæmic aspect, and a very nervous excitable manner. She was sick occasionally, and at times a sense of faintness came over her, especially during efforts of defæcation, which was attended with much pain, and usually a confined state of the bowels. She was losing a slight amount of blood, and occasionally clots, *per vaginam*. There was a pain of a gnawing worrying character across the lower part of the back, and a feeling of a constant bearing-down and weight in the womb, especially on any exertion. She said that she could return something internally which seemed to press down "in the parts." This gave her temporary relief. Tongue clean; skin cool; pulse quick, very feeble.

On examination *per vaginam*, a well defined, elongated, and somewhat spongy swelling was felt, proceeding from the region of the os uteri, and protruding for some distance into the vagina. The finger could be passed round this mass, which bled readily on touch, and felt like a large polypus. Anteriorly, where the pedicle of the tumour seemed to spring, a sulcus could be felt; but the sound could not be passed in any direction more than a quarter of an inch. No uterine tumour could be felt through the lax abdominal walls on combined manipulation, the finger of the right hand being retained in the vagina, and firm pressure made with the left hand upon the hypogastrium.

On the 28th, she had been losing a little more blood than usual for the last twenty-four hours; but her general health was improved, and she could take her food better, which was of a light nourishing character. Her mind was more tranquil, and she slept better. She was ordered to have an ounce of gentian and rhubarb draught three times a day; and to have the vagina syringed out daily with a little Condy's lotion. On the 31st, a weak vaginal injection of perchloride of iron was ordered.

August 5th.—The vaginal discharge was much diminished, and she felt to be gaining strength.

August 19th.—She had been progressing favourably for the last ten days. The bowels were a little obstinate.

August 25th.—She was ordered syrup of iodide of iron in drachm doses, with dilute hydrochloric acid and quassia.

August 28th.—As she had gained health materially, and improved in every respect since her admission, Dr. Greenhalgh thought it advisable to make an attempt at the reduction of the tumour. This was accordingly done. The patient being placed on her back, and under the full influence of chloroform, the right hand was introduced into the vagina, and the taxis steadily and firmly applied to the tumour; some slight bleeding occurred, but the uterus was restored to its normal position within seven minutes' time. The vagina having been syringed out, an inflated air-bag was introduced, which, however, was not retained for any length of time, owing to the distressing retching and

sickness produced by the chloroform. The patient for some time was much exhausted, and considerable hæmorrhage followed, which, however, was arrested by the timely application of ice over the hypogastrium and *per vaginam*. Ergot was given, and the patient passed a fairly good night.

August 29th.—There was no return of the bleeding. She had slept fairly. There was some slight abdominal tenderness, or rather, as she expressed it, a feeling of soreness. The pulse was quiet. The urine was drawn off, as she was unable to pass it naturally. The temperature was somewhat above the normal average.

August 30th.—She had slept better, and continued to improve. There was some slight sanguineous vaginal discharge.

September 1st.—She was much improved in health. There was still some slight abdominal tenderness. The pulse was improved in strength and tone. The bowels had been freely opened by an enema. The tongue was somewhat furred and moist. She was able to pass her urine naturally.

September 4th.—She was examined *per vaginam*. The vagina was sensitive and much corrugated on the right side, where there was a peculiarly "ridgy" feeling. The uterus was in its normal position. There was much offensive muco-purulent discharge. She was ordered to have the vagina injected with Condy's fluid daily.

September 10th.—She was progressing most favourably towards complete convalescence.

CASE II. *Inversion of the Uterus of three years' duration: Ineffectual attempts at Reduction: Amputation: Recovery.*—ANNIE C., aged 28, single, was admitted November 9th, 1872, with the following history. She stated that, previously to her confinement she had always enjoyed good health. She was confined of a live child, at full period, two years and a half ago, after a hard labour extending over three days. Profuse flooding followed, which was accompanied by intense abdominal pain, and evidently a condition of profound collapse. She had an "impression" that a portion of the placenta was retained in the uterus for two days, when an attempt was made to remove it, which gave rise to acute suffering. Up to the time of her admission into the hospital, she had never ceased to lose blood in a greater or less degree, and at intervals she had been subject to profuse floodings. She remained in hospital for six months, during which time, several ineffectual attempts were made to reduce the inverted uterus. Whilst under treatment, she caught small-pox, and after a mild attack she was sent home quite convalescent from the disease; but all the while she remained at home she continued to lose blood, and was unable to get about. Her health became gradually impaired, and her state of bodily weakness was excessive.

On admission, she was very anæmic and suffering from great general debility. The skin was warm; and she occasionally had night perspirations. The tongue was pale and slightly furred. The bowels were reported to be regular. Pulse very compressible, 96, regular. Appetite fairly good. She was not suffering pain, and the abdomen was not tender or sensitive on pressure. She was losing a slight amount of blood *per vaginam*.

On examination, the vagina was found to be of normal length, and in its centre was an oval, soft, elastic swelling, the long axis of which corresponded to that of the axis of the vagina. Above this swelling, and high up, was a ring more narrowed in front, into which the tips of the fingers could be passed. There was an entire absence of uterine tumour upon hypogastric pressure. She was ordered liberal diet, wine, quinine and iron, and all was done to restore her general health.

On the 18th, an air-bag was introduced into the vagina, which caused some pain, but no diminution of the size of the tumour. A few days after this an attempt at reduction was made by means of steady taxis, the hand being introduced into the vagina, and the uterine tumour manipulated for twenty minutes at a time, but without any perceptible result. No hæmorrhage followed; and the air-bags were again introduced. These attempts at reduction by means of taxis were persisted in for some weeks, but very little impression was made on the size of the tumour. Periodical attacks of flooding occurred, which were checked by various astringent applications. Oxide of zinc, gallic acid, matico, and other hæmostatics were administered internally; also ergot, cannabis Indica, and the extractum venæ majoris in drachm doses, but with only transitory results. Iodised cotton-wool was also applied locally.

In March last, she again suffered from profuse loss, which pulled her down very much, and she lost ground considerably. These severe floodings generally recurred at what she thought would correspond with her catamenial periods. For the whole of April she did very well, and regained her strength materially, and the "loss" was quite trifling; but in the earlier part of June the hæmorrhage again recurred with much constitutional disturbance, and she again fell back into her old

anæmic state, with quick feeble pulse, and cedema of the face and extremities; indeed, she was so ill that her life was placed in a most critical state, and it was thought advisable to have a consultation as to what should be done.

On June 26th, Mr. Smith removed two-thirds of the uterus by means of the *écraseur* wire; this was done slowly, and occupied eight minutes. Morphia was injected subcutaneously, and no hæmorrhage of any importance followed the operation; not a single bad symptom supervened. She gradually improved in health, regained her colour and good looks, and was able to leave the hospital five weeks after the operation quite convalescent. At the expiration of that time, on examination *per vaginam*, a circular ring could be felt, where the os uteri should be, soft to the touch and resembling the os uteri in all respects, remarkably well formed.

REMARKS BY DR. HOPE.—Happily, inversion of the uterus is of rare occurrence; and, doubtless, there are many medical men engaged in extensive obstetric practice, who have never seen an instance of this very formidable accident. That cases of this nature are, however, still occasionally met with—and are unrecognised when they do occur—the above recorded instances sufficiently testify. It has been stated, that this accident has occurred in the natural condition of the unimpregnated womb; but of this there are grave doubts. By far the majority of cases on record have occurred in connexion with parturition, and have been, more or less, distinctly referable to the management of the third stage of labour, and the extraction of the placenta. In proof of this statement, the late Mr. Crosse of Norwich, in his *Essay on Inversion of the Uterus* (part ii, p. 70), states that in 350 out of 400 cases of inverted womb of which he had found mention, the accident occurred in consequence of parturition. In the remaining 50 cases, it was said to have occurred in connexion with the presence of a polypus in the interior of the womb. A good example of this nature has been recently recorded by Mr. Field, in the *St. Bartholomew's Hospital Reports for 1872*, vol. 8, p. 133. It is, then, obviously essential that there should exist, at the time of the accident, an enlarged uterus, and a more or less relaxation and inertia of that organ.

In both the cases above described, the symptoms of this sad catastrophe—the profound shock to the nervous system, and the profuse hæmorrhage, etc.—were entirely overlooked or misinterpreted, and the most precious of all time was lost, *i.e.*, immediately after the occurrence of the accident, for replacing the womb. The affection was allowed to become chronic, and with what result in the one instance—that of Annie C.—the history of the case too sadly shows. Both are however, in their history and progress, typical examples of this grievous accident, and serve to illustrate the usually retrograde course which such cases, when chronic, are, in the majority of instances, prone to take. It was quite obvious that, had not amputation been performed in the one instance, the patient must have lost her life, from the exhausting discharges and the profuse hæmorrhages which had undermined her health to the last degree.

From these two instructive and rare cases, many useful practical lessons might be adduced, but space will not suffice. We may at least learn the following lessons.

1. Though the prognosis of chronic inversion is at all times grave, and its tendency is to destroy life, still every effort should be made, judiciously and cautiously, to replace the organ; and that these efforts may succeed—as in the first case—notwithstanding the length of time that the inversion has existed, and the unpromising aspect of the case.

2. Of all methods of treatment, the combined use of the taxis and elastic pressure seems to be the most reliable; and there are, I think, few cases that will resist this plan of treatment.

3. The operation for the removal of the whole organ should never be resorted to without sufficient grounds, and before all efforts at reduction have been fairly tried. It must be as a last resource, as the operation is one of the most hazardous kind, and renders the patient for ever incapable of performing the functions of her sex.

4. The removal of the uterus, although attended by great danger, often ends in recovery. In confirmation of this, Dr. West has given the following most comprehensive table; and it, at the same time, shows the result obtained by the different modes of performing the operation.

	Recovery.	Died.	Operation Abandoned.
Uterus removed by ligature in 45	33	10	0
Knife or <i>écraseur</i> 5	3	2	0
Knife or <i>écraseur</i> and ligature 9	6	3	2
59	42	15	2

5. The method of operating seems to be decidedly in favour of the

écraseur. By the use of this instrument there is less risk of hæmorrhage, if the operation is slowly done. The whole mass is brought away, and there is nothing of a putrefying character left in contact with the walls of the vagina, to set up septicæmia.

6. When there is inertia of the womb after delivery, whether simple or complicated with flooding, no imprudent traction should be made in the cord, lest a separation of the placenta and frightful hæmorrhage be produced, or, worse still, should the placental adhesions resist the tractive force, the womb should be brought down along with the after-birth, and a partial or complete inversion of the organ be the consequence. We must never forget the cardinal point—that, immediately after the birth of the child, and before making any traction in the umbilical cord, it is most essential to ascertain the condition of the uterus. If it be small, hard, contracted, and situated in the lowest part of the abdomen, it is extremely probable that the placenta is in a great part, or entirely, expelled from the cavity of the womb into the vagina. When, on the contrary, the uterine tumour continues on a level with, or even above, the umbilicus, and has a "soft doughy feel," due to its imperfect contraction, the placenta is very probably within the womb; and the only way to insure its safe and ready expulsion, is to rouse the uterus from its apathy, by steady support, and a firm grasping of the uterine tumour by the hand; indeed, I think that, whenever an able assistant is at hand, such as a competent nurse, she should in all cases "follow up" the last contractions of the womb which expelled the child, so as to be enabled to retain the uterus in her grasp until the doctor is disengaged, and can hold the uterus himself. That should be persistently done until the placenta is expelled. Were this simple plan more constantly observed, I think there would be but few cases of *post partum* hæmorrhage, and scarcely ever an inverted uterus.

HOSPITAL FOR WOMEN.

CASES OF PRURITUS.

(Under the care of Dr. ARTHUR EDIS.)

DR. EDIS has considered that the following cases might serve as illustrations of the importance of arriving at a correct diagnosis of the cause of pruritus, as also of the mode of treatment applicable in cases of this troublesome complaint. In by far the greater number of instances, he believes that it is due to some granular condition of the os uteri, or to an acrid discharge from the vagina (as in case III), which needs only to be recognised to be treated successfully. Still, instances occur, which for a time baffle all skill, and cause much distress both to the patient and to the medical attendant. The following are of the exceptional rather than of the ordinary run of cases.

CASE I. *Pruritus: Eczema Vulvæ*.—C. D., aged 60, widow, for the last two years had been troubled with constant heat and irritation in the privates, necessitating her getting out of bed seven or eight times at night, to bathe herself. The patient was enormously stout, weighing about eighteen stone. On examination, the whole of the vulva and flexure of the thighs, together with the anterior portion of the perinæum, were found to be red and irritable; the skin was indurated, and covered with a bran-like desquamation. The uterus was normal; there was no unusual vaginal discharge. A lotion, composed of glycerine, borax, and bicarbonate of soda, in camphor-water, was ordered, to cleanse the surface of the skin; and on the following day an ethereal solution of nitrate of silver, (gr. xl to ʒj), was painted carefully over the whole of the affected surface. This produced a certain amount of pain, which was relieved by a morphia suppository. On that night, the patient slept better than she had done for months. Perseverance in the use of a lotion composed of glycerine and borax, with lead lotion, was enjoined; and when the irritation from the application of the nitrate had subsided, the patient reported herself as "perfectly cured." Ten months from this date she was seen, and had not the slightest return of the affection.

CASE II.—*Pruritus: Scabies. Granular Condition of the Os and Cervix Uteri*.—W. R., aged 29, married seven years, mother of three children, (the youngest two years old), had "suffered from intense irritation, and breaking out in the privates, ever since her last confinement." On examination, the pubes was found to be covered with small pustules, very inflamed. The uterus was retroflexed, bulky; the os and cervix uteri very granular. A lotion of dilute solution of subacetate of lead, and glycerine of borax, afforded much relief, but still the external irritation remained. Various remedies had been tried before, with but temporary relief. On examining more carefully, the recurrence of scabies was suspected, and the ointment of iodide of sulphur was prescribed. After a few applications, the irritation, which had always been worse at night, entirely subsided; and at her next visit,

the pustular condition of the skin had quite disappeared. In this case there were two sources of irritation, each necessitating a different mode of treatment.

CASE III.—*Pruritus: Leucorrhœa. Pregnancy.*—R. M., aged 28, married six years, mother of three children, now three months advanced in her fourth pregnancy, complained of constant irritation in her privates, together with leucorrhœal discharge, at times coloured. The bowels were constipated. On examination, the os uteri was found to be very granular, the vagina bathed with mucopurulent secretion. The application of nitrate of silver to the os, and the employment of a lotion consisting of dilute solution of acetate of lead, with glycerine of borax, succeeded perfectly in relieving the discomfort. A mixture of sulphates of magnesia and of iron was prescribed, to obviate the constipation. Cases of this disorder are very frequent during the early months of pregnancy, and occasion much distress. A careful examination and detection of the cause is the only method of dealing successfully with them; and, simple as this may seem, it is too often neglected.

CASE IV.—*Pruritus: Diabetes.*—D. J., aged 49, married thirty years, mother of twelve children, about two years ago had some skin-disease, which lasted over a twelvemonth. Since then she had lost flesh; she had no appetite, and was consumed with thirst, which nothing seemed to quench. The bowels were confined, the motions were hard and dry. Micturition was frequent; the urine was profuse in quantity, and she had to get up several times in the night to pass it. She had much irritation in the privates, which were sore and irritable, occasioning much distress. On examination, the vulva and surrounding parts were found to be red and irritable, the skin indurated, and covered with small pustules. The uterus was normal. From the history given, diabetes was suspected, and the urine drawn off and examined. It was clear, of a light amber colour, specific gravity 1034; and on boiling it with liquor potassæ and solution of copper, the usual indications of presence of sugar were very marked. A strong solution of nitrate of silver (a scruple to a drachm), was painted over the inflamed surface of the vulva; a lotion consisting of acetate of lead and glycerine of borax, was ordered; and tartrate of potash was prescribed, with the view of relieving the excessive thirst. It was found that the average quantity of urine during the twenty-four hours exceeded ten pints. The application afforded much relief to the irritation; but, as the diabetes was in all probability the occasioning cause, she was referred to a general hospital, and thus passed from observation. She had previously been doctoring for several months, without the nature of her complaint having been suspected.

CASE V. *Pruritus: Constipation.*—S. C., aged 45, married twenty-seven years, mother of eleven children, had suffered for several months from violent irritation and burning smarting pain in the anal region. The bowels were very confined. On examination, the skin round the anus was found to be indurated and very irritable. No fissure or hæmorrhoids existed. No uterine mischief was detected. A mixture of sulphate of magnesia and sulphate of iron was prescribed, also a lotion of alum and glycerine of borax. Suppositories of extract of belladonna were ordered to be used every night, at bed-time. Within a fortnight, the symptoms had materially abated, the bowels acting regularly, and the patient sleeping comfortably, not being kept awake, as formerly, by the distressing irritation. Perseverance with the above remedies for another fortnight effectually removed the discomfort; and the patient has had no recurrence of it during the last three months.

CASE VI. *Pruritus: Herpes.*—H. E., aged 47, married eighteen years, without children, complained of "intense itching in the privates, which increased considerably when she got warm in bed." It had been present for the last three years, and had resisted all treatment. On examination, the flexures of the groin and the vulvar outlet were found to be very inflamed. The skin was red, dry, and irritable. The pubes were covered with small vesicles, some of which had become pustular. On examining with a lens, no trace of pediculi or acari could be detected; the fact of the pruritus having existed for three years, and its not having extended to other parts of the body, were also against the supposition of scabies. There was no uterine disorder or vaginal discharge. A strong ethereal solution of nitrate of silver (gr. xl to 3i) was painted carefully over the pubic portion, and the mercurial ointment ordered to be well rubbed in over the inflamed surface. A mixture of bromide of potassium and sulphate of magnesia in infusion of gentian was also prescribed. On presenting herself the following week, she stated that she was better than she had been for the last two years. The solution of nitrate of silver was again applied, and the use of the ointment persevered with. A fortnight from this time, she reported herself perfectly well. The skin looked healthy, and there was no longer any trace of vesicles or pustules. Two months subsequently, she returned with a slight relapse, small herpetic vesicles being very distinct. A repetition of the application again relieved the discomfort;

from her not being able to attend regularly, it continued more or less for several weeks, but she ultimately quite recovered.

The following, though not a hospital case, is worthy of record.

CASE VII. *Pruritus: Pediculi Pubis.*—The patient, M. L., aged 21, was single. Her mother requested me to see her daughter, as she had for some weeks past complained of intolerable itching in the pubic region, which had gradually extended down to the calves of the legs. It produced such an amount of distress that sleep was almost impossible, and precluded her going into society from the uncontrollable desire to allay the irritation by friction. She was particularly neat and cleanly in her person, had no leucorrhœa, and was far above any suspicion of pediculi or any venereal disorder, being a lady in every sense of the word. Not wishing to subject her to the distress of a pudendal examination, I requested permission to inspect the legs, which presented evident traces of much irritation, more especially along the inner surfaces of the tibiae, where the skin was covered with hair; beyond the appearance of numerous small blood-stained points, no rash was detected. On examining more closely with a pocket magnifying glass, I discovered several specimens of the pediculus ferox, or crab-louse, closely attached to the shafts of the hairs, and, as usual, evincing no disposition to let go their hold. The only explanation she could give as to their presence was having caught them from a closet at a confectioner's. A warm bath and the employment of Hendrie's soap, with a lotion composed of perchloride of mercury gr. xvi, rectified spirit 3ii, and rose water 3viii, soon allayed the irritation, the spirit serving to dissolve the nits. The use of the lotion was persevered with for a few days to avoid any relapse, although the itching ceased after the first few applications.

REVIEWS AND NOTICES.

THE CONTINUED FEVERS OF GREAT BRITAIN.*

A SECOND edition of Dr. MURCHISON'S work requires no commendation from us. It remains what it was on its first appearance, by far the best exposition of the subject of which it treats. We propose merely to consider one or two points upon which there is still some difference of opinion in the profession.

First, with regard to the use of stimulants in fever: it is to be regretted that no sufficiently accurate investigations have been made on the value of alcohol in fever. It is employed, we believe, by most medical men on the popular ground that it is strengthening, and not on the ground of accurate clinical observation. The quantity of alcohol required in any particular case of fever depends so much upon previous habits and individual peculiarities that it is almost, indeed we might say wholly, impossible to lay down a general rule; but when Dr. Murchison says that "it is very rarely necessary to give more than eight ounces of brandy at any period of the fever," we think he suggests a general rule which, in a large number of cases, would be inapplicable. Farther on he says, "occasionally this allowance may be exceeded, but the cases are very exceptional in which it is necessary to give more than twelve ounces in twenty-four hours." Now twelve ounces are about four or at most four and a half glasses, and a large number of persons north of the Tyne, at least, are in the habit of consuming daily quite that quantity, if, indeed, not more. And in England a considerable quantity of alcohol is consumed in health in the shape of beer and wine; we believe, indeed, to such an extent, that eight ounces of brandy would be to many no stimulation at all. No doubt Dr. Murchison's opinion on this matter is greatly influenced by his belief that alcohol is rather a medicine than a food—"more allied in its action to opium and quinine than to milk and beef-tea." Much depends here upon what is meant by food. This has, in our opinion, been stated in the most practical manner by Dr. Buchanan in his article on Typhus in Reynolds's *System of Medicine*. He says, speaking of alcohol: "With food in its widest sense, as what keeps up the vital functions, the physician will have little hesitation in classing alcohol who has observed the common case of an habitual tippler maintaining for years a fair standard of bodily health upon a quantity of other nutriment wholly insufficient by itself to maintain such health. And to such a case a fever-patient offers some resemblance. He, too, may not be able to take enough of other food to maintain him, but alcoholic drinks will help him not to starve. And thus the writer judges them to have a food value apart from their medicinal action" (vol. i, p. 451). We believe that this expresses the truth as accurately for practical purposes as is needful, and that it harmonises with daily

* *A Treatise on the Continued Fevers of Great Britain.* By Charles Murchison, M.D., LL.D., F.R.S., Physician to St. Thomas's Hospital, etc.

experience. For any one may prove to himself that severe exertion may be maintained for a considerable time upon alcohol alone; that feelings of exhaustion are rapidly relieved by alcoholic stimulants; and that when from fatigue, loss of appetite or any other cause, food cannot be taken, alcoholic stimulants will for some time supply their place. Whilst believing with Dr. Murchison that alcohol in typhus is, as a rule, unnecessary under twenty years of age, we venture to think that he has not sufficiently estimated its "food value", and that he has stated far too low the quantity of alcohol necessary in many cases of typhus. In enteric fever, on the other hand, with its slow convalescence, and the great danger of giving solid food when patients are urgently craving for it, we believe a liberal supply of stimulants indispensable. That alcoholic stimulants are sometimes given unnecessarily, and sometimes simply because the practitioner does not know what else to do, there cannot be much doubt; but for the purpose of producing sleep, relieving the feelings of exhaustion and the mental depression common in fever, and for helping on the appetite during convalescence, we think that there is no remedy equal to alcohol.

The employment of laxatives or purgatives in enteric fever has long been the subject of dispute. In this country the best authorities have condemned them, but the opposite practice has the support of Louis, Andral, Bretonneau, Trousseau, Niemeyer, Wunderlich, and numerous others. Speaking of the treatment of M. de Larroque, which Dr. Murchison tells us was long famous in Paris, Louis says: "If the preceding facts, even those collected and commented on by M. de Larroque, do not enable us to arrive at a rigorous conclusion as to the superiority of evacuants in the treatment of the typhoid affection, we must all acknowledge (for nothing is clearer) that these agents do not produce the injurious effects on the progress and the issue of the disease which have for a long time been attributed to them; that they may be administered without fear, and that it is very probable that these agents are superior to other therapeutic measures." (*De Fièvre Typhoïde*, tome ii, p. 442.) This purgative or laxative treatment is founded upon the elimination theory, and on the supposition that the cerebral symptoms are due to the absorption of putrid substances from the intestine. If this were true, then cerebral symptoms would be most common in those cases in which the bowels might be said to be bound, which, unfortunately for the theory, they are not. A mild attack of enteric fever is almost invariably associated with quiet or at least moderately loose bowels, and a severe attack is almost as invariably associated with the contrary condition. Cerebral and other dangerous symptoms are associated with diarrhoea, not with constipation. The physician who recommends laxatives to a patient with an acutely inflamed and ulcerated intestine, appears to us to be about as discreet as would he who should recommend a course of gymnastics in acute rheumatic fever, or walking exercise to one suffering from a paroxysm of the gout. We are glad to find, therefore, that Dr. Murchison gives the weight of his great authority in condemnation of this dangerous practice. He says, "Diarrhoea is not a process of elimination to be encouraged. The most urgent diarrhoea often co-exists with great tympanites and the most severe cerebral symptoms, and is very apt to be followed by hæmorrhage or perforation: the danger, in fact, is in direct proportion to the severity and duration of diarrhoea." It is not here contended, nor does Dr. Murchison contend, that the use of mild laxatives is never justifiable. On the contrary, Dr. Murchison recommends, when there is constipation at the commencement of the fever, "a small dose of castor oil or of rhubarb in peppermint water; and when the bowels are confined at a later stage, Dr. Murchison says: "I am in the habit of prescribing, every second or third day, one or two teaspoonfuls of castor-oil, or a simple enema." We believe this to be the most rational practice, and, in our experience, we have never had occasion to deviate from it. Speaking from a not inconsiderable hospital experience, we take leave to recommend very great caution in the use of laxatives in enteric fever; and with regard to stronger remedies, such as jalap, colocynth, etc., we commend the saying of Baglivi—"Fuge purgantia tanquam pestem."

Of the cold bath treatment Dr. Murchison speaks, on the whole, favourably but cautiously. We believe that this method of treatment deserves investigation, and we wish that physicians of Dr. Murchison's ability and experience would devote some attention to the matter. We have employed it in some cases of enteric and typhus fevers, and have come to the conclusion that it is an useful therapeutic agent. It lowers temperature safely, produces a feeling of comfort in the patient, and very often sound sleep when sleep previously has not been had for days. That its use reduces the mortality of enteric fever to 3 or 4 per cent., as some German writers maintain, we do not believe; nor do we believe, as one might conclude from German writers, that

the cold bath is a remedy suitable for almost all cases indiscriminately. From our experience we should say that it is a remedy unnecessary in many cases, useful in some, and injurious in others. When Brand, of Stettin, and others, say that they have never lost a case in which they have been enabled to employ the cold bath in time, we are reminded of the saying of Louis—"Que l'expérience apprend tous les jours, que les grands succès en thérapeutique tiennent trop souvent à des erreurs de diagnostic."

Dr. Murchison gives two cases of the co-existence of typhus and enteric fevers; and he says that "almost any two of the diseases which are believed to spring from different specific poisons" may exist in the system at one and the same time. This is not the place to enter into the consideration of this subject generally, and we shall therefore limit our remarks to the evidence which Dr. Murchison adduces as to the co-existence of typhus and enteric. It is with very considerable hesitation that we venture to dissent from Dr. Murchison on his own ground; but to our minds cases 88, 89 and 90 (pp. 664-5) do not establish the fact of the co-existence of the two fevers. We are of opinion that on January 30th, Henry W— (case 89), had been for several days, say four or five, well of the enteric fever; for the note on that day (about the twenty-fifth day from the commencement of the attack) says, "the patient complained of chills, the headache returned, and the tongue, which a few days before had been clean and moist, became coated. The pulse, which for several days had never exceeded seventy-two, rose to eighty-six." Now twenty-one days is the duration of a large number of cases of enteric fever, so that, assuming the patient's statement to be correct (which is possibly wrong, very few enteric fever patients being able to fix the commencement of their illness to a day), there is yet an interval of about three clear days during which, according to the note, there were the symptoms of health, a normal pulse and a moist tongue. It is not until three days after the patient has passed through an attack of enteric fever of twenty-one days' duration that the symptoms of typhus appear and pass through the ordinary course. To our mind, this is sequence, not co-existence. No doubt the typhus poison co-existed with the disease enteric fever, but there is in our opinion no evidence that the disease typhus existed along with the disease enteric. In case 88, too much confidence appears to have been placed upon the eruption; and we believe that many cases of so-called co-existence of specific fevers are due to a diagnosis chiefly founded on eruptions, in our opinion by themselves most misleading and untrustworthy. Malignant typhus fever and malignant scarlet fever were not unfrequently reported during the recent small-pox epidemic as occurring side by side with small-pox in cases which, we have ample reason for believing, were instances of variola hæmorrhagica. During the small-pox epidemic, a medical man wrote from a village in the country that he had had several cases of small-pox, and curiously enough, as he thought, a case of purpuric or petechial typhus. Those who have had much experience of small-pox and typhus will readily believe that the purpuric typhus was variola hæmorrhagica. Similar instances are not uncommon. It occurred to us once in hospital to see an eruption exactly like typhus appear in a man who was just recovering from enteric fever. The ward in which this man lay adjoined the typhus ward, and the eruption was so indistinguishable from typhus eruption (which was well known in the hospital, there being numerous cases of that disease in its proper wards), that the physician and the residents concurred in diagnosing typhus caught in the hospital, and the patient was ordered removal to the typhus ward. The eruption disappeared in two days, and, no other symptom of typhus appearing, the man was transferred back to the enteric ward. We do not suggest that Dr. Murchison would make mistakes of this kind, but we do think that these cases suggest caution in trusting much to eruptions in diagnosis. To Dr. Murchison's 90th case we do not refer, as Dr. Murchison himself thinks it doubtful. Between the years 1862-70, there were admitted into the London Fever Hospital 18,144 cases of typhus and enteric fevers, and in only two instances, and these, says Dr. Murchison, very doubtful ones, was there any suspicion of the two fevers co-existing. This being the experience of an observer like Dr. Murchison, we shall hesitate to accept the confident assertions of less competent and less experienced men.

PISCICULTURE.—The great advances in pisciculture are due very much to the study of medical naturalists, amongst whom M. Coste and Mr. F. Buckland are prominent. A New Zealand correspondent writes that, thanks to the care bestowed upon its shipment by Mr. Youl, the import of salmon ova to the colony is apparently successful. The shipment was divided between the provinces of Otago and Canterbury, and by the latest intelligence a considerable number of fish have been hatched in the breeding ponds of both places.

SELECTIONS FROM JOURNALS.

SURGERY.

REMOVAL OF A TUMOUR FROM THE LARYNX OF A CHILD.—Dr. O. Beschorner had under his care a child three years old, suffering from a growth which obstructed the glottis. Tracheotomy was performed below the crico-thyroid membrane, and four months afterwards the tumour was removed by thyrotomy. Division of the thyroid cartilage through its whole length was necessary; the tumour—a papilloma—had a broad attachment to the mucous membrane. The wound healed well; but the breathing remained somewhat impeded, in consequence, Dr. Beschorner supposes, of some cicatricial contraction, or of the two sides of the thyroid cartilage having overlapped one the other. He believes that papilloma is relatively the most frequent form of laryngeal tumour in young children; and considers that in these, when the situation and nature of the tumour cannot (as was the case in this instance) be ascertained by laryngoscopic examination, thyrotomy is indicated both by the liability of the tumour to return, as well as by the readiness with which the laryngeal opening becomes obstructed.—*Deutsche Zeitschrift für Chirurgie*, vol. ii; *Centralblatt für die Medicin. Wissenschaft*, September 6th.

THE PATHOLOGY OF CONICAL STUMPS.—Dr. P. Güterbock describes, in the *Archiv für Klinische Chirurgie*, vol. xv, the form of conical stump due to hypertrophy of bone, and occurring even in cases where the amputation has been skillfully performed. This proliferation of bone, a process not very different from what takes place in the normal healing of wounds, sets in in the first months after operation. Acute forms are met with as the result of osteo-myelitis, or rather of acute osteitis or periostitis, following the removal of the periosteum; or as broad spongy hyperostoses, having a rather firm attachment to the bones. They may appear within three weeks. Chronic hyperostosis may be the immediate result of an excessive formation of new bone in the normal course of healing, or it may appear during or after diseased states of the wound. The secondary formation of a medullary canal, which takes place in many cases, is the result of a melting down of the newly formed bone, and may end in union of the medullary cavities. The cortical portion also often becomes porous. Periosteal bone-proliferation only sometimes produces conical stumps; but there is often a thickening of the sawn end of the bone through an excessive formation of callus. There is a remarkable absence of regularly arranged Haversian canals in the bone formed from without. Conical stumps may arise from excessive ossification of the interosseous ligament, which not unfrequently takes place, generally as the result of chronic irritation from artificial limbs.—*Centralblatt für die Medicin. Wissenschaft*, August 23rd.

PATHOLOGY.

SCAPULAR CREPITUS.—Under this title, Dr. Galvagni describes (*Medicin. Jahrb.*, 1873) a peculiar crepitating sound, most evident on moving the scapula by placing the hand on it at the lower angle, and sometimes audible even at some distance. In two individuals in whom this was heard, there was extensive deformity of the thorax, the result of pleurisy, so that the scapula was at a considerable distance from the chest. One of the patients died of phthisis; and a large bursa was found between the subscapularis and serratus anticus major muscles, which were both much atrophied. The bursa had worn away part of the serratus and of the subjacent ribs. In a third case, the individual was a seamstress, in whom the crepitus was heard four or five weeks after the commencement of cramp. Dr. Galvagni believes that, in writer's or seamstress's cramp, the scapular muscle may undergo atrophy, causing the scapula to glide on the ribs, and giving rise to the crepitation.—*Centralblatt für die Med. Wissenschaft*, July 19th.

ECTOPIA OF THE ENTIRE BLADDER.—L. Lichtheim relates, in the *Archiv für Klin. Chirurgie*, vol. xv, the case of a healthy boy, aged 8 years, who on superficial examination presents the appearance of having ordinary ectopia vesicæ with a high degree of epispadias. He can, however, retain his urine, which is voided in a stream. A closer examination showed that the ends of the horizontal ramus of the pubic bone are united only by ligament. In a recess in the pelvis above lies the bladder, covered externally with mucous membrane. On the dorsum of the penis is a strip of mucous membrane, about 7 centimetres (2½ inches) long, connected with the bladder by a bridge of normal skin. The external mucous membrane of the bladder and penis is

covered with a flattened epithelium, lying on connective tissue, firmer in the latter than in the former. Beneath the mucous strip, and under the portion of skin leading to the bladder, runs the urethra, which opens by a slit-shaped opening at the end of a short penis. The umbilicus is absent. The scrotum is empty; the testicles lie in two sacs hanging from the anterior ends of the pubic bone; the prepuce is fissured above. The power of retaining urine is perfect. The condition described is congenital. In an analogous case mentioned by Vrolik, the urine escaped soon after birth through two small openings in the anterior wall, which afterwards closed; and in the present instance there were also oval depressions. In Vrolik's case, however, the protruding tumour was only a diverticulum of the bladder. In another case recorded by Stolt, there was a high degree of epispadias.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 20TH, 1873.

THE EXAMINATION OF BLOOD-STAINS.

A COMMISSION, composed of MM. Mialhe, Mayet, Lefort, and Cornil, have furnished an interesting report on this subject (*Repertoire de Pharmacie*, July 10th, 1873; *Progrès Medical*, August 23). They point out that in the present day it is no longer possible, in the examination of blood-stains in legal medicine, to rest satisfied with the physical characters observed by the naked eye. The microscope, sometimes alone, but more often associated with chemical analysis and the spectroscope, enables us to obtain an exact diagnosis formerly impossible in a great number of cases. Two conditions may occur.

I. When the stain is of recent date, or supposed to be so, the red corpuscles should be particularly examined, and every care taken to preserve them without change. The stains must not be washed with water, so that the hæmatine may not be altered. After insisting on the microscopic characters of the blood-stains, isolated or compared with those of various animals, the commission enumerate with care the fluids which are destructive or preservative of blood-corpuscles. Among the first, water, and particularly hot water, acetic, gallic, hydrochloric, and sulphuric acids; and of alkalis, potash and soda, even in weak solution, and ether and chloroform, and many other reagents, so alter the blood-corpuscles as to cause them to entirely disappear. Alcohol, chromic and picric acids, and bichromate of potash, preserve the corpuscles, though they alter their form. The preservative fluids are those whose composition approach nearest to serum, such as the iodised serum of Schultze, an excellent preparation, made with amniotic fluid, to which are added a few drops of the tincture of iodine, so as to give it the colour of white wine; or better, a fluid composed thus—white of egg, 30 grammes; distilled water, 270 grammes; and chloride of sodium, 40 grammes; or even a fluid containing 0.5 per cent. of chloride of sodium, or 5 or 6 per cent. of sulphate of soda. If the stains be wetted and softened by these fluids and then examined, white and red corpuscles and fibroid particles will be observed.

II. In more difficult cases, when the microscope, owing to the alterations which time has effected in the hæmatine, can give but vague information, examination by the spectroscope and chemical analysis enable us to arrive at precise results. The use of these means, being less known and also more delicate, requires special study.

1. *Spectrum Analysis.*—Colouring matters have the power of absorbing certain coloured rays of white light—the same always for the same substance. This is the principle on which spectroscopic examination is based. If into an analysing tube filled with water a few drops of a solution of hæmoglobine be introduced till it has the colour of peach-blossoms, the luminous rays of the spectrum passing through this fluid present two bands of absorption between the lines D and E of Fraunhofer in the yellow and the green. The same fact would be observed if a few drops of blood were substituted for hæmoglobine in the analysis. In a case of doubt, the hæmoglobine of the blood could be

reduced by adding to this latter a reducing body. Destroyed hæmoglobine has a different spectrum from oxygenated hæmoglobine; a single absorption-band as large as the two former bands united, and a little to the left of Fraunhofer's line D:

2. In blood in a state of decomposition, or which has been treated by acids or caustic alkalies, hæmoglobine is changed into a new substance; hæmatine is formed, which, combined with hydrochloric acid, gives characteristic crystals. In order to obtain them, we must proceed thus. A small fragment of dried blood is placed on a glass slide; it is dissolved in a drop of water, and a minute portion of sea-salt is added. It is covered with a thin slide, and pure acetic acid is made to pass between the two slides, and it is heated over a spirit-lamp to boiling point. Acetic acid is again added, and it is heated afresh, and this is repeated till the crystals are obtained. They are rhomboidal, of a dirty brown colour, quite characteristic, and require to be seen with a magnifying power of three hundred or four hundred diameters. With the smallest quantity of blood these two reactions can always be produced—the spectrum examination and the crystals of hydrochlorate of hæmatine; and they are so certain, that the existence of one alone enables one to affirm the presence of blood.

3. The third process, though not so exact as the preceding, ought nevertheless not to be neglected. If to a very small quantity of blood dissolved in a little water be added a few drops of tincture of guaiacum and of binoxide of hydrogen, a persistent blue colour is immediately produced; but this very sensitive reaction can be obtained with other organic matter, nasal mucus, saliva, etc.: it therefore only gives a probability. We must proceed in the following manner. A tincture of guaiacum is prepared with alcohol at 83 deg., and guaiacum resin; a mixture of sulphuric ether and binoxide of hydrogen is also made and enclosed in a stoppered bottle, and kept under water in the dark. This preparation is less liable to change than pure oxygenated water. The object stained with blood, if it be white, is put into a little cup, then moistened with water to dissolve out the blood-stain, and washed in distilled water; this water is then submitted to the action of these reagents. If the thing stained be coloured, and the stain little or not at all visible, it must be moistened and then pressed between two or three sheets of white blotting paper, and tried first with the guaiacum. If the stain be of blood, a reddish or brown spot will form on the paper. One of the sheets should be treated with ammonia, and the stain will become crimson or green. A second sheet, treated with tincture of guaiacum and ozonised ether, will give a blue colour more or less intense, according to the quantity of the blood.

To recapitulate: 1. If the stains or scales of blood appear recent, the corpuscles may, after the necessary precautions, be examined under the microscope, and their presence, diameter, etc., observed, which will enable one to diagnose the origin of the blood, whether human or animal. 2. If the stains be old and the blood changed, the reaction with the tincture of guaiacum would make the presence of blood probable; but its actual presence cannot be affirmed without spectrum examination, or the production of crystals of hydrochlorate of hæmatine: one of the two is sufficient. It is unnecessary to add that these reactions do not show whether the blood is human or animal.

HIGH DOSES OF POTENT MEDICINES.

WE noticed lately the reasonable suggestion of Mr. Greenish (*à propos* of the recent case in which a druggist was censured at Ramsgate) that, when a prescriber orders an unusually high dose of a potent medicine, he should, for the protection of the patient, the dispenser, and himself, append a mark (!), or write (*sic*) at the end of the line. There is no doubt that the adoption of some such practice would be found advantageous to all persons concerned. Mr. Greenish mentions that in the New Pharmacopœia for Germany there is a table containing eighty-six articles, and in the Austrian Pharmacopœia there is a similar table containing sixty articles, to each of which the maximum dose is attached; and any prescription containing a dose beyond the maximum in

those tables cannot be dispensed without the prescriber's sign thus (!) opposite to it; nor is the chemist permitted to dispense the same prescription a second time without an additional guarantee of a similar character.

An Edinburgh chemist calls attention to the fact that in Dr. Farre's *Abridgment of Dr. Pereira's Elements of Materia Medica* (1865), under the head of "Tincture of Digitalis", is the following note by the editor. "It would remove all doubts about the real intention of the prescriber, and would relieve any scruples of the dispenser, if the prescriber, when ordering *unusually* large doses of this or any other medicine, would write his initials above the dose or above the quantity of the active ingredient."

It would be still more desirable that in such cases the prescriber should write the dose in words instead of figures—say four drachms, instead of ʒiv . There are no doubt a great number of isolated instances of carelessness in prescribing hurriedly and accidentally formulæ which it would be dangerous for a pharmacist to dispense. When the subject was discussed lately at the Council of the Pharmaceutical Society, a Mr. Betty declared he felt sure there was not a man at the table who would not have poisoned two or three persons in the course of his life, if he had followed the principle of blindly acting on the letter of all the prescriptions brought to him. He himself could recall two or three instances, in which he should have killed the patient as dead as a "door-nail" if he had followed literally the prescription sent him.

Some shocking instances are recorded in the columns of the *Pharmaceutical Journal* of prescriptions which, if dispensed, would undoubtedly "have killed the patient as dead as a door-nail". One orders two grains of opium every four hours (in error for a quarter of a grain); another, a grain and a half of bichloride of mercury three times a day (twenty-four pills to be taken); and another, fifteen drops of dilute hydrocyanic acid for a dose (instead of dilute hydrochloric acid). No doubt the adoption of some means of clearly signifying intention when ordering any unusual potent dose would be of service, although it would still behove the dispenser to be on the guard against slips of the pen, which are only too apt to occur to the most careful persons, under pressure of much occupation, and sometimes strong pre-occupation during the routine of heavy work.

PROVIDENT DISPENSARIES.*

AT the present time, when the subject of provident dispensaries is attracting so much attention, we are especially glad to receive reports of these institutions; and we note with pleasure the progress which the Provident Dispensary at Coventry has made during the last year. There are more than nine thousand free members; and the receipts from these, which supply the best test of the popularity of the dispensary, amounted last year to £1,251, being an increase on the previous year of £178. This sum, which is the "Free Members' Fund", was disposed of, in accordance with Rule III, as follows. Three per cent. was deducted to meet any extraordinary expenses of the institution. After this deduction, one-third of the fund was withdrawn for the payment of drugs, etc.; and the remaining sum, £809 : 1 : 6, was divided among the three medical officers. The same amount—£269 : 13 : 10—appears to have been paid to each medical officer; and in this respect the custom differs from that which is observed at Northampton and other provincial dispensaries, where the medical officers are paid in proportion to the number of members who enter under each. The supplement from honorary subscriptions amounted only to £41, or 3.1 per cent. of the total receipts for the year, so that the dispensary is almost self-supporting; and, if it were not desirable to retain the honorary governors for the better management of the institution, it might be made entirely self-supporting, without any material diminution in the receipts of the medical officers. This remark applies also to the Derby Provident Dispensary, where the honorary subscriptions are

* Forty-second Annual Report of the Coventry Provident Dispensary. Read on June 26th, 1873, at a meeting of subscribers, etc.

only 6 per cent. of the total receipts; and to many other provincial dispensaries of less note.

The alteration in the Rules made two years ago, by which an equal number of free members and honorary subscribers—ten of each—were appointed as the Committee of Management, was opposed by Dr. Nankivell, now of Torquay, the founder of the dispensary; but, according to the Report before us, it seems to have given satisfaction, as a similar rule has done for many years at the Wandsworth and Hampstead Provident Dispensaries.

It thus appears that the internal condition of the Coventry Dispensary is encouraging; and we can only regret that the profession in the town do not participate more generally in its advantages. We readily admit that doctors were created for patients, and not patients for doctors. But, even holding this belief, we would like to see the number of medical officers increased from three to six, if six qualified and otherwise desirable men are found willing to do the duties; and it cannot be objected, that six are too many to attend to the medical requirements of nine thousand people, especially where private practice is allowed besides. Such an increase in the number of the medical staff, while it would tend to remove the professional jealousies which interfere with the usefulness of provident dispensaries at Coventry and elsewhere, would also be acceptable to the members by extending their choice of a doctor.

A NEW BRANCH.

THE North of Scotland, as represented by the *élite* of the profession in that part of the empire, unanimously resolved on Saturday last to join the ranks of the British Medical Association. We cordially welcome the new members, and look forward most hopefully to the future success and usefulness of the new Branch. By the report which we publish in another page, it will be seen that the nucleus of the new Society is supplied by the influential Northern Counties Medical Association, which has rapidly become developed during the past ten years, and has exercised considerable social and political influence in some of the northern counties of Scotland. The objects of that Association have been fulfilled beyond the expectation of the promoters; and hence, no doubt, the desire of the leading minds of the district to develop these still more by an amalgamation with the powerful body represented by our Association. If we may judge by the results already attained by the young and energetic Aberdeen, Banff, and Kincardine Branch, we may safely look forward to a no less vigorous career on the part of that represented by the more northern counties. The formation of the new Branch is mainly due to the energy of Dr. J. W. Norris Mackay, of Elgin, its Treasurer and Secretary, and Dr. Bruce, of Dingwall; and we gladly record the obligation due to them on the part of the Parent Association.

THE occurrence of cholera in Lisbon is contradicted.

A MARKED improvement has taken place in the state of M. Nélaton, who is able to get up and move about a little in his drawing-room.

THE *Penang Gazette*, of July 26th, says that the cholera had broken out in a most virulent form at Singapore.

MISS BOVELL, one of Miss Jex-Blake's co-disciples, has lately passed her third and final preliminary examination for the Doctorship of Medicine of the Faculty of Paris.

THE epidemic of cholera appears to be decreasing in Vienna. From September 7th to 13th, the daily numbers of new cases were 98, 64, 71, 53, 40, 32, and 30.

DR. MORELL MACKENZIE, having completed his term of office as Assistant-Physician to the London Hospital, has been elected Physician.

DR. STEINBERG, of Berlin, General Surgeon in the Prussian navy, has been raised to the rank of a noble, with the name of Von Steinberg-Skirbs.

A WOMAN, named Boulanger, has been condemned by the tribunal of Rambouillet to imprisonment for six months, for causing, by neglect, the death of an infant entrusted to her care. As an "aggravating circumstance," she was well and regularly paid. The fact that the child had died of hunger was established by *post mortem* examination.

A CASE of cholera was discovered, last week, on board a steamship which had arrived in the Thames from Cronstadt. The patient was sent on board the *Rhin*. After a careful examination of the ship's crew and passengers, the fumigation of the sick man's quarters, and destruction of his bedding, the vessel was allowed to proceed. The case illustrates the value of sanitary supervision of vessels arriving in the Thames.

THE ST. GEORGE'S DISPENSARY.

THE St. George's Dispensary in Mount Street, Grosvenor Square, has been placed upon the provident basis. The new system came into operation on the 1st instant, and we understand that, as far as it has yet gone, it has worked remarkably well. This dispensary is one of the best known at the west end of London, and many who are now among our most distinguished physicians and surgeons were in their earlier days connected with it. There can be no doubt that the step which it has now taken will exercise considerable influence over other dispensaries, and that many will be induced to follow the example which it has set.

YELLOW FEVER IN AMERICA.

A TELEGRAM from New York, dated September 8th, states that yellow fever is raging at Galveston and Houston (Texas), and Shreveport, (Louisiana); and that families are fleeing from these towns. On the 26th, it is stated, that 60 per cent. of the cases at Shreveport were fatal.

FASTING GIRLS.

THE *Revue Catholique* vouches for the fact that Louise Leteau, the "stigmatisée" of Bois d'Haine in Belgium, has taken no nourishment whatever for the last twenty months, that this total abstinence has not made her thin, that she is in excellent health, and that the phenomenon which has won her the distinction she enjoys continues week by week. —A very doubtfully authenticated case of voluntary starvation is reported from New Hampshire. America, indeed, has always seemed to afford numerous examples of fasting girls; but in the present case the culprit is a maiden sixty years of age.

HUMAN REMAINS IN THE THAMES.

THE possibility that the mutilated portions of a human body recently found in the Thames might be the remains of a subject supplied to some worthless medical student, of morbid habits and revolting practices, is one which can never have been seriously entertained by persons knowing with what precautions the supply of subjects for dissection is surrounded. In the first place, any unclaimed body of a person dying in a public institution and destined for the purposes of dissection, is registered at the office of the Inspector of Anatomy, and its destination settled by his officers. It is forwarded with an official schedule and certificate to a licensed school of anatomy, where its receipt is duly acknowledged by a formal certificate. From that time the anatomical teacher in charge of it is responsible. No entire body is ever given to any one student; four or eight students are selected for the dissection of each body, in a list prepared in writing in a manner indicated by the rules of the school, and under the observation of the teacher. During the summer months, subjects are supplied for the purposes of instruction in surgical operations; but these are yet more immediately under the observation of the teacher. Had any dissection or operation been performed, its character and purpose would have been imme-

diately obvious to the surgeon who examined the portions of the body recently found in the Thames. Dissection does not commence in the metropolitan schools until October 1st. Moreover, every subject furnished to the schools must, after dissection, be buried. Undertakers (who rightly look sharply after their fees in the matter) are officially appointed at the schools; and the certificates of burial must be subsequently lodged with the official authority. Parts of bodies dissected no doubt are sometimes preserved in museums for the purposes of teaching; but there is no possibility of a body forwarded for dissection undergoing the maltreatment to which this one has been subjected, and being ignominiously and secretly disposed of, instead of receiving burial. It would be impossible at any time. The suggestion is altogether wild, and unworthy of a moment's attention at this period of the year.

A MORTUARY.

It would be thought that the demand for mortuary accommodation in the district of St. Giles's, of all wretched and overcrowded parts of London, would be considerable. That it ought to be, no sanitary medical officer would dispute; but it affords strong evidence of the depraved custom of the inhabitants, who are no doubt largely Irish, and decline to give up any facility for indulging in the "wake," that only one body was removed to the district mortuary during last year.

THE MALADY OF THE FIRST NAPOLEON.

THE following interesting letter, along with a lock of hair, has been recently discovered by Major Young, of Lincluden, Scotland. It was written to his father by Dr. Short, principal medical officer at St. Helena at the time of Napoleon's death. "St. Helena, 7th May, 1821. You will no doubt be much surprised to hear of Bonaparte's death, who expired on the 5th of May, after an illness of some standing. His disease was cancer in the stomach, that must have lasted some years, and been in a state of ulceration some months. I was in consultation and attendance several days, but he would not see strangers. I was officially introduced the moment he died. His face in death was the most beautiful I ever beheld, exhibiting softness and every good expression in the highest degree, and really seemed formed to conquer. The following day I superintended the dissection of his body (at this time his countenance was much altered), which was done at his own request to ascertain the exact seat of the disease (which he imagined to be where it was afterwards discovered to be), with the view of benefiting his son, who might inherit it. During the whole of his illness he never complained, and kept his character to the last. The disease being hereditary, his father having died of it, and his sister, the Princess Borghese, being supposed to have it, proves to the world that climate and mode of life had no hand in it, and, contrary to the assertions of Messrs. O'Meara and Stobo, his liver was perfectly sound; and had he been on the throne of France instead of an inhabitant of St. Helena, he would equally have suffered, as no earthly power could cure the disease when formed."

THE CHOLERA IN GERMANY.

THE official returns, extracts from which are regularly published in our German contemporaries, give a brief but striking sketch of the ravages of cholera. The reports for Berlin, from September 5th to 11th, give the following statements: September 5th to 6th, 32 new cases, 9 deaths; 7th to 8th, 41 cases, 17 deaths; 8th to 9th, 32 cases, 13 deaths; 9th to 10th, 25 cases, 7 deaths; 10th to 11th, 27 cases, 8 deaths. The following is an abstract of the returns from some of the other principal towns and cities in Germany. Königsberg: from August 24th to 30th, 381 fresh cases, 175 deaths; September 2nd, 44 cases, 26th deaths; 4th, 27 cases, 14 deaths; 6th and 7th, 54 cases, 31 deaths. Danzig: from August 30th to September 2nd, 9 cases, 2 deaths; total cases from outbreak, 186, deaths 100. Dirschau: August 23rd to 29th, 31 cases 20 deaths; from outbreak (June 10th) to August 29th, 140 cases, 81 deaths. Stettin: to August 30th, 91 cases 52 deaths, 18 recoveries. Magdeburg: August 31st and September 1st, 160 cases, 81 deaths; September 7th and 8th, 77 cases, 39 deaths. Stendal: September 1st

and 2nd, 26th deaths. Munich: September 1st and 2nd, 21 cases, 6 deaths; total from commencement, 718 cases, 309 deaths. Augsburg: from August 26th to 31st, 8 cases, 4 deaths; remaining under treatment, 3. Würzburg: from July 8th to August 31st, cases 112, deaths 58; August 31st, 2 new cases; September 1st, 8; September 2nd, no new cases. Dresden: on September 4th no new cases, and no deaths had occurred since the previous day; 4 patients remained under treatment. Heilbronn: August 31st to September 1st, 13 cases, 5 deaths; total number of cases, 73, of deaths, 21. Hamburg: from August 24th to 30th, 342 cases, being 167 more than in the previous week. Elbing: September 9th; since outbreak, 263 cases, 174 deaths; from September 5th to 9th, 40 cases, 27 deaths.

LONDON HOSPITAL.

THE original school building, erected in 1784, the first hospital school in London, will shortly be demolished to make room for the new wing of the hospital. The foundations of the latter are now being dug, in some places to a depth of forty feet. In the course of the excavations, a large number of human remains have been disinterred, the place having been the "subject" cemetery of the hospital before the Anatomy Act was thought of. The new wing, which will contain 250 beds, will only be connected with the present building by a covered corridor; the hospital will then contain 800 beds. The new school has been further improved during the present year; the museum has been nearly doubled in size, and a new laboratory added.

PUERPERAL FEVER IN AUSTRALIA.

A MELBOURNE correspondent states:—The atmospheric conditions of the past month, which were favourable for the lambing season and for vegetation, have been full of danger and discomfort for humanity. An outbreak of puerperal fever, the first of its kind, carried off five patients from the lying-in hospital in as many days; about twenty deaths soon followed from the same epidemic in other localities, and there was a wide-spread feeling of alarm, which has now ceased with its cause. There has been a coincident prevalence of diphtheria, scarlatina, and whooping-cough.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

DURING the past twelve months this building has been extended, at a cost of over £5,000. The principal additions are—a Pathological and an Anatomical Museum; a Chemical Laboratory, with a Private Laboratory and Class Room attached; and a Physiological Laboratory. The old building has, to a great extent, been remodelled; the Dissecting Room has been considerably enlarged, and adjoining it a room has been fitted up with Osteological preparations, skeletons, plates and preparations illustrative of Elementary Anatomy. The old Museum has been converted into a Library and Reading Room, for the use of the students. The old Chemical Laboratory has been adapted for pathological purposes.

FRESH MEAT FROM AUSTRALIA.

THE Melbourne correspondent of the *Times* writes that Mr. T. S. Mort, aided by Mr. Nicolle, of the Ice-Works, has succeeded, after years of unremitting labour and costly experimenting, in discovering a cheap and safe means of applying cold to all perishable articles of food, and is now making great preparations for freezing meat for shipment, and keeping it frozen during the voyage to England. The cattle are to be slaughtered, and the carcasses frozen at Bowenfels, on the other side of the Blue Mountains, about a hundred miles from Sydney. By railway they will be conveyed in trucks adapted to the traffic to the dépôt in Sydney. The dépôt, which is a building within a building for the sake of isolating the interior or cold chamber, is capable of holding 1,000 tons of frozen meat, and is to contain machinery calculated to produce cold equivalent to 60 tons of ice every twenty-four hours. The agent employed in the production of cold on land is ammonia, and Messrs. Nicolle and Mort have erected extensive works in connexion with the ice-works for its manufacture. In some cases, when great

results are perceived to be the outcome of certain discoveries, a sense of duty, apart from all the considerations of profit, carries a man over the apparently insurmountable obstacles which lie between him and success. This has been Mr. Mort's impelling spirit. He saw that, by solving the problem, the wasteful destruction of food through decomposition would be stopped, and that the plenty of one season or country might be applied to the want of another; and it became his absorbing desire to be associated with so great a service to his fellow men.

THE CHOLERA IN PARIS.

IN a paper read by M. Besnier, before the Academy of Medicine in Paris, on September 12th, it was stated that, from September 4th to 11th inclusive, 81 cholera-patients were admitted into the hospitals, of whom 49 died, 3 were dismissed cured, and 29 remained under treatment. The mortuary returns of Paris, for the week ending September 12th, gave 107 deaths from cholera, which number, on the 15th, had increased to about 130.

ST. THOMAS'S HOSPITAL.

It is rumoured that Mr. Frederick Durham, and Mr. Mac Kellar of the Royal Free Hospital, are in the field for the appointment of Resident Assistant-Surgeon. Whoever is now appointed, will be most likely full Assistant-Surgeon in the course of a few years. The opportunities afforded in this appointment make it one of the most valuable in the medical world.

"COMPULSION—ONLY YOU NEEDN'T."

THIS, it is suggested, is the new form of compulsion introduced by the framers and administrators of the recent Sanitary Acts, and is the peculiar function of the Local Government Board. Reporting on the recent outbreak of fever in Whitechapel, Mr. Liddle, the medical officer of health for the district, remarks that at first great difficulty was experienced in inducing patients to be removed, but after a time this difficulty decreased. The 26th section of the Sanitary Act gives power to the local authorities to obtain an order from the magistrate to compel the removal to an hospital of a patient suffering from any infectious disease who is not provided with proper lodging; but, as there is no specified penalty for not complying with the order of the magistrate, it is almost useless for the officers of the Board to obtain such order. Mr. Liddle, therefore, urges that this section of the Sanitary Act certainly requires to be so amended, as to give the officers of the Local Boards power to remove any person suffering from infectious disease, when by such person remaining at home the lives of others residing in the same house may be endangered. A short time ago the sanitary inspector, in visiting a case of fever, found that a boy, aged about thirteen years, had been ill for several days with fever, probably typhus. This room had a cubic space of 1,050 feet, and was tenanted by a man, his wife, and four children. Of these four children, three had had fever. The boy was in a bed, on which the mother, who was not ill, was lying down, and the father was sitting on a chair by the side of the bed, with his head resting upon it. The removal of the patient was urged, but the boy refused to be taken away. The smell of this room was very offensive, although the window was open. Notice was served upon landlord to diminish the overcrowding of the room; but, owing to three of the inmates having been attacked with fever, it was deemed advisable not to enforce immediate compliance with the notice, but to wait until the patients had recovered.

THE DIALS.

THIS district of St. Giles's, unhappily associated in the minds of Londoners with the extremes of wretchedness and vice, under the name of "The Seven Dials," appears to weigh heavily on the sanitary medical officer, Dr. Ross. In his very interesting annual report, he gives a melancholy account of this part of his district. Sanitarily, it is exceedingly bad; for, as all the lines of the streets converge to a point, there are always, at the end of the wedge, from five to ten houses which have no

back yards; and, as a necessity, the water-closets, dust-bins, etc., must be placed in the cellars. The staircases are dark and badly ventilated. Most of the houses contain about eight rooms, but some are smaller, and they are generally let out in tenements, one family occupying a single room. The streets are, for the greater part, narrow, and are intersected by narrower alleys. The mass of the population is composed of costermongers, match, flower, and fruit sellers, who make St. Giles's their head-quarters for a great part of London. Irish labourers form probably one-half of the entire population. Besides, there are the tramps, wife-deserters, beggars, pick-pockets, and women of bad repute, who occupy the common lodging-houses in this quarter. There are more than 2,000 of these persons, the large majority of whom are single, or at least live as celibates; they are, nevertheless, prolific. These lodging-houses, Dr. Ross states, are the seething hotbeds of depravity and crime; and, as they are adjacent to the habitations of the lowest class of our labouring poor, the indecent and immoral habits of the population infect whole streets, and cast a gloomy shadow of squalor and vice over the entire locality. It would be a mercy to the labouring poor to scatter these people from their haunts. Only a limited number of houses harbouring them should be allowed in each district. By massing these outcasts together, as they are in St. Giles, they are effectually cut off from all humanising influences, and their moral corruption only becomes more aggravated. That the police regulations may be stringent, and carried out so far as they go satisfactorily, may be very true; but that such accumulation of immorality should so abundantly exist in the metropolis, is perhaps a set-off against the effectiveness of police authority.

TYPHOID FEVER AND INTERNAL DISINFECTION.

MR. STEPHEN SKINNER, M.B., contributes to the *Practitioner* a short paper on the treatment of enteric fever by the use of sulphocarbolate of sodium. He administers the drug in twenty-grain doses, every fourth hour, and gradually increases the quantity during the next few days to thirty grains. He appends twenty cases in which this mode of treatment was carried out, one case only terminating fatally. He believes that, in cases in which the drug was administered during the period of incubation, the disease either ran more quickly, or it did not become developed. The opinion which he entertains regarding the effect of the remedy is, however, he admits, only conjectural; but he advocates a further trial of the salt to settle its real use or uselessness.

THE INTERNATIONAL MEDICAL CONGRESS.

THE third International Medical Congress has just been held in Vienna. The first meeting took place on September 1st, and was commenced by the Archduke Rainer, who delivered an address of welcome, which was acknowledged by Professor Ratti of Rome. The President of the Congress, Professor Rokitsky, then delivered an address, and declared the Congress open. The Secretary, Dr. Schnitzler, read a report, in which he stated that the number of delegates from governments and scientific societies attending the Congress was greater than on either of the previous occasions. A letter of welcome from the Minister for Foreign Affairs was received and read. The following members were appointed to act as presidents and vice-presidents at the discussions to be held on the several subjects named. 1. Vaccination: President, Dr. Jaccoud (Paris); Vice-Presidents, Professor Castiglione (Rome), Professor Hebra (Vienna). 2. Syphilis and Prostitution: President, Professor Warlomont (Brussels); Vice-Presidents, M. Kovács (Pesth), Professor Sigmund (Vienna). 3. Quarantine in Cholera: President, Medical Councillor Dr. Günther (Dresden); Vice-Presidents, M. Haardt von Hartenthurn, M. Drasche (Vienna). 4. Drainage and Sewerage: President, Medical Councillor Dr. Eulenberg (Berlin); Vice-Presidents, Councillor von Hamm, Town-Physician Innhauser (Vienna). 5. The Formation of an International Pharmacopœia: President, Professor Ratti (Rome); Vice-Presidents, Dr. Capșa (Roumania), Professor Bernatzik (Vienna). 6. The Social Position of Medical Practitioners: President, Professor Reclam (Leipzig); Vice-Presidents, Dr. Hübner (St. Petersburg); Sanitary Councillor Schneller (Vienna). 7. Quar-

tine in General: President, Dr. Abdullah-Bey (Constantinople); Vice-Presidents, Dr. Tomaschich (Trieste), Professor Caminhoa (Rio de Janeiro). The result of the deliberation on the first named subject was the adoption, by a majority of 155 to 5, of a resolution proposed by Professor Hebra, to the effect that the Congress regarded vaccination as necessary, and recommended the governments to carry out a general system of compulsory vaccination. Regarding syphilis and prostitution, an outline of an international legislative enactment was agreed on, providing that medical treatment of syphilis should be carried on under the direction of the authorities, who should choose the medical officers for the purpose, undertaking also the cost when necessary; that special wards for the treatment of syphilis should be instituted in all hospitals, also under the direction of the public authorities; and that all candidates for licences to practise medicine should undergo a special examination on syphilis. The discussion on quarantine in cholera led to the adoption of resolutions that land and river quarantine ought to be abolished, but that maritime quarantine should for the present be continued; and that an international committee should be formed to study the means by which cholera is spread, and to frame regulations more efficient than those at present in force. Regarding quarantine in general, it was agreed that it ought to be limited to the time necessary for the disinfection of the ship, crews, and passengers. It was also recommended that a permanent international committee should be appointed to determine what diseases of men and animals should be subject to quarantine, and to draw up a plan for universal application. A rather long series of resolutions was passed with regard to the drainage of towns, concluding with the following. "All towns should be obliged to take into mature consideration, with the assistance of approved experts, all questions regarding the cleansing and keeping clean of the ground of the town, and the disposal of ordure. This is required in the interest both of the inhabitants and of national economy in the widest sense of the word." A resolution recognising the necessity of an International Pharmacopœia was passed. It was agreed that the Pharmacopœia should contain the most important and generally recognised remedies, and their most necessary excipients and corrigents, with a sufficient scientific description; and that the metric system should be adopted. It was also agreed that it should be recommended to the next International Congress to organise a committee for the formation of such a Pharmacopœia. Brussels was chosen as the place for holding the next International Medical Congress in 1875. The session was brought to a close with an address by Professor Rokitsky, who ended by wishing long life to Francis Joseph, Emperor-King of Austro-Hungary—a wish in which all the members joined with cheers.

LOANS FOR SANITARY PURPOSES.

LAST session an Act was passed authorising the Treasury to advance £3,000,000 to make loans to School Boards under the Education Act and to sanitary bodies under the Public Health Act. The repayments may be spread over fifty years at 3½ per cent. The most useful little Act is, we believe, the direct outcome of a deputation of the State Medicine Committee of the Association.

RYDE SANITARIUM.

THE Ryde branch of the Young Men's Christian Association has established a sanitarium for the use of young shopmen in bad health or on holiday. Very comfortable quarters, with good board, are provided at Hazlewood House, for the very moderate sum of a guinea a week. The house has been formally opened by the Marquis of Cholmondeley, one of its patrons.

TURKISH BATHS FOR WORKHOUSES.

THE guardians of Bethnal Green, says the *Local Government Chronicle*, have refused the offer of the Marchioness of Salisbury to erect a Turkish bath for the inmates of the workhouse, because they said that, if a Turkish bath were necessary, the parish was quite able to pay for it.

REWARD OF BRAVERY.

THE *Times* correspondent on the Ashantee coast writes that Dr. M'Keller, the late Assistant-Surgeon, was with the Houssas in all the earlier fights of the Ashantee war. He displayed the most reckless bravery. His health broke down from continued exposure in the bush. He has had to resign his post and go home. He received no extra remuneration whatever to in any way compensate him for the loss of his health which resulted in the loss of his post.

WHAT POOR-LAW SURGEONS MAY EXPECT.

APPLICATION has been made on behalf of Dr. Cantrell of Wirksworth, to the Belper, Bakewell, and Ashbourne Unions, for a superannuation allowance on the ground of increasing infirmities and approaching blindness. It appears that he has held a district in each of these unions for thirty-four years, and is seventy-three years of age. In each union it was negatived, because the guardians thought it would establish a dangerous precedent. Surely, a surgeon aged 73, who is incapacitated, and who has held his offices ever since the introduction of the new Poor-law, is an eligible person for a pension.

MEDICAL REVIEWING.

WE have had occasion recently to lament more than once the palpable worthlessness of the majority of the "reviews" of books by metropolitan medical authors, which appear in metropolitan medical journals. The *Edinburgh Medical Journal* has afforded habitually a conspicuous example of what honest and well guided criticism by well informed writers should be. The following sentences, from a review which it publishes in this month's number, sufficiently indicate that we are not alone in our condemnation of the idle and misleading puffery which has long passed for "reviewing" in the papers referred to. "Our readers will have gathered from several of our notices on the obstetric literature of recent years, that, while we admire the zeal and diligence of British authors, we recognise in them generally a lamentable meagreness, much ill-considered spasmodic working, much foolish printing, evidently for mere publication's sake. Illustrations of all this we have in manuals of midwifery, which have received from eminent metropolitan journals such praise as makes us blush for the silly reviewers, evidently young lads either grossly incapable, or paid directly or indirectly for their contemptible attempts to mislead their brethren."

HEALTH OF CUSTOMS' OFFICERS.

A REPORT has been issued on "the Health of the out-door officers, watermen, messengers, and other inferior officers of Her Majesty's Customs during 1872," the author being Dr. Dickson, the Medical Inspector of the Customs. During the first quarter of the year, the health of the department was satisfactory, the number of admissions to the sick list being considerably below the average, and consisting chiefly of rheumatic and pulmonary complaints, which usually preponderate at that season. One death occurred, that of an out-door officer, from pulmonary consumption after three years' illness. In the second quarter of the year, the vicissitudes of the weather told on the health of the men, cases of pulmonary and rheumatic disease being more numerous and severe than usual; but the sick-list was otherwise comparatively light. Four deaths occurred in the quarter, viz., one in a messenger of middle age, from malignant small-pox in its most rapidly fatal form, extinguishing life before the characteristic eruption had time to be developed; and three in out-door officers, one from pulmonary consumption complicated by epilepsy, another from delirium tremens conjoined with bronchitis, and a third from chronic disease of the liver and kidneys, terminating in diarrhoea. Two out-door officers were superannuated for senile debility associated with rheumatism and bronchitis; and three more for mental disease. In the third quarter of the year, the Customs' officers shared in the favourable sanitary condition which prevailed. Bowel-complaints did not occur in larger proportion than in the five preceding summers, which have all been remarkably healthy in this respect. Only eighteen cases of diarrhoea required temporary removal from duty, and none presented alarming or

choleraic features. There were only two deaths of out-door officers. One was from small-pox of much severity, notwithstanding that the deceased had been vaccinated in infancy and revaccinated in adolescence; the malady was contracted from attendance on his daughter, who died of the disease. Another officer died of cancer affecting various organs of the body. With regard to the fourth quarter of the year, as the officers of Customs are much exposed to the weather, the incessant rain which prevailed was in some respects injurious to their health, the number of cases of rheumatism and gout being above the average. No fewer than five deaths occurred in this quarter, viz., an out-door officer, suddenly, of apoplexy; another from pneumonia and heart-disease; while three succumbed, after protracted illness, to pulmonary consumption. Three out-door officers were also superannuated on medical certificate, one for insanity, another for incurable spinal disease, and a third for hernia and senile debility. In the Gravesend division, the health of the officers was unusually good during the last year, few cases of severe illness having occurred, and none of death or superannuation. It is mentioned, too, that as these officers spend their lives on board vessels from abroad, all of which are for a longer or shorter time under their surveillance, their sanitary condition may be considered to be a fair criterion of that of the port in connection with its foreign trade. Their almost entire exemption from zymotic disease is certainly remarkable. Speaking generally of the Customs' officers, rheumatic and pulmonary affections constituted last year more than 40 per cent. of the illness to which they were subjected. Chest-diseases caused more than half the mortality of the period, chiefly pulmonary consumption, of which there were five fatal cases. Disorders of the digestive organs showed 17 per cent. on the number of cases; and one case terminated fatally. Diarrhoea was in a small ratio, viz., 6 per cent. of the number of cases. The usual precautions have been taken against the importation of cholera, the officers being supplied with medicine to meet the disease in its earliest and milder stage, whether occurring amongst themselves or amongst the crews or passengers with whom they might be associated. Skin-diseases showed a proportion of 10 per cent. during the year; zymotic febrile diseases 6 per cent. Of three cases of small-pox, two terminated fatally.

SCOTLAND.

THE subscription list towards the memorial of the late Sir James Y. Simpson will be closed on October 15th.

A HOSPITAL is to be erected for the parishes of Inch, Leswalt, and Stranraer. Lord Stair has given a site for the building.

PROFESSOR HUGHES BENNETT was last week elected a foreign corresponding member of the Academy of Medicine of Paris, in the section of Pathology and Therapeutics. We regret to learn that his health is not yet fully re-established, and that in consequence he will pass the ensuing winter at Nice.

GREENOCK CHOLERA HOSPITAL.

IN view of the possibility of cholera being brought by vessels arriving from infected ports on the Continent, the Greenock Police Board have authorised the construction of a cholera hospital at Craigie Knowle, and of a temporary one on Gravel Park Estate. The Admiralty have been asked by the sanitary officials of the Clyde towns for an old man-of-war to be used as a cholera floating hospital for the river.

FEMALE MEDICAL EDUCATION IN EDINBURGH.

THE question of the admission of ladies as students of medicine, in connection with the recent case of the lady-students in Edinburgh, has lately formed the subject of two long and able letters in the *Times* from Mrs. Garrett Anderson, M.D., and Miss Jex-Blake. The gist of these letters will be well understood by those who have watched the subject with any attention; the main point of difference between the two being, that Mrs. Garrett Anderson advises that ladies desirous of study-

ing medicine should for the present desist from their attempts to overcome the obstacles raised in the Edinburgh University, and graduate in Paris, returning home to prove by example their competency to practise; while Miss Jex-Blake exhorts them, on the contrary, to fight it out on that line. Several of the ladies are adopting the former course. A leader in the *Times* discusses the subject, and expresses views on the whole matter nearly identical in substance and in form with those which we have for some years maintained. It admits the inherent and inalienable right of women to use their faculties in any honourable intellectual pursuit, for which they are able to prove their fitness by submitting to the tests publicly provided; but it doubts whether the nature of the duties of the medical profession will not in the long run be found to weigh too heavily upon the physical weakness and sexual disadvantages of women for arduous and public pursuits; and it believes that they will find themselves so heavily handicapped in the race, that very few can ever expect to reach the goal of success. If the profession of medicine were thrown open to women as freely as it is to men—as we have always thought that it ought to be—it may reasonably be doubted whether more than a very few would ever adopt it, and whether more than a very small proportion of that few would succeed in it. A further contribution to the history of the subject has been made in a letter addressed to the *Times* by Sir Alexander Grant, Principal of the University of Edinburgh. He writes the formal history of the relations between the University and the *septem contra Edinam*; and makes some statements which are new to us and will be new to many. He acknowledges and regrets the hardship and difficulty of the position in which the ladies have been placed; but, he says, this is owing to the state of the law as interpreted by the Court of Session. He confidently asserts that the main body of the professors were not partisans on either side, and that the general feeling was a desire to give facilities for medical study to women, so far as this could be done consistently with the maintenance of academical good order. He states that the University was solicited in 1869 to admit ladies, as an experiment, to the lectures of medical professors. The University Court yielded to an impulse of liberality, and proceeded at once to frame regulations forbidding mixed classes, but permitting any professor of medicine to hold separate classes for the medical instruction of women. Three of the medical professors opened classes for ladies; of these, one had his health seriously broken down by the labour, and the two others declared that the burden of such extra duty was more than they could continue to bear. Under these circumstances, the ladies applied that substitutes might be appointed to lecture to them in the place of such professors as might be unable, or unwilling, to give them instruction. Now, for the first time, the University determined to seek legal advice. An impartial statement of the case was drawn up and submitted to the Solicitor-General for Scotland, with the question whether such measures as the ladies now asked were within the competency of the University. The opinion of the Solicitor-General was very strongly given, and went even beyond the exact point inquired on; it was to the effect that any step tending towards the graduation of women would be beyond the powers of the University. This opinion paralysed the action of the University. The University Court informed the ladies, on further application from them, that it was debarred by this opinion from promoting their graduation until the legality of such graduation could be established; but it offered to make, in the meantime, arrangements for their full medical instruction; and it was suggested to the friends of the ladies that an amicable suit should be instituted with a view of ascertaining the law. These offers were rejected, and a suit was brought by the ladies against the Chancellor and Professors of the University, which has terminated, thus far, in a judgment that it is not within the powers of the University to confer a degree upon a woman. In conclusion, he says: "I sincerely sympathise in the earnest appeal made by Miss Jex-Blake to the Legislature to take up the consideration of the medical education of women. It is a subject well worthy the attention of the Legislature, and one which can only be properly dealt with, as a general social subject, by the Legislature." Sir D. Wedderburn has given

notice of a bill relating to the subject; but it affects only one university. Sir A. Grant, however, intimates the opinion that it ought to be dealt with so as to regulate all other universities of the United Kingdom; and says that "the University of Edinburgh will loyally bear her part in carrying out whatever Parliament may ordain as expedient." Miss Jex-Blake has replied to Sir A. Grant in a letter, in which she views some of the facts in respect to the various phases of the treatment of the ladies by the University in a different light, as might have been expected; but into the details of this controversy it is by no means necessary to enter. The University Court has acted, we may be sure, from a sense of duty and regard to what it conceives to be the highest interests of the institution; and both parties may, we think, be well satisfied with what Sir A. Grant states of the past views and existing intentions of the governing body. It is marked by breadth and fairness of view, and promises, we think, fairly for a settlement of the question in the only way in which it can possibly be ultimately decided—a provision for the admission of women under fair, reasonable, and convenient provision to separate medical education, which they must arrange themselves through friendly professors, and the legal facility for admission to university degrees and university honours if they are able to win them. When they have fairly won them, as we doubt not that a certain number will with ease and credit, it remains to be ascertained how far they are overweighted and debarred from successful practice by the physical disabilities which others allege to be insuperable disadvantages in a medical career, but which some very able women have already at least shown to be less so than had been alleged.

IRELAND.

ACCORDING to a recent return of twenty-two district lunatic asylums in Ireland, there were 7,187 inmates—of whom 861 were members of the Church of Ireland, 5,761 Roman Catholics, and 535 Presbyterians—on the 1st of June last. Returns are made as to England, but not tabulated in the same manner.

SUPERNUMERARY FINGERS AND TOES.

A MALE child was born on the 22nd ult., in the North Dublin Union, who has six fingers on each hand, and an equal number of toes on each foot.

OUR FOREIGN VISITORS.

It was hoped, says the *Medical Press and Circular*, that the profession in Dublin would have been gratified by a visit from the distinguished foreigners—Professors Virchow and Langenbeck and Dr. Gueneau de Mussy—who were present at the meeting of the British Medical Association in London. There was an expectation that they might have been able to accept the invitation of Mr. Jolliffe Tuffnell to make themselves this summer acquainted with a few of the beauties of Ireland, but it was not found to be possible for them to delay longer their return home. We believe, however, that they have given a promise, if possible, to avail themselves of the invitation next year.

DR. ROBERT W. SMITH OF DUBLIN.

WE regret to state that this gentleman, whose reputation as a surgeon is well known, has been suffering for some weeks past from hepatic disease, complicated with ascites, and that he still continues in an extremely unsatisfactory condition. He has been tapped for the dropsical symptom, but suffers considerably from severe pain, which requires opiates in large quantities to procure rest.

SUICIDE OF A MEDICAL PRACTITIONER.

MR. HAINES, an apothecary who resided in Cork, committed suicide last week, by swallowing one ounce of the tincture of aconite, dying within an hour afterwards. Emetics of sulphate of zinc were administered, and the stomach-pump was used, but without success. The deceased was 60 years of age, and was much respected in the locality in which he practised. The cause for this rash act was owing, it is said, to mental depression, arising from religious impressions.

THE DAIRY REFORM COMPANY AND THE EPIDEMIC OF TYPHOID FEVER IN LONDON.

[THE following letter has been addressed to us by the Secretary of the Dairy Reform Company. It appeared in our second edition of last week.]

SIR,—I. On the 30th August, you published a special second edition, containing what purported to be a complete correspondence between this company, the medical officer of health for Marylebone, and Dr. Murchison. This publication was entirely unauthorised by us, no copies having been sent to the editor, with whose name we were not then acquainted.

There were typographical errors in the correspondence, but these are not of great importance; but the correspondence is numbered in a manner which makes it appear complete instead of incomplete, and headings are put to the letters which are not all correct.

2. Thereupon we sent you the complete correspondence, with a request that the omitted portions should be published. At the suggestion of the Secretary of the British Medical Association, one of the Directors wrote a letter, giving a history of the facts as they happened; but you have not thought fit to publish either the omitted portions of the correspondence or the Directors' letter, and you have republished the incomplete correspondence in its objectionable form, and have also published a leading article, the writer of which commences by a sentence still further misleading to your readers, and implying that the incomplete correspondence is complete. We therefore call upon you to publish this, our formal repudiation of the incomplete correspondence and also the omitted portions which we again send you. I am further instructed by the Board to state what the misrepresented facts really are.

3. On the 4th August, Dr. Whitmore called and told us that suspicions as to the milk had been communicated to him.

4. On the same day he wrote a letter marked No. 1 in the enclosed correspondence, and referred to in paragraph 2, saying that, "without presuming to express any opinion as to the cause of this outbreak . . . I feel it my duty to suggest . . . the necessity of your at once ceasing to supply the public with milk . . . until it can be shown that the outbreak has its origin in other causes."

5. In reply to our questions, he called to see the Directors on the 5th.

6. He then stated his altogether erroneous belief that our milk came from a sewage-farm, and told us that nine houses where the fever had appeared had been brought to his notice, of which eight were our customers; and his position appeared to us at the time to be logically as follows:—

a. Nine cases of fever are known in Marylebone.

b. Eight of these occur among your customers.

c. One is known *not* to be among your customers. Therefore, the whole nine are due to your milk.

7. Our customers, as nearly as we can estimate, represent from 11,000 to 12,000 persons.

8. Finding that the sewage-farm idea was erroneous, after a very long interview and a very close examination of our premises and mode of conducting business, Dr. Whitmore, before leaving, stated that, if he had known all he had ascertained from his inspection and our explanation, he would not have so readily suspected our milk.

9. On the 7th, he substantially repeated his first letter, and asked us to discontinue our supply of milk "until such time as the true (*sic*) cause of the outbreak can be ascertained."

10. We replied on the 8th, in the only way possible for men of business not acting under panic, and, while utterly rejecting the allegation against the milk, which was altogether unwarranted by any evidence then laid before us, we nevertheless offered to close if indemnified by the vestry, to which letter we never received any reply.

11. By this time Dr. Whitmore had investigated, either personally or by his own deputies, into the health of our *employés* in London, and had ascertained that not one case of typhoid was to be found among them.

12. By this time we had also received replies from all the farms of the most satisfactory possible nature, and here it is only fair to say that Mrs. Jessop, whose name has been so unnecessarily published, was never told by the medical attendant of her husband that he had typhoid fever.

13. On the 8th also, we received a letter from the Local Government Board, informing us that Mr. Radcliffe had been appointed to investigate the suggested connection between the milk and the fever, and requesting us to assist him.

14. On the following day, he called upon us, and we gave him every assistance in our power.

15. He has never made any suggestions that we have not complied with.

16. He has never complained of our conduct.

17. On the 9th, Dr. Corfield, whom we had previously called in, arranged with Mr. Radcliffe and Dr. Whitmore to inspect all the farms, and Mr. J. Chalmers Morton (member of the Rivers Pollution Commission) consented to accompany them.

18. On the 11th, a letter was brought to this office by Dr. Murchison, dated two days previously, in the handwriting of Dr. Murchison, and bearing the signature of another eminent physician as well. It may be remarked here that neither of these gentlemen held any official position, and that the matter was then in the hands of the Government.

19. Dr. Murchison did not ask to see the Directors.

20. This letter gave a different version of the facts from that officially given by Dr. Whitmore, and the statements were also self-contradictory and incomplete, and insufficient for us to act upon.

21. We, however, immediately replied, stating facts unknown to these gentlemen and of far greater precision and, therefore, authority than those stated by them.

22. To which we received a reply, wherein they stated that there was not the slightest reason for modifying their opinion.

23. We again replied frankly and at length on the same day.

24. Later on the same day, we received a telegram, not from Mr. Radcliffe and Dr. Whitmore, but from Dr. Corfield, advising that we should discontinue the distribution of the Chilton Grove milk until he

25. This telegram he sent off before he had inspected the farm, but after an interview with the medical attendant of the late Mr. Jessop.

26. On that telegram we stopped the supply of milk from the Chilton Grove farm.

27. On the next day, we received a letter from Dr. Murchison alone of a much fuller nature. In this letter, *written after the suspected milk had been stopped*, and therefore having no real importance, Dr. Murchison while arguing, to a certain extent mixes with his arguments assertions which he did not support by evidence, and also makes unsupported contradictions of our statements.

28. The Directors replied at length, not only stating that the suspected milk had been stopped, but also explaining very fully why they had not stopped it sooner.

29. Three days afterwards, or on the 16th, they learnt for the first time, from the columns of the BRITISH MEDICAL JOURNAL, the really important facts communicated by Dr. Murchison to that journal.

30. On the 30th August, in his first letter to the *Times*, Dr. Murchison first brings against the Directors the accusations of manslaughter and falsehood.

31. Just as we admitted that the milk was the cause of some of the recent cases of fever, as soon as we became aware of the opinion of the joint Committee of investigation, so we would now admit that we were to blame for not having acted on suspicion at any earlier period could any blame properly be attributed to us, but we entirely deny that any blame can be imputed to us. And we are prepared to submit the above facts and correspondence to be investigated and reported upon by any competent and impartial men of science appointed, say by the President of the Royal Society; for we protest most loudly that Dr. Murchison's first letter never ought to have been written. Whether after the government had taken up the matter he should have intervened at all, when he might so easily have attended the interview between the Directors and Dr. Whitmore on the 5th August, is open to doubt; for we had received a great number of communications from physicians of eminence and repute, to the effect that the milk was a false alarm; and if a trading company is to follow the unofficial advice which every medical man may rightly or wrongly believe it to be his duty to give, they would soon be in the position of the old man in *Æsop's* fable.

32. But what is quite certain is this, that if Dr. Murchison considered the case so urgent that it could not be left to the machinery provided by Parliament and Government, but required the special and extraordinary intervention of private physicians however eminent, he should not have kept his letter in his pocket for two days, for surely his authority, if he had at that time been possessed of any facts convincing to himself, was sufficient without that of any one else; and surely a personal interview to explain the reasons for which he considered the lawful machinery of the country insufficient to meet the emergency, and to make sure that his views and facts were properly conveyed to us, would have been better than a letter. But assuming that a letter was to be written, then there is no question that the letter should have said one of two things. It should either have stated, as a fact resting upon his professional authority, that the milk, or a part of it, had become poisonous; or it should have contained a full exposition, in the fullest possible detail, of the reasons which had led him to that opinion.

33. The Directors protest against the misrepresentation both by Dr. Murchison and the writer of your article, that they used the question of pecuniary loss as a reason for not closing. This is untrue.

34. The reasons they gave are in their first letter to Dr. Murchison of the 11th August fortunately numbered, and comprise eleven reasons, some of which are of the greatest weight, and none of which are "a farrago of nonsense", as Dr. Murchison is never tired of terming them. But they put forward the pecuniary question to impress upon Dr. Murchison that it was altogether unreasonable, and even as they have ventured to term it, and again term it, "absurd", to ask them to close their business for the reasons stated; but they say, "were they not in possession of facts unknown to you, they would not hesitate at once, at whatever sacrifice, to suspend, which would of course mean to close, their business."

35. The Directors again protest against the accusation of the writer of your article that they "attempted to ride off" upon their belief that the allegation as to the milk arose from Dr. Whitmore's mistake about a sewage-farm being the source of supply; their best defence against this offensive imputation is the fact that in their letter published in the *Times* so late as the 29th ultimo, they appealed to Dr. Murchison to confirm their statement that he had laboured under that impression as well as Dr. Whitmore, for, so far as they knew, Dr. Murchison was the only source from which Dr. Whitmore's earliest information had been obtained. And it was only in the *Times* of the 30th, or eighteen days after the Directors had actually stopped the milk, that Dr. Murchison for the first time disclaimed having shared this idea.

36. The Directors desire me to state that the Editor of the BRITISH MEDICAL JOURNAL is in error if he supposes, as stated by the writer of the article in question, that he had informed them that this "sewage-farm theory" was not the basis of suspicion in the mind of Dr. Murchison.

37. The Directors did not "argue against the facts instead of investigating them"; and as they eventually stopped the milk on suspicion, and on suspicion only (although resting on tangible grounds), they were not "as exacting" in demanding "the exclusive and complete proof of the noxious quality of their milk as if they were conducting a physiological experiment in a laboratory, or working out an abstract problem in logic", although they did utterly reject the totally insufficient and illogical statements which alone, through some unfortunate mistake or misunderstanding, were placed before them.

38. The Directors again protest against the accusation of the writer of your article that "even on that supposition", namely that they were conducting an experiment in a laboratory, "they were indolent and unwary in investigating the evidence"; they had written and telegraphed to all the farms; they had also furnished Dr. Whitmore with the names and addresses of all their *employés* in London. They had also made inquiries in all directions; and heard of cases of fever in all directions in houses not supplied with milk by the Company, showing how badly chosen the word "outbreak" was. Their first two meetings were summoned by telegraph; they afterwards met daily; and one of the first things they did had been to call in the advice of Dr. Corfield, Professor of Hygiene in University College, and a Metropolitan Medical Officer of Health.

39. The foregoing are the hard facts of the case, which no amount of intemperate assertion can alter. The statement of the writer of your article that it is within his knowledge "that Dr. Murchison is entirely accurate in his statements", and "that the contradictions put forward by Mr. Maconochie for the Company are seriously inaccurate", falls, therefore, to the ground.

I am, Sir, your obedient Servant,
D. MACONOCHIE, Secretary and Manager.

Orchard Street, W., September 10th, 1873.

*** The first two paragraphs of the above letter relate to the conduct of this correspondence. They are unimportant to the general issue, and contain statements which are demonstrably incorrect from beginning to end. We shall comment but briefly upon this letter. It must be observed, however, that Dr. Whitmore's second letter did obviously not "substantially repeat the first", but stated expressly that fresh facts had come to his knowledge, and was far more urgent and peremptory in its writing. The letters of the 11th and 12th August were not from Dr. Murchison, but from Sir William Jenner (whose name Mr. Maconochie throughout suppresses) and Dr. Murchison. Of the facts published in the JOURNAL (on the 15th for 16th), the most important of those known on the 11th and 12th were personally communicated to the Company by the editor, who called, for that purpose mainly, at the office of the Company. Had anything like the same industry been shown in examining the facts brought under notice by Dr. Murchison, a correct conclusion could have been early attained by the Company. Sir W. Jenner and Dr. Murchison "judged rightly that the

who knew and saw the effects of the poison contained in the milk were not bound to wait passively and dumbly until its first source was traced, which might be a work of time. In a physiological experiment, we repeat, it might have been wise to wait till the whole history was traced *ab origine* before taking the step counselled. In this case, we think it blamable; and we also repeat that, even if it had been a physiological experiment, we think the Company blamably indolent in not at once proceeding to investigate the cases on which Sir William Jenner, Dr. Murchison, and Dr. Whitmore based their suggestions, instead of dismissing them with the most positive contempt. We must add that it was the *Times* which described, and we think well described, Mr. Maconochie's statement of reasons for discrediting the communications addressed to it, as a "farrago of nonsense"; and that Dr. Murchison has never charged the Company with manslaughter, although there can be no doubt that very great suffering, and probably death, have followed the course which they adopted. In adopting that course, they acted, we fully believe, from bad advice, and not at all from faulty intention; and we have the same opinion of their present letters, which are lamentable examples of perverted ingenuity and prejudiced statement. Making all possible allowances for them, we cannot withdraw the censure which we first pronounced; and we cannot but express the indignation which we feel at their gross attacks upon Dr. Murchison, to whom is certainly due the warmest gratitude for the energy and sagacity by which he arrested the course of what might well have proved a most wide-spread and signal calamity, and to whom many must consider that they owe their preservation from most imminent risk to health and life.

SIR,—The letter of Mr. W. Hope, dated September 3, which appeared in your last week's JOURNAL, together with a very long one from Mr. Maconochie, dated September 10th, and published in your second edition of the same day, have received my attentive perusal; and I have now to ask that you will kindly afford me the opportunity of replying to both of them, especially as since my return to London I have been informed that a great deal of what Mr. Maconochie has stated had previously appeared in one or more of his letters to the *Times*, but which, from the circumstance of my being absent from home, and busily occupied in seeking health and recreation elsewhere, had altogether escaped my notice.

Mr. Hope commences by telling us with charming frankness that on the question of their milk being contaminated, he and his co-directors had been at loggerheads. He states that, in the first instance, he had the greatest difficulty in getting them "to admit, or rather discuss, for they would not admit the possibility" of its being poisonous, that such a proposition seemed to them simply visionary; and that "the Chairman took the suggestion quite as an aspersion on his good name."

Now, sir, to my mind, this little piece of gratuitous information reveals most unmistakably the spirit of incredulity and—I had almost said—obstinacy which from the first animated the Directors of this Company, and has been so conspicuously displayed throughout all their subsequent proceedings; but for which, I venture to think, they might have preferred a strong claim to public sympathy, and in all probability would by this time have secured a return of the support and confidence of most, if not all, their former customers.

Mr. Hope's conversion from an uncomfortable scepticism to the positive unbelief of his colleagues, appears to have been brought about by being told that I had attended the meeting of the Directors under the full impression that their milk came from a sewage-farm. This I have already contradicted; but, assuming it were true, was it sufficient, I may ask, to obliterate altogether the strong suspicion produced by the fact that a large number of families were then suffering from typhoid fever—of which they had already been informed—all of whom, with but one exception, had drunk their milk? Or because that their milk was the cause of the outbreak had been disproved, were they for that reason, and that only, justified in setting at naught the strongly expressed opinions of such eminent authorities as Sir William Jenner and Dr. Murchison?

Mr. Hope presumes to say that my interview with the Directors on the 5th instant quieted my suspicions for two days, and leaves it to be inferred that in the interval I did nothing. In this he is singularly mistaken. It was in those two days (during which additional proofs of their milk being contaminated had rapidly accumulated) that I was most anxiously and incessantly occupied. In that brief period, I drove about in all directions in search of fresh information. I addressed a letter to the editors of our three principal medical journals, asking of their medical readers information of any cases of fever that came under their care or cognisance. I also drew up, and afterwards sent out, a circular with the same object to every practitioner in the parish; and further, with the aid of the assistant-surveyor of the parish, I completed

arrangements for thoroughly and continuously disinfecting the public sewers, and for carrying out also such additional sanitary work as in my judgment was necessary to arrest the progress of the epidemic. Had my doubts been quieted, or, to quote Mr. Hope's expression, had I become *désillusionné* in the matter, it is not likely I should have done what I could only have been prompted to do by a suspicion which hour by hour was growing into strong and unalterable conviction.

Mr. Hope next tells us that, on the receipt of my official letter of the 7th instant, his first impulse was to accept it as a sufficient proof, and to close their establishments; but here, again, he yields up his better judgment to the prejudices of his still incredulous colleagues, and compromises with his feelings by drafting that very extraordinary letter in which the Company agree to shut up shop, on condition that the vestry will undertake to compensate them "for all the loss and injury they may sustain in loss of custom and reputation," and this proposal, he gravely asserts, is made to the vestry "to test the strength of the belief of their medical officer." As a ratepayer and a man of business, he must have known that a parish vestry or any other local board has not the power, even if it had the will, to use the parochial funds for any such purpose as this; and therefore as a test of my faith, it was utterly useless. But what has become of the "overwhelming evidence" referred to in that singular letter, of the disease being due to other causes than the milk? Up to the present moment, not a tittle of it has been disclosed, and I think it should be; for, although the discoveries at Chilton Grove Farm have settled the question as to the true cause of the late epidemic, it is nevertheless important to know what the nature and substance of this "overwhelming evidence" really is, in order that, should it point to some positive danger present or prospective, I, as being entrusted with the sanitary supervision of this great and populous parish, may without further delay take the necessary steps to avert it.

Having now dealt with so much of Mr. Hope's letter as refers to myself, I venture to ask a little further space to answer the letter of Mr. Maconochie, and, from the circumstance of that gentleman having embodied his statements in thirty-nine short paragraphs, which I may call Mr. Maconochie's thirty-nine articles, my task will be rendered comparatively easy.

Paragraph 3 states that, on the 4th of August, I called and communicated my suspicions as to the milk. I did something more. I made a sanitary inspection of the premises, and called attention to a defect in the overflow-pipe of the basement water-cistern, and requested that it might be remedied.

Paragraph 4 quotes from my letter of August 4th the following passage: "Without presuming to express an opinion as to the cause of this outbreak"—This is referred to in other letters of Mr. Maconochie; and is evidently made use of to show that, at the time of writing it, my mind was in a state of chaos, that I had no settled opinions on the subject, and therefore my warning was unheeded; but let me say, I did not dare at that time to give full expression to my thoughts, because I had the fear of an action for libel before my eyes; but for that, the Directors may be sure that I would have given them no excuse or plea for inaction on the grounds of my doubt or indecision.

Paragraph 6 attributes to me the belief that their milk came from a sewage-farm. This is altogether incorrect. I asked if such were the fact simply because, not half an hour before, it had for the first time been suggested to me that such might be the case. My theory, therefore, was not, as Mr. Maconochie has elsewhere asserted, "started upon an erroneous datum," but upon one which has turned out to be literally true. But, on a matter of such importance as this, there ought to be no evasion or mental reservation. Let me, therefore, be candid, and say that, for a long time, I did labour under certain very mistaken impressions with regard to the sources whence this Company obtained their milk, and which, I think, were largely shared by the public. I supposed that this model Company, who had come before us in the character of public benefactors, and professed to be influenced mainly by motives of philanthropy, obtained their milk from farms under their own immediate control and management, and that the sanitary condition of those farms was all that could be desired. My visit into Oxfordshire, however, speedily dispelled these wild imaginings, and convinced me that many other respectable milk vendors in St. Marylebone, with pretensions infinitely more modest, were equally with this Company entitled to public confidence and support.

In paragraph 7, we are told that the Company have from 11,000 to 12,000 customers. It may be true. I asked for a list of them, but could not obtain one. In that, the Directors did not, in the prosecution of the inquiry, "give every assistance in their power."

In paragraph 8, Mr. Maconochie says that "Dr. Whitmore, before leaving, stated that, if he had known all he had ascertained from his inspection and our explanation, he would not have so readily suspected our milk." This I utterly deny. I certainly expressed approval of the

manner in which the milk was kept at the dairy, and sent out to their customers; and I also commended the precautions that were taken to ensure purity and freedom from adulteration; but not a sentence escaped my lips which admitted of the supposition that my suspicions were in the slightest degree allayed by what I then saw or heard.

In paragraph 11, Mr. Maconochie says that I had by that time investigated the health of their *employés* in London, and ascertained that not one case of typhoid was found amongst them. This is incorrect. I, or rather, my inspector, examined these *employés* and their families in Marylebone only, and amongst them were found one child suffering from fever and one woman who was then convalescent.

Mr. Maconochie, in his letter of the 11th of August, addressed to Sir William Jenner and Dr. Murchison, gives an explanation of the way in which the surplus milk is distributed amongst the Company's *employés* after their return from their beats, which, if I understand him correctly, comprises all that remains of the milk of all the farms from which they obtain their supply. Now we know that the infected milk came from one farm only, and that the daily quantity sent up was by no means large. Is it, therefore, unreasonable to infer that the admixture of what remained of this infected milk, after its distribution amongst the customers, with the surplus milk of all the other farms, caused such a dilution of the poison as to render it comparatively harmless? If there is any value whatever in this hypothesis, it will help to account for the general exemption of the *employés* from the disease. Connected with the investigation of the health of the *employés*, a circumstance occurred, which has been related to me within the last three days by my inspector, Mr. Lightfoot, which I think is not altogether devoid of interest. On the day when that officer—I think it was on August 9th—called at the dairy in Orchard Street, to obtain a list of the *employés*, which had been promised him by Mr. Maconochie, the weather being warm, he asked for a glass of milk. Mr. Maconochie, with characteristic politeness, called down the pipe for a jug-full to be sent up immediately. A tumbler-full was poured out, which he drank. It was deliciously cool, and, at the kind solicitation of Mr. Maconochie, he was induced to imbibe a second. Six days afterwards, this poor fellow was seized with enteric fever in its aggravated form, and is still seriously ill. (No other case of fever has occurred in Mr. Lightfoot's house or in the immediate neighbourhood.) Had he simply emulated the heroism of one of the Directors, and drunk only one tumbler, he might have escaped. From this sad incident we gather the important fact that, so late as on the 9th of last month, the Company was still sending out poisonous milk.

Other points in Mr. Maconochie's letter might be touched upon; but I have not the assurance to intrude further upon your valuable space than to subscribe myself,

Yours, etc.,

J. WHITMORE, Medical Officer of Health
for Marylebone, etc.

15, Wimpole Street, August 16th, 1873.

* * * This correspondence should end here.

AUTUMN MANŒUVRES.

[FROM OUR SPECIAL CORRESPONDENT.]

Cannock Chase, September 10th.

BEFORE the following notes can be published, the Autumn manœuvres will have terminated, the troops will be *en route*, if they have not already returned, to their various stations, and the usual question will be current as to what has been gained thereby.

Medically, there is little to be said against them; and, indeed, had it not been for the very unfavourable weather, the troops would have had a very pleasant holiday, and one very beneficial to health, for their rations have been excellent, and almost invariably issued in good time; and they have scarcely had one very fatiguing march, though sufficient to make them unwilling to wander much from camp on their own account. The Guards, at first, showed a high ratio of venereal disease, in consequence of some men having exposed themselves to it immediately prior to their departure from London; but throughout the camp there appears to have been very little illness, and very few severe cases due to exposure to cold and damp.

The sick-list, however, though the only available test of the healthiness of the camp, is somewhat fallacious; for, probably, there are not a few men who might, with truth, a few months hence date the development of latent disease to the recent exposure both here and at Dartmoor.*

* This observation has been already verified, for one of the Band of the Guards was sent to Cannock Chase on September 9th for his "march pass" on the 11th, and returned on the 12th. During the night of the 13th one musician died, and there was found to be pneumonic congestion of both lungs, already greatly enfeebled, by almost universal pleuritic adhesions, as well as by some crude tubercle in the apices.

In a military point of view, these manœuvres may have been successful in tending to make the army popular in this neighbourhood, judging from the crowds collected to witness them, but they certainly have been no test of the powers of the Control to meet a great emergency; nor was the ground sufficiently large to allow such strategical movements as are looked upon as the chief reason for massing our troops in different parts of the country, and thus entailing so great an expenditure.

On future occasions, the health of the troops might be more studied in a few respects with advantage. For instance, on September 1st, after a long march, and when the men were very wet, one battalion had to do out-post duty throughout the night; and it appears that such exposure was quite unnecessary, as the duty could be learnt equally well by day, and no one can surely be found to say that lying on the damp ground all night, in wet clothes, can conduce to health. Then, again, when the weather is so unsettled as it has been here, striking camps, and repitching them on new and wet ground, ought to be avoided. It should be imperative for all men to be supplied with flannel shirts; for, though comprised in the kit on joining the service, they are in time frequently replaced by cotton ones. The great coats should not, as a rule, be carried, if not to be worn, so that when the troops return they might have something dry to put on, though this is done to teach them not to neglect to carry everything with them, as in actual warfare they cannot know where they may rest at night.

By all means the soldier should be instructed in the modern art of warfare, but, at the same time, it should not be forgotten that there is a vast difference between the sham and the reality.

THE SOCIAL FESTIVITIES OF OCTOBER FIRST.

THE following social gatherings in connection with the medical schools are announced to take place on October 1st.

St. George's Hospital.—The annual dinner of the Hospital Medical School will take place at Willis's Rooms, St. James's, on October 18th; Dr. Acland of Oxford in the chair.

Middlesex Hospital.—The annual dinner of the past and present students and their friends will take place at 6.30 P.M., in St. James's Hall, on October 1st; Dr. Greenhow in the chair.

St. Mary's Hospital.—A *conversazione* will be held in the Board Room after the introductory address, at 8 in the evening.

Westminster Hospital.—A *conversazione* will be held in the Board Room in the evening, after the address, on October 1st.

Leeds School of Medicine.—The annual dinner will be held at the Great Northern Hotel on Wednesday, October 1st, at half-past five.

Liverpool Royal Infirmary School of Medicine.—The annual dinner will take place at the Adelphi Hotels, on Wednesday, October 1st, at seven o'clock; Dr. Gee will preside.

ASSOCIATION INTELLIGENCE.

NORTHERN BRANCH.

THE autumnal meeting will be held at the Central Hall, Darlington, on Thursday, September 25th, at half-past 1 P.M.

Dinner at the King's Head Hotel at 4 P.M. Tickets, exclusive of wine, 6s.

Notice of Motion.—Mr. H. G. Hardy will move, "That in future the annual subscription to the Branch be five shillings."—Dr. Eastwood will move as an amendment: "That in future the annual subscription to the Branch be four shillings."

The following papers have been promised. 1. Mr. James Mackie: On the Working of the Public Health Act. 2. Dr. Eastwood: On the Water Supply of the Tees Valley. 3. Mr. C. S. Jeaffreson: On Osteoid Cancer.

Gentlemen who intend to read papers or introduce patients are requested to communicate their intention to the Secretary without delay.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-upon-Tyne, September 2nd, 1873.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch will be held at the Town Hall, Oundle, at 2 P.M., on Tuesday, the 30th instant. Luncheon will be kindly provided by D. Webster Tomlinson, Esq., at his house, previously.

Gentlemen who intend to read papers or communications are requested to forward the titles of the same as early as convenient to Dr. Bryan, President.

W. MOXON, *Honorary Secretary.*

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting will be held at the Lion Hotel, Shrewsbury, on Monday, October 6th, at 1 P.M.; S. BETTON GWYNN, Esq., in the chair.

Dinner will be served at 3 P.M. for the convenience of the country members. Tickets, exclusive of wine, 7s. 6d. Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. Wright of Liverpool, will be provided as usual.

Gentlemen intending to read papers, etc., will oblige by communicating the titles of such, before the 29th instant, to

JUKES STYRAP, *Honorary Secretary.*

Shrewsbury, September 12th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will be held on Tuesday, October 7th, at Petworth; HENRY BOXALL, Esq., of Wisborough Green, in the Chair.

Any gentleman desirous of reading a paper or bringing forward cases is requested to communicate forthwith with the Honorary Secretary, in order that a notice of the same may be inserted in the circular convening the meeting.

WM. J. HARRIS, *Hon. Sec.*

Worthing, Sept. 15th, 1873.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting of this Branch will be held in the Museum, Shrewsbury, on Wednesday, October 8th, at two o'clock. DR. GREVILLE THURSFIELD, President-elect.

Papers will be read, etc.

The Dinner will take place at the George Hotel at four o'clock. Members may introduce friends.

SAMUEL WOOD, *Hon. Secretary.*

FORMATION OF THE NORTHERN COUNTIES BRANCH IN SCOTLAND.

THE annual meeting of the Northern Counties Medical Association was held at Gray's Hospital, Elgin, on Saturday, September 13th, at 12.15 P.M. There were present: Dr. Duff, Elgin, President; Dr. Wilson, Dr. Jones Ross, Dr. Duncan Mackay, and Dr. Macnee, Inverness; Dr. Aitken, Northern Asylum, Inverness; Dr. Vass, Tain; Dr. Bruce, Dingwall; Dr. Craig, Glenurquhart; Dr. Griger and Dr. Cameron, Nairn; Dr. Ross, Dr. Mackay, Dr. Whyte, and Dr. Adam, Elgin; Dr. Forbes, Fochabers; Dr. R. S. Turner, Keith, and Dr. Macnab, Loch Inver. Professor Maclean, of Netley College, was also present by invitation.

The Secretary (Dr. Mackay, Elgin) having read the minutes of last meeting, mentioned that he had received apologies from Dr. Turner, senior, Keith; Dr. Murray, Forres; Dr. Kynoch, Invergordon, and Dr. Allan, Bonar.

President's Address.—The PRESIDENT delivered an address on the origin and rise of the Society, its increase and its losses, and proceeded to inquire how far the Society had fulfilled its mission. He stated that the Society contemplated, in its formation, to facilitate social intercourse among its members, and to encourage mutual improvement by reading papers on medical and kindred subjects, and medical politics generally. He traced the Society from its formation in 1863 to the present day, and showed that, from the small beginning of about fourteen members, it now included the great majority of the practitioners in the Northern counties, and that, in its advance, it had connected itself with kindred associations in Buchan, Aberdeen, etc. It was encouraging to see such associations being ramified over Scotland; and he pointed out that he believed these Societies were destined to become a future element of strength for the medical profession by their power of combination for mutual support and mutual encouragement. He alluded to the subject of medical fees. He thought that subject should engage the attention of the Association, as the rise in the price of every necessary of life, and the increase of every other expense connected with the practice of the profession, particularly in the country, demanded a reconsideration of the scale of fees. He adverted to the losses which the Society had sustained in the deaths of several of its members—more particularly to the deaths of Dr. Robb and Dr. Ferguson, which had taken place since the last meeting of the Society, and he invited the Society to join with him in recording a tribute of most merited praise to their memories.

He next viewed the Society in its social aspect. He pointed out the advantages which, in his opinion, might result from these meetings, in cultivating mutual acquaintance and friendship, in correcting prepossessions, and fostering kindly and charitable feelings among the members of the profession. In its professional aspect, the President reviewed the work done by the Society, and the subjects which had engaged its attention. He regretted that the distance at which many of the members lived, the difficulty of leaving their professional duties, and the short time that they could spend together, precluded elaborate addresses and lengthened discussions; but he urged that the business of the Society should always be opened by an address from the President, either on medicine or some other kindred subject, as a matter due to his own position and to the Society, and that the members should, by every means in their power, contribute to promote the welfare of the Society, and, by their contributions and zeal, to place it in the foremost places both of influence and talent. [Applause.]

Papers.—The following papers were read.

1. Dr. Forbes (Fochabers) read a paper on a Simulated (?) Case of Labio-Glossopharyngeal Paralysis. A man had fallen into straitened circumstances, and taken to drinking, from failure in business, and was subject to frequent violent ebullitions of passion. In a paroxysm of this nature, he suddenly fell down, as believed, speechless, and only after some time was able to rise. He was put to bed, and only after five days he was able to utter yes, or no, but not for ten days was the faculty restored. The man afterwards said that he had been feigning, while his wife and relatives held that there had been no simulation. The case gave rise to a very interesting discussion.

2. Dr. WHYTE (Elgin) gave details of a case of Ovarian Disease, on which he had operated successfully. The principal point in the case was the manner in which he treated the pedicle: namely, by tying it at different points with carbolised ligatures. The ligatures (of catgut) should, he recommended, embrace more than one half, if two be required, or more than one-third if three, so that the large vessels are completely secured, while the end of the pedicle is not cut off entirely from the general circulation. The advantages which he stated this plan to present were the following. 1. It may be applied to almost any pedicle. 2. Hæmorrhage is thoroughly obviated. 3. Sloughing of the end of the pedicle is prevented. 4. There is thus additional security against septicæmia. 5. It allows the abdomen to be closed at once.

3. Dr. MACKAY (Inverness) showed certain novelties which he had invented within the last few months. They consisted of a new kind of fly-blisters, a water-proof paper, and a new court-plaster. The blister is made from the blistering plaster of the *British Pharmacopœia*, but consists of many blistering spots on one sheet, each of which produces a corresponding vesicle. The spots are blue, while the material to which they are attached is a yellow paper, prepared in a peculiar way. The waterproof paper is of a crimson colour, quite impervious to water, apparently well adapted as a substitute for oiled silk, and can be produced at less than half the cost of that article. The court-plaster is also made from paper. It is almost transparent, waterproof, and without gloss on one side. Applied to the face or hands, it is all but invisible. It is said to take a firm hold, and seems quite to accord with the name which Dr. Mackay has given it—epidermic court-plaster. It forms a lithic artificial skin for covering abrasions, especially on conspicuous parts of the person.

FORMATION OF A BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Dr. BRUCE (Dingwall) brought forward a proposal, of which notice had been given, that this Society should form itself into a Branch of the British Medical Association. He enlarged upon the advantages which would accrue to the members from this connection.

Professor MACLEAN (Netley) seconded the proposal. He gave his very decided opinion of the wisdom of the step proposed, and of the great influence which the British Medical Association was wielding in the fields of science and medical politics, and the great power for good which would be exercised on the country generally and on one another, if the members of the profession would, as this Society proposed to do, unite with a Society already established and occupying a prominent place in public esteem. He spoke of the brilliancy and success of the late meeting in London, and assured the meeting that the British Medical Association would, with the greatest pleasure, welcome into its ranks the gentlemen whom he saw around him.

The proposal was most unanimously and cordially agreed to; and the meeting resolved: "That the Northern Counties Medical Association constitute itself a Branch of the British Medical Association, under the title of the Northern Counties Branch of the British Medical Association."

Laws.—The following laws were adopted for the regulation of the Branch. 1. The Northern Counties Branch of the British Medical Association shall include the western portion of Banffshire, and all the other counties of Scotland northward. 2. Unless it be otherwise provided, the affairs and proceedings of this Branch shall be regulated by the fundamental code of laws of the Association. 3. Any member of the Association residing within the area of the Branch who is not disqualified by any law or bye-law of the Branch or Association, and who shall be recommended as eligible by their members, may be admitted as a member of the Branch by the President and Secretary of the Branch, and such admission shall be presented for confirmation at the next meeting of the Council. 4. The Executive Government shall be conducted by a President, President-elect, two Vice-Presidents, an Honorary Secretary and Treasurer, the Secretaries of the districts, and six ordinary members of Council. 5. The President-elect shall be appointed at the annual general meeting of the Branch, and shall enter on his office as President at the annual general meeting next ensuing. 6. The Vice-Presidents shall be the Presidents of the preceding two years. 7. The Honorary Secretary and Treasurer shall be appointed annually, and he shall be eligible for re-election. 8. The six ordinary members of Council shall be chosen annually. They shall be eligible for re-election, but no one of them shall be capable of holding for more than three consecutive years, unless as an *ex-officio* member. 9. The annual general meeting shall be held in September at such time as the Council may appoint, alternately in Elgin and Inverness, provided that not less than fourteen days' intimation of the day, time, and place of meeting be given in the JOURNAL of the Association and by circular from the Secretary. 10. At each annual meeting the members shall receive the Council's report, elect officers for the ensuing year, transact necessary business, and discuss such subjects connected with the interests of the profession as shall be brought before them. 11. All subjects connected with medical science or the profession shall be admissible for discussion at the general meeting. 12. Members of the Branch resident within its district may, at their convenience, form societies and hold meetings for the promotion of the objects of the Branch. 13. No alteration shall be made in any law of the Branch, nor any law be enacted or abrogated, except at a general meeting of the Branch; nor unless special notice of the proposed alteration, enactment, or abrogation shall have been given through the Secretary to each member of the Branch one month before the general meeting at which each change is to be considered. 14. A dinner or such other social entertainment as may be determined shall be provided on the day of the annual meeting. 15. An annual subscription of five shillings, one on January 1st, shall be paid by each member to the Treasurer for the necessary expenses of the Branch. Each new member who joins after the 30th of June, shall prepay a subscription of 2s. 6d. for the remainder of the year.

Office-Bearers.—The following were elected. *President:* G. Duff, M.D., Elgin. *President-elect:* J. Jones Ross, M.D., Inverness. *Vice-Presidents:* J. Murray, M.D., Forres; J. Wilson, M.D., Inverness. *Honorary Secretary and Treasurer:* J. W. Norris Mackay, M.D., Elgin. *Members of Council:*—T. Aitken, M.D. (Inverness); W. Bruce, M.D. (Dingwall); J. A. Cameron, M.B. (Nairn); R. Craig, M.B. (Glenurquhart); J. Macnee, M.D. (Inverness); J. Vass, M.D. (Tain).

Districts: Tariff of Fees.—It was submitted to the Council to consider the subject of the subdivision of the Branch into district-branches, for the more efficient practical working of the Association; and likewise, as the North of Scotland Association has lately appointed a committee to revise scale of fees, to endeavour to come to a common understanding, and to draw up a tariff which would be applicable to the whole of the north of Scotland.

The late Dr. Paul, of Elgin.—Dr. GRIGOR (Nairn) suggested that it was a most desirable thing, and would come very appropriately from the gentlemen present, that an effort should be made to procure a good bust of the late Dr. John Paul, of Elgin, to whose memory he paid a warm tribute of praise. The suggestion was heartily adopted by the meeting, and they unanimously authorised the treasurer to subscribe in their names, from the funds of the Association, the sum of ten guineas. Dr. Mackay was requested to take charge of any subscription, which might be sent to him for this purpose.

Votes of Thanks were given to the President, and to the Trustees of Gray's Hospital, for granting the privilege of meeting there; and the meeting adjourned.

Luncheon.—At half-past two, nineteen members partook of luncheon in the Gordon Arms Hotel, Dr. Duff, President, in the chair; supported on the right by Professor Maclean, of Netley, and, on the left, by Dr. Ross, of Inverness, President-elect. After the usual loyal toasts, the success of the "British Medical Association, and of all its Branches," was drunk with all the honours, followed by "The Northern Counties

Branch," "The strangers present," coupled with the name of Professor Maclean, of Netley, who replied for himself, and as a member of the British Medical Association. A most pleasant and profitable afternoon was spent. Altogether, the meeting was highly successful, and, on all hands, cordial wishes were expressed for the success of the parent Association, and its latest offspring.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following vacancies are announced:—

- ATHY UNION—Apothecary to the Athy Dispensary District: £30 per annum. Applications, 23rd inst., to F. Haughton, Hon. Sec., Levinstown, Athy.
- BETHEM HOSPITAL—Two resident Medical Students. Applications, 11th October, to A. M. Jeaffreson, Clerk.
- BIDEFORD UNION—Medical Officer for the Bideford District.
- BIRMINGHAM: QUEEN'S HOSPITAL—Physician.
- BRENTFORD UNION—Medical Officer for District No. 7: £40 per annum, and fees. Applications to Wm. Ruston, Clerk.
- BRIDGNORTH UNION—Medical Officer for District No. 4.
- BRISTOL GENERAL HOSPITAL—Physician.
- BRISTOL ROYAL INFIRMARY—Assistant-Surgeon.
- BURY ST. EDMUNDS—Public Analyst: £10 ros. per annum; ros. per analysis for the first fifty, and 5s. per analysis beyond. Applications, 20th October.
- BURY ST. EDMUNDS URBAN SANITARY DISTRICT—Medical Officer of Health: £52 ros. for one year.
- CONWAY UNION—Medical Officer for the Creuddyn District: £50 per annum, and fees. Applications, October 2nd, to William Hughes, Clerk to Guardians.
- EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN—Assistant Physician. Applications, 25th instant.
- EASTERN DISPENSARY, Bath—Resident Medical Officer: £80 per annum, rising to £100, furnished apartments, etc. Applications, 24th inst., to Francis Savage, Hon. Secretary.
- EAST SUFFOLK HOSPITAL, Ipswich—House-Surgeon: £100 per annum, furnished apartments, board, etc. Applications, 24th instant, to George S. Elliston, Secretary.
- ENNISCORTHY UNION—Medical Officer and Public Vaccinator for the Killan Dispensary District: £90 per annum, and fees. Applications to Thomas Redmond, Hon. Sec.
- GUEST HOSPITAL, Dudley—Resident Medical Officer: £120 per annum, furnished residence, board, &c. Applications, 26th inst., to E. Poole, Secretary.
- HARTLEPOOL HOSPITAL AND DISPENSARY—House-Surgeon and Secretary: £80 per annum, board, etc. Applications, Oct. 1st, to F. H. Drake, Sec.
- KANTURK UNION, co. Cork—Apothecary for the Newmarket Dispensary: £50 per annum. Applications, 5th October, to George Smith, Hon. Sec., The Cottage, Newmarket.
- KILMACHTHOMAS UNION, co. Waterford—Medical Officer for the Workhouse: £90 per annum. Applications, 30th instant, to Wm. Hunt, Clerk to Union.
- LANGPORT UNION, Somersetshire—Medical Officer to the Workhouse: £35 per annum. Applications, 23rd inst., to J. F. H. Warren, Clerk to Guardians.
- LIVERPOOL DISPENSARIES—Hon. Medical Officer to the South Dispensary. Applications, 24th inst., to W. Lister, Secretary.
- MANCHESTER ROYAL EYE HOSPITAL—Three additional Medical Officers. Applications, 15th inst., to P. Goldschmidt, Chairman of the Board.
- MANCHESTER ROYAL INFIRMARY—Pathological Registrar: £100 per ann. Applications, 20th inst., to the Chairman of the Weekly Board.
- MORPETH DISPENSARY—House-Surgeon: £110 per annum, furnished house, etc. Applications, 1st Oct., to D. F. Wilson, Hon. Sec.
- NARBERTH UNION—Medical Officer for District No. 3: £45 per annum, and fees. Applications, Oct. 4th.
- NEWMARKET UNION—Medical Officer for District No. 1.
- NEWPORT UNION, co. Mayo—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballycroy Division of the Achill Dispensary District: £100 per annum and fees. Applications, 7th October, to John Carr, Hon. Sec., Murelan, Achill.
- OSWESTRY DISPENSARY—Surgeon.
- ROYAL COLLEGE OF SURGEONS, Ireland—Professor of Chemistry.
- ROYAL LONDON OPHTHALMIC HOSPITAL—Curator; Assistant-Surgeon. Applications, 30th inst., to Robert J. Newstead, Secretary.
- ST. THOMAS'S HOSPITAL—Resident Assistant-Surgeon: £100 per annum, furnished apartments, and commons. Applications, 20th instant, to A. D. Tritton, Treasurer's Clerk.
- SUNDERLAND URBAN AND PORT SANITARY DISTRICTS—Medical Officer of Health: £500 per annum for five years. Applications, 25th inst., to Wm. Snowball, Town Clerk.
- ULVERSTONE UNION—Medical Officer and Public Vaccinator for the Broughton West District: £42 per annum, and fees. Applications, 22nd inst., to John Sykes, Clerk to Guardians.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- BERRY, W., Esq., appointed Junior Assistant Medical Officer to the Workhouse Hospital, Manchester.
- *HUNT, W. J., M.D., appointed Assistant-Physician to the Metropolitan Free Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

- LONG.—On September 15th, at 93, Richmond Road, Dalston, the wife of *Mark Long, M.D., of a son.

MARRIAGES.

BLAND—TEALE.—On September 11th, at Hoddesden Church, Herts, William Charles, eldest son of the late John Bland, Esq., Surgeon, Durham, Assistant Medical Officer, County Asylum, Dorchester, to Ellen Marion (Nellie), youngest daughter of W. H. Teale, Esq., The Rye, Hoddesden.

BRAITHWAITE—HIGGINSBOTTOM.—On September 4th, at Nottingham, the Rev. E. B. Braithwaite, of Bardsey, Yorkshire, to Harriet Florence, only daughter of "Marshall Hall Higginbottom, Esq., Surgeon, of Nottingham.

DICKINSON—PERRY.—On September 10th, at St. John's Church, Hensingham, Cumberland, by the Rev. W. H. Wilkinson, M.A., Vicar, assisted by the Rev. B. S. Darbyshire, M.A., Edward H. Dickinson, M.A. Oxon., M.B., to Annie, daughter of the late Henry Perry, Esq., of Keekle Grove, near Whitehaven.

MACLACHLAN—PATON.—On September 9th, at 10, Alloway Place, Ayr, by the Rev. Thomas Dykes, D.D., assisted by the Rev. William MacLachlan of Port-Glasgow, father of the bridegroom, William MacLachlan, M.D., Surgeon, Dalmellington Ironworks, to Katharine Wilson, youngest daughter of Robert Paton, Esq.

GRIFFITHS—ALISON.—On September 4th, at the Parish Church, Donegore, by the Rev. Thomas B. Adair, Vicar of Templepatrick, assisted by the Rev. H. R. Taylor, M.A., Rector of Donegore, W. Handsell Griffiths, M.D., of Sydenham Road, Dundrum, Dublin, eldest son of the late John Waters Griffiths, Esq., of Waterford, to Lizzie Smythe, only surviving daughter of the Rev. S. Smythe Alison, Parkgate, County Antrim.

DEATH.

***BOLTON**, John A., M.D., at Leicester, aged 45, on September 15th.

MR. JOHN H. WRAITH, Public Vaccinator for the Darwen District of the Blackburn Union, has received a government grant of £31:14:8 for efficient vaccination.

OPENING DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MACLAGAN (Dundee).—The paper will be published in the JOURNAL.

DR. JOHN HADDON.—The only vessel of the kind we have seen advertised may be heard of by applying to Mr. Richard Abbey, Captain's Secretary, 4, Essex Street, Strand, London.

MR. BAILEY.—Address the Consul General of the Netherlands, 20½, Great St. Helen's, E.C., London.

PUNCH JUNIOR.—A little satire, or even a good deal, does no one any harm, and we shall have no objection to see and to read a comic account of the meeting of the Association held in London, though "it contains travesties of the leading personages, and of the Editor, General Secretary, Treasurer, and President of Council"; but as this is not a comic periodical (at least, not intentionally so), we cannot promise to publish it, although it is said to be "free from offensive matter, and amusing without being vulgar."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

CHLOROFORMING HORSES.

SIR.—*Aprupo* o Dr. Souter's letter on this subject, allow me to remark that I have on several occasions administered chloroform to these animals; and, a few weeks ago, extracted the lens for cataract with great facility from a powerful cob, deeply anaesthetised with this agent. A common canvas bag, such as is used for poulticing horses' feet, is all that is required as an inhaler. It would be necessary to use four or five ounces of chloroform for such an operation as I speak of. Methylated chloroform answers perfectly well; and the cost is about sixpence. I think it is a pity that veterinary surgeons do not use anaesthetics more frequently.

I am, etc.,

CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

ARNOLD AND SONS' SPECIALITIES.

SIR.—Under the above heading, in the advertisements of to-day's JOURNAL, mention is made of an "Improved Fracture Apparatus, by Mr. George Greenslade." As the chief novelty in that apparatus is after my own suggestion—the hinges of the side-splints being made to traverse across the back-splint (see *Medical Times and Gazette*, July 19th, 1873)—and was carried out just in time to be exhibited at the Annual Museum of our Association last month, I shall be glad to be informed whether such novelty, although of slight importance, is reckoned as one of the improvements.

Plymouth, September 13th, 1873.

I am, etc.,

HENRY GREENWAY.

TRANSIENT NOTORIETY AND PERPETUAL PUBLICITY.—If Dr. Lambart (Liverpool) can produce any professional brass-plate comparable with his hand-bill, in the list of school prizes appended to his name, it will no doubt deserve equal condemnation. We do not draw any distinction in the matter between "the transient notoriety of a hand-bill" and the "perpetual publicity of a brass-plate." We can have no objection to the course he proposes.

TITLES IN DENTAL SURGERY.

SIR.—I beg to enclose the prospectus of the Liverpool Dental Hospital, which appears in the *Dental Journal* of this month. The staff, as you will see, comprises several duly qualified surgeons, and one Licentiate in Dental Surgery. The remainder of the officers, four of the six dentists attached to the hospital, add to their names the initials L.R.C.D.S. As these gentlemen are not Licentiates in Dental Surgery of the Royal College of Surgeons, as the initials which they use represent no qualification known in this country, and as these same letters were used by them in last year's prospectus, perhaps you will allow me to ask what qualification they represent?

September 1873.

I am, etc.,

DENS.

*. We do not know. Perhaps some of our readers will kindly assist us in answering our correspondent's question.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Ipswich Journal; The Manchester Guardian; The Aberdeen Daily Free Press; The Bath Express; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Bolton Chronicle, September 13th; The North Devon Herald, Sept. 11th; The Bolton Chronicle, Sept. 13th; The Merthyr Express, Sept. 13th; The Wolverhampton Chronicle, Sept. 10th; The South Durham and Cleveland Mercury, August 9th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Morell Mackenzie, London; Dr. Dickinson, Liverpool; Dr. Ellis, Blackheath; Mr. Christie, C.B., London; Mr. Mills, London; Mr. W. M. James, London; Dr. James Reid, London; Mr. Ledwich, Dublin; Dr. Whitehead, Manchester; Mr. E. J. Adams, London; Dr. Morris, Ystrad; Mr. Thomas Leeds, Sheffield; Mr. James J. Bailey, Stockport; M. Dunant, Brighton; Mr. Henry Greenway, Plymouth; Mr. J. Wilson, Stockton-on-Tees; Mr. S. W. Moore, London; An Associate; Mr. W. S. Wade, Wakefield; Mr. Charles C. Searle, Brixham; Mr. George Stanfield, Bristol; Dr. Clifford Allbutt, Leeds; Dr. Coles, Croydon; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Robert Pollock, Acton; Mr. William Gayton, London; Dr. Mark Long, London; Mr. Wm. Davis, Heytesbury; Mr. William Brown, Callington; Mr. Myers, London; Dr. Aveling, London; Dr. Hughes Bennett, Edinburgh; Mr. Fairlie Clarke, London; Dr. W. J. Harris, Worthing; Dr. Laidlaw, Trannemere; Dr. C. Bell Taylor, Nottingham; Messrs. Newbery and Sons, London; Messrs. Davies, Tenby; Dr. Jacob, Dublin; The Secretary of the Quekett Microscopical Society; Our Dublin Correspondent; Our Paris Correspondent; Dr. Griffiths, Dublin; Mr. T. Edward Williams, Talgarth; Our Edinburgh Correspondent; Dr. Murray, London; Dr. A. Mackintosh, Chesterfield; Dr. J. Hadden, Manchester; Dr. Mackay, Elgin; Dr. Mackern, Long Eaton; Mr. George Moore, Hartlepool; Mr. R. Kershaw, London; Dr. George Johnson, London; Dr. Whitmore, London; The Manager, Native Guano Company, London; Dr. Bryan, Northampton; Dr. Robert Liveing, London; Mr. W. W. Wagstaffe, London; Mr. J. W. Langmore, London; Dr. J. C. Reid, Newbiggin by Sea; Mr. A. A. Emmerson, Leicester; Mrs. Tappan, London; Mr. Nelson Hardy, London; etc.

CLINICAL LECTURE

DYSIDROSIS

(AN UNDESCRIBED ERUPTION).

*Delivered at University College Hospital, London.*By TILBURY FOX, M.D. Lond., F.R.C.P.,
Physician to the Department of Skin-Diseases.

GENTLEMEN,—I am desirous to-day of directing your attention to a disordered condition of the sweat-follicles and the sweat-function which you will not find described in books. In fact, I shall depict to you for the first time a disease of the skin which is, as a rule, diagnosed as eczema, but is a separate and distinct affair. I will, in the first place, read to you the notes of a case which has recently been under our notice amongst the out-patients.

Mrs. E., aged 36, came to the hospital on May 27th with her child, who had ringworm; and she showed on the back of the left hand a patch which had all the appearance of being ringworm. She was ordered some mercurial preparation, and returned on the 30th with the hand in an inflamed state, but the ringworm was well. She then made a remark about herself which led to a closer examination of her case. It appeared that about Christmas she noticed a little itchy pimple at the back of the ring-finger of the left hand, and presently a circle of little bladders developed round about this pimple. The disease was very irritable, and had never really gone away since Christmas. It never increased much until a fortnight ago. The mercurial application seemed to cause its spread. She always noticed a tendency in the eruption to spread, and the hand felt hot and irritable after washing.

The general health is good; but the woman feels "so very weak that, if she goes to scrub or sweep a floor, she trembles very much, and is obliged to sit down and eat a crust and drink some porter; and then she can get on." If she is much upon her legs, she soon tires, and the legs ache. She often has sick-headache. In the recent cold weather, if she began to work, she "used to get into a great heat, as on a summer's day." After eating, she flushes, and generally feels sick. She is almost always perspiring, and especially of late. Whenever she changes her clothes, even in the coldest weather, she is always very damp. Her feet are always cold. She is suffering from menorrhagia. For the last two years, she has been generally unwell every fortnight, "and very much so for two or three days." She never gets a good night's rest; is "always working, or travelling, or sending up a large dinner, or something of the kind, in her sleep." She often wakes up suddenly in the night, startled, fancying she is jumping or flying, or leaping off heights, etc. She is not hysterical, but is very "nervous". She suffers also from a tight pain round the waist at night; but this appears to be due to flatulence. The bowels are very obstinate indeed.

Present Condition.—Both hands and arms and upper arms are affected—the hand and arm to which no mercurial ointment has been applied, on the left side, equally with those of the other side. There are scattered papules, which, on close examination, are seen to be in reality vesicles; and also very distinct vesicles, of the size of millet-seeds—some of them having a red base, and in some cases being crowded together in little groups, more or less scattered all over the backs and sides of the fingers, and the back and front of the hand, and the whole forearm (back and front), and the arm up to the shoulder, especially its inner aspect. In some cases, the vesicles have run together, so as to form minute bullæ; on pricking these bullæ, a drop of very clear fluid exudes, and it is alkaline. Between the fingers, the cuticle is in some cases raised slightly by a layer of fluid beneath. It is white and macerated, especially at the web of the fingers; and the fluid is faintly acid; it is also offensive. There are no crusts anywhere. On the palmar aspect, there are scattered isolated vesicles about the fingers; and towards their tips a number of minute transparent points, resembling sago-grains, are visible under the skin—some thirty or more. These points are not raised, but are seen through the cuticle, and are clearly sweat-follicles distended by sweat. The front of the forearm appears as if it were the seat of diffused eczema. Over the palm of the hand itself, there are transitional stages between the solitary vesicle and the macerated patch. For example, about the root of the fingers, and extending across the whole palm, is a band, an inch wide, of macerated cuticle, upraised by clear fluid beneath, and looking like a piece of very thin moistened chamois leather of light colour, or wet parchment; and this runs up a certain

way along the outer boundary of the hand. Next comes a line of cuticle upraised by clear fluid, and situated nearer the centre of the palm. It is half an inch wide, of transparent aspect, and fluid can be let out from beneath. Next come groups of vesicles; and, lastly, isolated vesicles; and those along the inner side of the little finger are like tapioca-grains. On the right side, at the ends of two of the fingers on their palmar surface, there is an appearance as if there were boiled sago-grains beneath the skin; and this is found to be due to distended sweat-follicles filled with sweat, and seen through the cuticle. If one of these transparent places be pricked, clear fluid oozes away from it. Towards the base of the fingers, there are groups of distinct vesicles, themselves separate the one from the other. At the junction of the fingers with the palm of the hand, there are white patches of the size of sixpences on two fingers, formed of uplifted and macerated cuticle. On the forearm, over its front, are scattered vesicles on a red base; and here and there little red points, that look like red papules; but these are vesicles whose contents have dried up without rupture of the cell-wall, or abortive vesicles.

Now it is to be observed that there are no crusts; and the fluid contained in the vesicles remains perfectly clear until it dries away or escapes, when the cuticle shrivels and peels off: or until it macerates in certain places the cuticle.

It is not difficult to trace the stages from one phase to another. First, the sweat-follicles are distended, and are not raised; but are seen through the cuticle. Then, as the collection of sweat increases, there are distinct vesicles with very transparent contents; these vesicles may run together if the outpouring of sweat continue; and, in cases where the secretion is excessive, very large bullæ indeed may form. Presently the cuticle becomes macerated in some places; and white patches, formed of uplifted cuticle, are produced. In this case, there was a very offensive and sour odour perceptible about the hand or arm.

The patient complained greatly of burning pain about the seat of eruption. She states that she once had the shingles severely and painfully, and that the smarting and burning she feels with the present disease are of the same kind. The eruption has shown a tendency to appear about the face and legs.

REMARKS.—If you have followed my description of the case, you will have no difficulty in appreciating the nature of this disease. Its anatomical seat, as seen in the earliest stages of the disease, is clearly the sweat-follicles. The vesicles result from distension of these follicles by sweat, which, on examination, is not found to bear any resemblance to the fluid exuded in inflammation; nor does it contain pus, or give place to crusts. The bullæ are formed by the coalescence of vesicles; the papulæ, by the abortion of vesicles; the white patches of uplifted cuticle, by the maceration of the latter by sweat, which becomes, from the access of air, acrid and sour.

Now, at first sight, this disease looks like an acute eczema; but it is not so, though the acrid sweat may so far irritate as to excite an eczema. Do not forget this. You will have observed that this disease does not begin as a serous catarrh of the papillary layer, as does eczema, but by distension of the sweat-follicles. When there is no sero-purulent discharge about it, the fluid in the vesicles remains quite clear so long as it is confined; and during the whole course of the disease there is no crusting. It is altogether unlike eczema with its sero-purulent discharge, stiffening linen, and drying into thin yellow crusts.

The disease may look like erythema papulatum, but only in so far as there are abortive vesicles present; and these clearly do not constitute the chief feature.

The disease varies greatly in extent and duration; it may happen that one or several successive outbursts of the eruption occur, and the disease may last a week or ten days, or several weeks if there are successive outbursts. The case which I have described is a very marked one. In some cases we have a few little flattened itchy vesicles, about the sides of the fingers, succeeded by a drying up of their contents, and a mere peeling off of the cuticle. In some cases the feet are affected, and then we have between the toes, especially at the junction of the toes with the foot, small white patches, produced by uplifting and maceration of the cuticle by acrid sweat. These cases are confounded with, and always called, eczema. There is oftentimes a great deal of very troublesome itching, especially at night, and patients complain of it bitterly, as it is excessively annoying, and disturbs them from getting a fair night's rest. In other cases we have the whole foot affected, in others coincidentally the hands and feet, or the face and arms. I have noticed in gouty subjects, that the disease is intensified in severity, I suppose on account of the irritable character of the blood.

The disease, gentlemen, is not described in books, since it is always regarded as eczema, but I have explained to you that it is wholly unlike eczema. The resemblance is accounted for by the fact, that in both dis-

eases there are vesicles which are crowded together, but the character of the fluid uplifting the cuticle, and its subsequent behaviour, the source of this fluid, the anatomical seat of the disease, are wholly and entirely different. The disease is not the hydroa of Bazin, under which term a host of different things have been classed—urticaria bullosa, erythema papulatum, miliaria, and the like.

Of course, in many diseases, excessive sweating occurs, as in the case of idrosis, miliaria, and sudamina; but then the sweating is only an accidental feature, and accounted for by the general disturbance; but in this disease, the sweat-disorder is the main and sole disease present. But I have noticed that it always occurs in those who too freely perspire, in those who are depressed, weak, and get quickly exhausted, and in connection with, oftentimes, anomalous nerve-symptoms. The cause of the sudden outpouring of sweat is doubtful. It is, probably, some disturbance of the nerve-influence.

Now as to treatment. It is of no use trying to cure the disease by local measures, though you can moderate the irritation, and inflammation, and prevent the sweat from becoming sour and irritating. The internal remedies are diuretics, with a view to relieve the skin, with large doses of quinine and nux vomica. Locally, I cover up the parts in the acute and early stage, with some simple cerate, with liquor plumbi, rubbed into it, and perhaps carbolic acid, in small quantity. Then, later on, I coat the parts with starch and calamine powder, and later on prescribe the balsam of Peru, twenty grains to an ounce of lard, with a little white precipitate. Most cases do well. In the simpler instances of the disease you give the quinine internally, with arsenic if you like, and diuretics if need be, and locally protect the parts with calamine lotion.

I have termed the disease dysidrosis, because nature seems to have a difficulty in getting rid of the secreted sweat, which remains to distend the follicles, and to macerate the tissues. The disease is nothing more than retention of sweat and its results. Dysidrosis bears the same relation to the sweat-glands that acne does to the sebaceous glands.

RARE CASE OF EPISPADIAS (WITHOUT EXTRO-VERSION OF THE BLADDER), AND ACCOUNT OF OPERATION.*

By G. LICHTENBERG, M.D.,

Surgeon to the German Hospital, and to the Training Hospital, Tottenham.

T. B., aged 9 years, presented himself in January, 1872, at the German Hospital, with the following malformation of the penis. The urethra was entirely deficient at the upper part, from the os pubis down to the glans, presenting merely a slight groove lined with mucous membrane, and leading at the symphysis pubis, which latter part was not divided, into a wide infundibulum, through which, during narcotisation of the patient, my little finger could be easily introduced into the bladder. The distal half of the glans was not divided, but also at the same time not perforated, nor were any traces of the meatus to be seen, while the other half was bifid. The whole penis, of a very diminutive size, was in the natural condition, drawn upwards, with a slight tendency to the left side, towards the abdominal walls, and withdrew, in the recumbent position of the patient, the infundibulum almost from view, though it would not prevent the urine from continually dribbling away, even if the patient were in this position. The prepuce, as usual in these cases, of comparatively large size, was hanging down apron-like from the under portion of the malformed glans. Both testes were in the scrotum, and I noticed once an imperfect erection at the beginning of the narcotisation. The bladder seemed to be fully developed, although, on account of the constant dribbling away of the urine, of an extremely small size; but it decidedly gained during the different operations, which were afterwards performed, more power of retaining the urine. Around the infundibulum one could notice some small folds of the skin running in a convergent direction towards the orifice, and the finger had to overcome a certain resistance before it could be fully introduced into the bladder.

In order to improve this truly miserable condition of the patient, I endeavoured to follow Professor Thiersch's ingenious method, for the first time practised by him with good result in 1857 and 1858; but, in consequence of several failures, I had to employ partly another method in order to accomplish my object.

The whole operation had to be divided into four distinct acts: the first comprising the formation of a canal through the distal half of the

glans; the second, the transformation of the groove of the second half of the glans into a regular canal, communicating with the newly formed one; the third act had for its object to transform likewise the groove from the glans up to the infundibulum into a canal; and, lastly, the fourth act comprised the covering of the infundibulum itself.

1. The formation of a canal through the distal half of the glans penis was easily accomplished with a small trocar, and the canal was then widened with the galvano-caustic wire.

2. To transform the groove of the second half of the glans penis into a regular canal, I made on each side of the groove a longitudinal incision through about two-thirds of the thickness of the glans, giving a convergent direction to the incisions, viz.: the two incisions would have met at one point, if they could have been lengthened to the proper extent. I then pared, to the outer side of these two incisions, the surface to a certain extent, and brought together the two raw surfaces over a catheter with some fine sutures. The catheter was directly afterwards removed. Perfect union took place.

3. In order to transform that part of the groove which was lying between the glans and the infundibulum into a canal, the following operation was undertaken. I made, near to the right edge of this groove, a longitudinal incision through the skin, and at both ends of this likewise a small transverse incision was made, running outwardly; and this flap, thus marked out, was carefully dissected off. After this, a similar flap was formed on the left side of the groove, but with this difference: that the longitudinal incision was not near the groove, but at some distance from it, and the two small transverse incisions at both ends of this had a direction towards the groove instead of from it. This flap, after having likewise been carefully dissected off, was then turned over like the leaf of a book over the groove, and the flap of the right side stretched over this; so that the two raw surfaces were attached to each other, and the epidermal side of the under flap had its aspect towards the groove. The whole was fixed with fine silk sutures.

This operation, however, did not succeed, for the flaps sloughed almost entirely, and I therefore, at a later period, had to submit the same part to another operation. For this purpose, I made use of the very large prepuce by making, at a little distance from the glans, a long transverse incision through the whole thickness of the prepuce, large enough to enable me to pull easily the glans through this buttonhole, and fixed then this part to the base of the glans previously pared. I afterwards, but not on the same day, used this part of the prepuce, which meanwhile had become firmly attached to the glans, as a means to form the upper wall of the urethral canal, which I intended to do by the former operation, but had utterly failed. In order to accomplish this, I pared, on both sides of the urethral groove, the surface to a great extent, and likewise the upper surface of the prepuce, which, by being turned over, had to cover the urethral groove, but, of course, taking care to leave through the entire length of the prepuce a broad strip, which was intended to form the actual upper wall of the urethra untouched by the knife. The flap was then fastened to its position with sutures, and union took place everywhere, although the parts themselves were continually bathed in urine and no precautions whatever were taken to prevent this.

4. To cover the infundibulum, two flaps were taken from the abdominal walls near the infundibulum, in order to cover this part. The first one had almost a triangular shape, and was turned over in such a manner that the infundibulum was covered by its epidermal side; the second flap was almost of a quadrangular shape, and was destined to cover the triangular flap, the raw surfaces touching each other. Both flaps thus united were fastened to the previously pared margin of the original prepuce, and thus a perfect canal was constituted from the glans up to the bladder. After this operation, a catheter was constantly kept in, but, notwithstanding this, sloughing set in to some extent at the left side, and although it did not frustrate the whole operation, nevertheless no union whatever took place between the doubled flap and the margin of the original prepuce; two more operations had, therefore, to be performed in order to carry this point. There now merely remains a fistular opening, or, I might even say, a second meatus urinarius, between the two halves of the glans, which, until now (as the last operation was only performed quite lately), I have not felt it advisable to close; but this I hope to do very soon, and I daresay it will be easily accomplished.

The patient is already able to retain, in the recumbent position, a certain quantity of urine, and will then pass it, partly at least, in a good stream; and, even in the upright position, there is not the continual dribbling of urine going on as formerly. I intend to supply the patient after a while with a truss-like instrument, in order to enable him to retain the urine longer, and am in hopes that in time the power of the bladder may still increase; which improvement, to a certain extent, has already taken place.

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

ON THE SYMMETRY OF THE PANCREAS AND SPLEEN.

DO THE SHOULDER-TIP PAIN AND OTHER SYMPATHETIC PAINS OCCUR IN DISEASES OF THESE TWO MEMBERS OF THE PNEUMOGASTRIC SERIES?

By D. EMBLETON, M.D., F.R.C.P.,

Physician to the Newcastle Infirmary.

In a paper read at the Newcastle meeting of the British Medical Association, in August, and printed in the JOURNAL in October and November, 1870, I endeavoured to explain the mode in which, as it occurred to me, the above-named pains arise in diseases of the liver, and to enumerate the diseases of that organ in which the pains occur. In the present paper I wish to fulfil a promise made in the former, that I would endeavour to show that similar pains occur at the shoulder-tip, and in other parts, in diseases of other organs of the pneumogastric series.

Under this term I comprise, of course, all those viscera that receive a supply of nerves from the medulla oblongata through the par vagum. They all lie in the neck, chest, and abdomen; and it is only with regard to some of those in the latter cavity that any doubt exists as to their really belonging to the series, for anatomists differ as to the distribution of the abdominal branches of the par vagum. The majority agree that the stomach, liver, spleen, and pancreas, receive pneumogastric nerves, although the hepatic and splenic branches are variously described by different authors; some exclude from the series the pancreas, the kidneys, and suprarenal bodies; whilst others include in it not only these organs, but a considerable, though unascertained extent, of the small and large intestines.

To fix the exact inferior limits of the wandering pair is a matter of great difficulty, perhaps of impossibility, on account of the complexity of the abdominal nervous system, through the intricate interlacement of the branches of the par vagum with those of the sympathetic system. There is good evidence, from our latest anatomists, that the pancreas receives nerves from the par vagum, and that the kidneys and suprarenal bodies, and a considerable extent of the alimentary canal below the stomach, also receive branches from the same source. All the viscera receive, together with their pneumogastric branches, a copious supply of plexuses of nerves and ganglia from the sympathetic system, and a few small twigs from the spinal cord.

It is presumable, that any of the organs of the pneumogastric series, when inflammatorily and painfully diseased, may give rise to tenderness of the trunk of the par vagum in the neck, to pain there, or in the head, or some part of the shoulder, and side of the chest. Those members of the series which lie in the neck are too near to the trunk of the nerve to allow tenderness of the nerve to be distinguished from that general tenderness caused by the disease in the organs themselves, and I am not aware that in diseases of these organs the shoulder-pain exists.

The effects of disease in the organs at a greater distance from the trunk of the nerve are much more likely to give rise to distinguishable pains at the parts named, but I am not aware of any records existing to show that these pains have been noticed in diseases of the thymus, or thyroid gland, of the suprarenal bodies, or the intestine. They exist, however, commonly, in diseases of the lungs; are less prominent, on the whole, in diseases of the heart; are met with frequently in diseases of the liver (as is well known); of the stomach, spleen, and kidneys; some of them have been remarked also in pancreatic diseases.

The present communication has reference to the pancreas and the spleen, and the shoulder-pain in their diseases; but before coming to the subject of these sympathetic pains, it appears to be necessary to obtain as clear an idea as possible of these two viscera, to ascertain whether they are double or single organs, and what is their proper relation to the median line of the body, and to the par vagum nerves. Are they to be regarded as symmetrical, or asymmetrical?

It is held as a general rule, in the vertebrate kingdom, that animals, as regards the lateral halves of their bodies, are symmetrical; that is, that one half is a reversed copy of the other, the halves being united on the median line of the body, and diverging equally from it in opposite directions. (See article "Symmetry," by S. R. Pittard, in Todd's *Cyclopædia of Anatomy*, vol. iv.)

This rule or law of lateral symmetry, or lateral homology, as it has been called, is most clearly expressed in the early stages of the development of the embryo; but, as development and growth proceed, it becomes less stringent, its operation is more or less interfered with, and its results, in certain cases, so obscured, that they may elude observation, or be misconstrued. Now, though animals are laterally symmetrical enough for all the purposes of their lives, a scrutiny of their various

parts affords ground for observing that perfect lateral symmetry is, strictly speaking, the exception, rather than the rule, in the adult body; and moreover, that the deviations from the law are advantageous to animals, rather than the contrary. Many deviations from the original law are found, both in the vertebrate and in the invertebrate kingdom. The following are notable, and mostly well-known examples; in the latter kingdom, the valves of anomie, and many other mollusks, the spiral shells of conchifera, the naked bodies of tunicata, nudibranchiata, limaces, etc.; in the former, the flat fishes, the internal male and female organs of birds, the penes of birds, the beak of the crossbill, the left incisor of the narwhal, etc.

In the human body, putting aside cases of monstrosity, we have not far to look for exceptions to the law of symmetry; indeed, there is hardly an organ that can, strictly speaking, be said to be quite symmetrical.

The whole right side of the body is usually larger than the left, and now and then this is reversed. The distribution of the component parts, as the blood-vessels, nerves, and muscles, on one side, is not quite the same as that on the other side. The hemispheres of the brain are seldom quite equal, the left being considered by many larger than the right, or placed symmetrically; and the convolutions of one hemisphere do not tally, in form or distribution, with those of the other. The lungs are not quite symmetrical in size, or in division into lobes. The heart and large blood-vessels are more aberrant still. The liver has its right lobe larger than its left, in the proportion of four-fifths to one-fifth. The gall-bladder is unsymmetrically placed. The alimentary canal has lost its original symmetry of form and position. The portal and systemic veins, and the lymphatic system, are all unsymmetrical.

As regards the pancreas and spleen, we ought, therefore, from analogy, to expect to find, on investigation, the operation of the same law of symmetry, with more or less deviation from it in the course of the development and growth of these organs. They ought, at their origin, to be, each of them, either single or double—and most of the internal organs are double; if single, they would belong to the median line of the body; if double, one half would belong to each side of that line; and this original symmetry ought, during growth, to be gradually changed to a kind of asymmetry, from which, however, the original form, however obscured, should be deducible.

Let us then see what our best descriptive anatomists say of these organs, what we can glean from the researches into their development, what we are told respecting them by the highest authorities on comparative anatomy, and draw therefrom a warrantable conclusion.

1. THE PANCREAS.—The extracts, subjoined in notes, will show the idea, up to the present time, entertained as to this gland.*

Passages to the same effect, from many authors who have written since the discovery of the pancreatic duct by Wirsung, in 1642, might be adduced, but those quoted will suffice to show that the prevalent

* Cruveilhier states: "The pancreas is a glandular organ annexed to the duodenum, with which it has immediate relations: it is situated transversely and deeply behind the stomach, and in front of the lumbar vertebra. In form it resembles no other gland; it is transversely oblong, flattened from before backwards, large at its right extremity, where it presents a sort of angular expansion like a hammer, and gradually tapering towards its left extremity; hence the division of this organ into a head, body, and tail."

Again: "The right extremity is curved upon itself from above downwards, like the duodenum, by the concavity of which it is circumscribed; then, having reached the third portion of the bowel, it passes transversely to the left behind the superior mesenteric vessels, and forms the posterior wall of the canal in which they are situated. This reflected portion, arranged in the form of a whorl, is sometimes detached from the rest of the gland, on which account it has been called the lesser pancreas." (*Anatomy*, vol. i; *Lehr. Pract. Med.*, vol. vii, p. 531-2, 1842.)

According to Huschke: "Die Bauchspeicheldrüse . . . ist eine lange, zusammengesetzte körnige Drüse, die quer durch die Bauchhöhle hinter dem Magen verläuft, in vieler Hinsicht mit den eigentlichen Speicheldrüsen übereinkommt und daher von ihrer Lage den passenden Namen erhalten hat." (S. T. von Soemmering, *Lehre von den Leinwandungen*, etc., von E. Huschke, fünfter Band, 1844, p. 164.)

Todd and Bowman call it "a large gland, placed across the spine behind the stomach, in physiological relation with the duodenum; its right extremity or head, much larger than the tail, lying close within the curve of the duodenum, and presenting a recurved extremity following the lower part of that intestine, and sometimes termed the lesser pancreas." (*Physiological Anat.*, 1856, vol. ii, p. 459-60.)

The late Dr. Hyde Salter, in the article "Pancreas," in Todd's *Cyclopædia*, writes: "The pancreas is an azygos, non-symmetrical, glandular organ. From its elongated form it has been described by anatomists as possessing a body and two extremities—one, which is enlarged and clubbed, has been called the head; the other, tapering and acuminate, the tail; the middle portion, the great mass of the gland, being the body. Other describers have suppressed the body altogether, and described as the tail all that portion which is not included in the curved intumescence at the right extremity, which they designate the head. Indeed, the imaginations of anatomists have been largely drawn on to supply analogies whereby to illustrate the shape of this organ. Some have compared it to a hammer, some to a dog's tongue; among them all, I think the best is that which compares it to a pistol." (Vol. v, *Supplement*, p. 81, with figs. of varieties of pancreatic duct and other beautiful figs. from comp. anat.)

In Quain's *Anatomy*, it is characterised as "a long, narrow, flattened gland, larger at one end than the other, and lying deeply in the cavity of the abdomen." . . . The lower extremity of the curved portion or head "is sometimes marked off from the rest, and is then termed the lesser pancreas." (Seventh edit., part iii, p. 881.)

idea has been, and still is, that the pancreas is a single, azygos, and unsymmetrical organ, and therefore an exception to the general rule of the viscera.

It is true that the results of the study of the development of the organs and their varieties are quoted by some authors in distinct and separate paragraphs, yet the "description" remains in the old stereotyped form, and there is nothing in it to lead the mind of the student to the knowledge that the pancreas is, or may be, a double, or in any sense, a symmetrical organ.

2. In the paragraphs placed below, which are taken from the works of developmental anatomists, it will appear that these distinguished men have looked upon the pancreas as originating on the median line of the body, and therefore, at the earliest period, when it appears to be single, as a symmetrical organ.*

The information obtained from these and other sources is scanty, but valuable. The pancreas arises in the post-peritoneal space at the lower part of the early mesogastrium, or the upper part of the early mesentery, either as the liver does, by the protrusion of a part of the posterior wall of the intestine, just below the stomach, into a previously existing mass of cells, out of which a tube with its branches, and all the accessory parts of a gland, are developed, or by the formation of a tube, etc., in the first place, by the agency of these cells, the tube gradually perforating the wall of the intestine from without inwards. However this may be, the opening of the tube, or duct, for the pancreas, is either coincident with that of the ductus communis choledochus, or situated a very short way from it.

The pancreas and the liver lie at first behind the intestine, which is then a straight tube, placed on the median line of the body; but, as that part of the tube corresponding to the future stomach and duodenum turns very early somewhat on itself, and towards the right side of the body, the budding glands will necessarily appear afterwards to lie on the left side of the intestine, but on the right side of the median line of the body.

The two viscera, as they grow out, are compelled to take different paths, after having together pushed on towards the median line and its left side. The liver then develops itself upwards, and towards the right side, then spreads itself forward and laterally, and lastly, downwards, thus clearing itself from the duodenum and pancreas, passing behind the stomach up to the diaphragm at the posterior region of the epigastrium and hypochondria, especially the right, and lastly, mounting up and extending forwards and downwards over the stomach, upper part of the duodenum, and a portion of the arch of the colon. The pancreas, in its growth, cannot follow the course of the liver; it is kept from proceeding upwards and forwards by that gland, by the stomach and the bag of the omentum, and it is restrained from a downward course by the third division of the duodenum. It develops itself, therefore, towards the left side of the abdomen, across the median line, and somewhat upwards, being pressed against the spine by the stomach and bag of the omentum; the stomach, at the same time, is extending itself towards the left, pushing, as its *cul-de-sac* bulges out, the spleen into the left hypochondrium. The upper part of the pancreas, growing on, assumes an elongated and flattened form, following the spleen, which, in the adult, it usually touches. The lower part (of the "head") of the gland increases also towards the left side of the body, until its further progress

is stopped by the third or ascending portion of the duodenum, and by the superior mesenteric vessels, which cross its path at right angles. It is therefore much shorter than the upper part of the gland, and is pressed against the right end of it, coalescing so as to be confounded with it, and contributing to give to the pancreas the form of a hammer, or pistol, and being denominated a protuberance, or mere accessory, or a reflection of the head of the gland—the lesser pancreas. This lower part of the gland may be absent; but, when present, which is very commonly the case, it always has its own proper duct, which either opens into the duct of the upper portion (the usual case), or penetrates the duodenal wall apart.

Taking this view of the development and growth of the pancreas, it is not difficult to believe that in man we have a two lobed, instead of an azygos gland, the two lobes being unequally developed.

3. *The Varieties of the Pancreas* in man are, perhaps, best indicated by the varieties of the duct, which are shown in the notes below.*

According to these extracts, the arrangements of the pancreatic duct in man may then, in passing, be thus stated.

a. It is single, and opens into the bile-duct just before this enters the duodenum.

b. It is single, and opens directly into the duodenum, apart from the bile-duct.

* Bartholinus says of the duct: *Unicus plerumque quamquam ab eodem duplex sit observatum, parallelâ lineâ invicem extensus.* (*Anatomia Bartholiniana*, Lugd. Batav., 1674.)

Winslow says: "The pancreatic duct is sometimes double in man, one lying above the other. It pierces the duodenum and opens into the ductus choledochus, commonly a little above the prominent point of the orifice of that canal; and sometimes it opens immediately into the duodenum."

"In man, I observed several years ago that, where the great extremity of the pancreas is connected to the curvature of the duodenum, it sends down an elongation, which adheres very closely to the following portion of the intestine; and, upon a careful examination, I found a particular pancreatic duct, ramified like the large one which ran toward and intersected this great duct, into the extremity of which it opened after having penetrated the duodenum. This portion I term *pancreas minor*, and it sometimes opens separately into the duodenum, in which we likewise observe several small holes round the ductus choledochus, which answer to the pancreas." (*An Anatomical Exposition of the Structure of the Human Body*. By J. B. Winslow. Translated by G. Douglas, M.D.; 1763; p. 208.)

J. and C. Bell say that "sometimes there are two pancreatic ducts; but more frequently that part of the gland next the duodenum, and which is called the round head of the pancreas, has an excretory duct peculiar to itself, which either opens into the duodenum separately from the main duct, by piercing the coats of the intestines nearer the stomach, and sometimes opens further down." (*The Anatomy and Physiology of the Human Body*, 1829, vol. iii, p. 334.)

Cruveilhier states: "The excretory duct is generally single, but sometimes double; and then there is a principal duct belonging to the body of the pancreas, and a smaller one for the reflected portion, or lesser pancreas." (*Op. cit.*, vol. i, p. 533-34.)

Again: "The pancreatic duct and the ductus choledochus open by a common orifice in the human subject. This arrangement is constant; and, when we find a pancreatic duct perforating the duodenum separately, we may be certain that there is another duct presenting the regular arrangement—at least I have never observed to the contrary. As to the precise situation of the separate opening of the supernumerary pancreatic duct, it may be either in front of, behind, below, or above the orifice of the ductus choledochus."

Huschke, as to the varieties of the gland, writes thus: "Es sind sehr wenige. Sie betreffen vorzüglich den Ausführungsgang. Durch Nichtvereinigung seines Endastes kann er doppelt und so gar dreifach werden, und der Bauchspeichel also an drei verschiedenen Orten in den Zwölffingerdarm sich ergießen. Ebenso kann er sich vom Gallengange trennen, oder beide sollen durch einen mittleren Canal vereinigt gewesen seyn."

Todd and Bowman (*op. cit.*) tell us: "It frequently happens that the duct belonging to the lower end of the curved portion, or lesser pancreas, opens separately into the intestine."

Dr. Hyde Salter (*op. cit.*) relates: "Occasionally the pancreatic duct is double throughout its whole length, the two running side by side, and communicating just before their junction with the ductus choledochus. Soemmering asserts that there are three ducts distinct throughout, and opening separately."

Again, at page 84: "Just before entering the intestine the duct commonly receives a large tributary branch, often nearly as large as itself, coming from the head of the pancreas. This occasionally remains permanently distinct, and opens into the intestine by a separate orifice—a condition always present, according to Meckel, in the early fetus, so that this irregularity is essentially nothing more than an extension of a foetal condition into adult life. When this duplicity exists, the separate duct from the head of the pancreas has its own little papilla, proportionately smaller than the normal one, and separated from it by about three-quarters of an inch or an inch. It is usually lower down, though sometimes higher up, than the main orifice. According to other authorities, however (Soemmering, *Corporis Humani Fabrica*), the pancreatic duct and the bile-duct will sometimes open on the mucous membrane of the duodenum by two entirely distinct orifices, when the former is single and there is no secondary one."

Quain's testimony is: "The duct increases in size as it advances towards the head of the pancreas, where among the larger branches it is usually joined by one from the lesser pancreas." As to the varieties, "sometimes it is double up to the point of entrance into the duodenum; and a still further deviation from the ordinary condition is not unfrequently observed, in which there is a supplementary duct derived from the lesser pancreas, or some part of the head of the gland, opening into the duodenum by a distinct orifice, at a distance of even an inch or more from the termination of the principal duct." (*Op. cit.*, part iii, p. 883.)

Herbert Mayo, speaking of the pancreas, says: "It has two ducts, the larger of which opens into the duodenum at the same point with the ductus communis choledochus; the smaller either opens into the greater, or into the duodenum at an inch distance from it." (*Outlines of Human Physiology*, 1833, p. 127.)

* From Kölliker we get the information that "The development of the pancreas commences by the formation of a diverticulum of the posterior wall of the duodenum, and in its further progress it exactly resembles the salivary glands." (*Manual of Human Histology*, 1854, vol. ii, p. 138; Sydenh. Soc.)

Todd and Bowman say that, "according to Reichert, the liver and pancreas of the embryo frog are developed from a portion of the yolk, which becomes separated from the general mass at an early period. . . . At first, there is no appearance of a division in this mass of yolk-substance. . . . Subsequently the two organs become more distinctly marked out." (*Physiol. Anat.*, 1856, vol. ii, p. 607-8.)

Gray, who has figured the liver and pancreas of the chick, says: "They seem to be developed from two separate protrusions of the intestinal tube about the nineteenth hour of incubation." (*Philos. Transl.* 1852.)

Quain says: "The pancreas appears earlier than the salivary glands, in the form of a small bud, from the left side of the intestinal tube, close to the commencing spleen." (*Anatomy*, seventh edit., 1867, part iii, p. 883.)

Again, at page 861, we find this passage: "The dilated portion of the (intestinal) tube which forms the stomach turns over on its right side, so that the border, which is connected to the vertebral column by the membranous fold (or true mesogastrium), comes to be turned to the left—the position of the tube being still vertical, like the stomach of some animals. By degrees it becomes more dilated, chiefly on what is now the left border, but subsequently the great curvature, and assumes, first an oblique, and finally a transverse position, carrying with it the mesogastrium, from which the great omentum is afterwards produced. Upon the surface of the part of the canal which immediately succeeds the stomach, and which forms the duodenum, the rudiments of the liver, pancreas, and spleen are simultaneously deposited; in connection with the two former, protrusions of the mucous membrane grow into their blastemic mass, and form the commencement of their principal ducts."

Mr. Pittard says: "The pancreas is an originally median organ, one end of which has been displaced, along with the pylorus, towards the right." (Article "Symmetry," Todd's *Cyclopaedia of Anatomy*, vol. iv, p. 847.)

c. There are two ducts, one from the upper and larger lobe, the other from the lower, or lesser pancreas.

a. These coalesce and unite with the bile-duct.

β. One of them, that from the upper lobe, opens into the bile-duct; the other, that from the lower lobe, into the duodenum.

d. There are three ducts, distinct throughout, and opening separately into the duodenum. (Soemmering, as quoted by Dr. Salter, and Huschke, in the quotation given.)

All have their counterparts in the lower animals, as Tiedemann pointed out, but the varieties in animals are much more numerous than in man. No instances of four ducts in man are on record; three are very rare; two and one are common.

With regard to the lateral homology of the pancreas, when the gland and its duct are single, they belong to the median line, and then only is the organ azygos and symmetrical; except as to position, and, as Mr. Pittard, in the article "Symmetry," already quoted, says, "its anterior aspect is the left lateral homologue of the posterior." When double, the larger, or upper lobe, belongs properly to the right, and the lower lobe, though stunted, to the left side of the median line—a certain departure from symmetry, but one which recalls that of the liver, with its unequal lobes. When triple, the upper lobe is double and the lower single; a greater departure from symmetry, unless we conceive that the higher portion of the upper lobe belongs to the right side, the lower portion to the median line, and the lower, or lesser lobe, to the left side of that line, and then there will be symmetry. The second of these three instances, a double pancreas, is, I suppose, the normal, or at least the typical arrangement; but we do not really know in what proportion each instance occurs in any given number of cases. The occurrence of a double upper with a single lower lobe is paralleled, according to Dr. Hyde Salter, in the horse.

There appear to be no instances recorded of a double upper with a double lower lobe in man; but in birds a double lower lobe is extremely common, the upper lobe being either absent, or very imperfectly developed.

4. We must now turn to the comparative anatomy. The condition of the pancreas in *Pisces*, *Reptilia*, and *Aves*, is shown in the subjoined extracts from Dr. Hyde Salter's article, "Pancreas," already quoted.*

It is, however, in *Mammals* that the pancreas most closely resembles that in man; and the two following passages, one from Dr. Hyde Salter's article, and the other from Professor Owen's *Anatomy of Vertebrates*, vol. iii, 1868, are all that can be necessary to show the true morphology of this gland.†

From comparative anatomy, then, there can be no doubt that, on the whole, the pancreas has a considerable degree of symmetry, as much as that possessed by many other organs; that on the whole it is a double rather than a single organ; indeed, one may even venture to think that

* In *Fishes*, the gland presents itself in a great variety of numbers and forms of coecal tubes—either one, two, three, or more, constituting a single series on the median line, or a single or double series on each side of it, in the lower orders, or forming a concentrated compound racemose gland, with one or two terminal ducts, in the higher orders.

In *Reptiles*, it is more like the gland of the mammals; generally it is bifurcate, and, whilst one division is applied to the duodenum, the other is in contact with, or envelopes, the gall-duct. Its close contact with the spleen is only seen in the true serpents. In them it is always placed to the right of the commencement of the intestine and of the stomach. Its duct opens into that of the liver, or separately into the duodenum, and is almost always single.

In *Birds*, the organ has its duodenal part alone developed, and that is single, double, or triple. The ducts vary in number, and are most commonly one, three, or six, opening separately into the duodenum, and apart from the liver-duct.

† The former says: "The chief differences between the pancreas in other mammals and in man relate merely to its colour, its consistence, its more or less marked division into lobes, its form, its volume, its union into a single mass, or its separation into two distinct parts. Its form is generally that of a narrow band, divisible into two portions—one, the duodenal, following the curve of the duodenum, and placed vertically or obliquely; the other, the gastro-splenic, extending transversely, and therefore opposite to the other, from the duodenum to the spleen, against which it always abuts. The latter is always developed; the former is often inconsiderable or suppressed, and must be considered merely as an accessory portion."

The latter states, that "this conglomerate gland" (in mammals) "differs chiefly from that in birds by the progressive development of a part more or less distinct from that which is lodged within the loop or fold of the duodenum: such added part may be represented by that freely projecting end of a fold of the birds' duodenal pancreas which stretches towards the spleen; but there is no transverse part of the gland extending at right angles from the duodenal portion, like that which forms the splenic or transverse pancreas in the mammalian class, and which ultimately becomes the main part or body of the gland in them." In the lower classes generally there is a splenic and a duodenal lobe. "In the rodentia, these are diffused in small portions over a large space from right to left. In carnivora, the duodenal and splenic divisions are well marked and subequal."

Passing from the aye-aye, through the lemurs, the platyrrhine, to the catarrhine quadrumana and to man, the duodenal "or small pancreas" becomes more and more restricted in size relatively to the splenic division, and "is reduced to an enlargement called the head". The main duct of the gland "is commonly joined near its end by the duct from the lesser pancreas or 'head'; but the homology of this with the duodenal pancreas of lower mammals and birds is sometimes instructively exemplified by the independent entry of its duct into the duodenum."

the *Ideal Pancreas* should be represented as having four lobes, two belonging to each side of the median line, the splenic lobe being double in the horse, and sometimes in man; the duodenal double in birds generally.

5. The peculiar symmetry and the double character of the gland are both obscured, almost hidden in its adult form by the obliquely transverse position which it occupies, and by the mode of the distribution of blood-vessels and nerves to it. The pancreas, devoid of a special artery, receives its blood mainly from the hepatic on the right, and from the splenic on the left, and partially from the superior mesenteric artery on the under side; the hepatic supplying the upper part of the "head," and a portion of the "body;" the splenic the rest of the "body," and the "tail," whilst the superior mesenteric is destined mainly for the lower part of the "head," or lesser pancreas, and for the duodenum. Thus the right, or splenic lobe, is not exclusively provided with arteries from the right, nor the left, or duodenal lobe, from the left side of the body; the provision, however, on each side, comes from the median line of the aorta, whence comes also the supply for the intestinal tract, including the stomach, and for the liver and spleen, all symmetrical organs.

The veins are less symmetrical even than the arteries; as to the lymphatics, there is little known of them.

The nerves of the pancreas are derived from the solar plexus, and from offshoots of the right and left pneumogastric nerves, and, being placed upon and running with the blood-vessels, share the peculiar symmetry of their distribution. They come from both sides of the body, indicating that the pancreas is a symmetrical organ, belonging to both sides of the median line.

The solar plexus, in which the splanchnic and other sympathetic branches, and twigs of the phrenic nerves of each side join with offshoots from both pneumogastric nerves, gives off the coeliac, and this again the gastric, hepatic and splenic plexuses, which, subdividing with the corresponding arteries, pass to the organs whose names they bear; and it is clear, from Quain, Hirschfeld, and other anatomists, taken together, that each of them most probably contains filaments from both pneumogastric nerves. We must also infer, from the same sources of information, that the pancreas receives a larger supply from the right than from the left pneumogastric, which would accord with the different dimensions of its two lobes; but yet we cannot say that the right vagus supplies the splenic, and the left the duodenal lobe.

What one would be led to expect, after reflecting on the mode of distribution of the vagi nerves to the other and better known members of the pneumogastric series, is that both lobes should receive twigs from both vagi, but that the splenic lobe should be mainly nerved from the right, and the duodenal lobe mainly from the left vagus; however, our present anatomical knowledge does not confirm such expectation.

The somewhat irregular distribution to the pancreas of vessels and nerves, may, perhaps, in some measure, be accounted for by the probable fact that the organ itself must have attained considerable dimensions, and assumed a good deal of its characteristic form and position, through cell-development, before its blood-vessels and nerves were laid down.

6. Taking into account, therefore, the analogy presented by the other organs of the body, and particularly by those of the pneumogastric series; the original position and symmetry, and the development of the pancreas in the lower, and therefore, probably, in the higher animals; the varieties of the gland and its duct in man; and especially its comparative anatomy; the only conclusion at which one can arrive is, that the adult human pancreas ought to be described in our text-books not as an asymmetrical organ, an exception to a general rule, but as being more or less symmetrical, almost as symmetrical as the liver. If it be azygos, it is not asymmetrical; if double, it is only not quite symmetrical in form, because one of its lobes is less developed than the other, and in position, because it lies across, and not along, the median line.

If we imagine the pancreas developed on the median line, either upwards or downwards, from its origin at the back of the duodenum, or backwards, if that were possible, it will at once appear to have a much more symmetrical aspect than it has in its normal position.

7. Lastly, is the shoulder-tip pain, such as occurs in liver-diseases, present in diseases of the pancreas?

The pancreas receives branches from both pneumogastrics, but these are less in importance than those received by the stomach, liver, or spleen, and the organ itself is much less in bulk than the stomach or liver; so that, if the shoulder pain should occur, it ought to be less frequently present, and less prominent, than in diseases of the stomach and liver. Then, again, pancreatic diseases are of themselves rare, and, when they do occur, are so obscure, and so usually associated with and masked by affections of the neighbouring viscera, that their diagnosis is very difficult, and often impossible.

The pain, however, may be reasonably expected to be occasionally present, in acute and painful diseases of this organ, in one or the other shoulder.

As the "head" of the pancreas is the part most commonly diseased, either the right or left vagus may be affected, according to the lobe attacked; or both nerves, if both lobes suffer.

There is confessedly no group of symptoms that can be relied upon as pathognomonic of pancreatic disease pure and simple. I have consulted all the authors within my reach to see if any had noticed the shoulder pain as one feature of the group. The usual account goes to show that the pain is seated in the gland itself, and radiates or extends to the spine, the wall of the chest—often on the right side, and running up as far as the lower part of the shoulder—radiations doubtless along the course of the nerves of the organ back to the solar plexus, and thence to the splanchnic and intercostal nerves, and to the spine.

The only authors who, to my knowledge, distinctly mention the shoulder pain in these diseases, are Dr. J. R. Wardell and Dr. G. Andral. The former, in the third volume of Reynolds's *System of Medicine*, states that, of inflammation of the pancreas, "the cardinal symptoms are a dull, heavy, aching pain, deep down below the centre of the epigastric region, which radiates through to the back, left shoulder, and left lumbar space, simulating the pain experienced in renal calculus." But this pain of the shoulder is not said to be in the top of the shoulder.

The pain in pancreatic, as in liver diseases, may perhaps be more frequently discovered on a more attentive and minute examination of the cases as they occur. I cannot say that I have myself had occasion to notice its presence. In splenic diseases, however, the pain is often present.

The latter physician, in his *Cours de Pathologie Interne* (tom. i, p. 167), gives the following case, taken from *Hufeland's Journal*, April, 1822. "Une villageoise, en 1820, mit au monde un sixième enfant. Immédiatement après la délivrance elle fut saisie d'une fièvre grave. La malade était pâle, émaciée, exténuée par des sueurs abondantes et une continuelle salivation, avec éruption d'une liqueur filante, jaunâtre, sans odeur ni saveur. La quantité de ce liquide sécrété dans vingt-quatre heures dépassait deux livres; la bouche et le gosier présentaient un aspect naturel; tantôt il y avait constipation, tantôt diarrhée, et les selles alors étaient semblables aux mucosités rendu par la bouche. Anorexie, grande soif qu'on ne parvenait à calmer qu'en humectant souvent la bouche, car la plus petite quantité de boisson occasionait des spasmes de l'estomac. Le soir, exacerbation de la fièvre. En outre, douleurs pongitives et transitoires dans la côté gauche de la poitrine, toux sèche, fréquentes palpitations, syncopes au moindre mouvement. La malade éprouvait dans le dos des douleurs qui se propageaient jusque dans l'épaule et le bras droits; sentiment de pression à la région précordiale," etc.

The patient fully recovered in three months, and bore another child.

These citations are not, it must be confessed, very satisfactory. Further and more minute observation may give us sufficient pathological proof that the pancreas really belongs to the pneumogastric series of organs, and that its morbid influence may be extended to one or other shoulder-tip.

THE ANTICIPATION OF POST PARTUM HÆMORRHAGE.*

By EWING WHITTLE, M.D.,

Lecturer on Medical Jurisprudence in the Royal Infirmary School of Medicine, Liverpool.

It is now more than twenty years since I read a paper before the Medical Society of Liverpool, in which, as I believed, I demonstrated to that Society the fact, that the probable occurrence of *post partum* hæmorrhage in any case of parturition could be diagnosed beforehand, and, being diagnosed, could be prevented. If this assumption be sound, you will readily admit that this cannot be too widely known, and that it is a reproach to the profession that we still occasionally hear of cases of death from *post partum* hæmorrhage. Very early in my career in the practice of obstetric medicine, I observed that cases of parturition in which *post partum* hæmorrhage occurred, were always marked by the pains during labour being of a peculiar character. Having my attention directed to this point, I further observed that *post partum* hæmorrhage never occurred in any case of labour in which this peculiar character of the pains was absent. The pains are of this kind: they are strong and quick; they do not gradually culminate into a strong pain and subside again, but they are sharp, quick, and cease almost

suddenly; and the intervals between the pains are long in proportion to the length of the pains. In an ordinary case, for one or two hours before the completion of labour, the intervals will average about three times the length of the pains; i.e., if the pains last each from fifty to sixty seconds, the intervals will average a little less than three minutes. Now, if the pains last each only from forty to fifty seconds, and are of the sharp character I have described, with intervals lasting five or six minutes, though the labour may proceed steadily and the head advance a little with every pain, you will be sure to have hæmorrhage after delivery is completed, unless you anticipate it by altering the character of the pains, in making the pains longer and the intervals shorter. It is very easy to understand how this comes to be the case: the uterus is contracting sharply, and then becoming fully relaxed; after the child is born, a relaxation follows; one or two sharp pains expel the placenta with a gush of blood, and the uterus again relaxes, continuing the same tendency which existed before the delivery of the child.

Some of my friends will say that this may be very well, but that all this may be prevented by carefully attending to the maintenance of a steady contraction of the uterus by following down the expulsion of the child and placenta, and keeping the uterus firmly grasped until all danger of relaxation has passed away; that, by attending to this point carefully, during an experience of many years, they have never had a serious case of hæmorrhage. But I would warn them that, no matter how long, through good fortune or good care, they may have escaped this painful trial, they never know when they may happen to fall in with a patient of weak, flabby fibre, and low nervous power, in whom they may find it impossible almost to induce active uterine contraction in time to save her from the effects of the hæmorrhage.

Having recognised the necessity for interference in any case as soon as the os is fully dilated, I give a full dose of ergot. If this do not improve the character of the pains at the end of an hour, or thereabouts, I repeat it; I scarcely ever find a second dose necessary. In dealing with primiparæ, caution is required, first, not to administer ergot until the soft parts are pretty well dilated as well as the os uteri; and the drug should be administered in much smaller doses, as it sometimes acts with unusual energy in primiparæ. Generally, in about twenty minutes or half an hour after the ergot has been administered, the pains increase in length and frequency, and when the labour is over, the uterus maintains a good contraction. The ergot which I use is a liquid extract twice the strength of that of the *Pharmacopœia*, of which I give a teaspoonful when I think a full dose is indicated.

I have pursued this practice now for more than twenty years. During this time I have attended 3,750 labours, and among them I have had one case of *post partum* hæmorrhage; that case occurred about three o'clock one winter's morning, when I happened to have no ergot with me. I foresaw that it would happen, and was able to prevent its being very serious by adopting the ordinary means.

If the gentlemen around me will look out for these cases in their own practice, I am sure they will occasionally recognise them, and by adopting the means that I suggest, they will secure the safety of their patients, and at the same time relieve themselves from a constant cause of anxiety.

I feel that, by this discovery, I have eliminated from my own practice the danger of *post partum* hæmorrhage, and I earnestly urge you all to try and verify for yourselves the hint which I now offer you.

CLINICAL MEMORANDA.

LARVÆ IN THE EXTERNAL EAR.

AN elderly lady complained of uneasiness and irritation in her left ear, and was advised to syringe it well with warm soap and water. On doing so, a number of live maggots, about the sixth part of an inch in length, were expelled from the meatus. I brushed the interior of the canal with a mixture of sulphurous acid and glycerine, and again used the syringe, when some more maggots were washed out, dead. The irritation not ceasing yet, I repeated the application, and two days later one very large maggot crawled out. A further use of the acid and glycerine, followed by copious syringing, brought away a large quantity of minute eggs, after which all the unpleasant symptoms vanished. No ulceration was to be observed in or about the tympanum, nor any apparent inducement for the presence of the maggots. Some insect—probably a fly or "blue-bottle", must have found its way into the meatus during sleep, and there deposited the eggs.

LOUIS LEWIS, M.R.C.S.

* Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

THE SANITARY STATISTICS OF THE METROPOLIS FOR THE TEN YEARS, 1861-70.*

By J. W. TRIPE, M.D.,

Medical Officer of Health for Hackney.

My chief reason for bringing before you the facts contained in this paper is the belief which I have for very many years entertained, in common with most vital statisticians, that the death-rate of a district affords but one, although perhaps the chief, evidence as to its comparative salubrity. I have often pointed out in my reports that the death-rate of a district depends, amongst other causes, upon the number of persons to an acre, the possession or want of the necessities and comforts of life, the relative proportions of young children and old people to those who are between ten and sixty years of age, and also upon its sanitary condition. It must not be supposed, because I put the good or bad sanitary condition of a district last amongst the causes influencing the death-rate, that I attribute comparatively little importance to it; but I do so because sanitary measures are almost the sole means placed at our disposal by which we can alter the death-rate, whilst the others are permanent, and therefore require in this paper more attentive consideration than the latter, so as to enable us to judge how far sanitary supervision has enabled us to modify the influences of the permanent factors of the death-rate.

When I first proposed writing this paper, I thought that a comparison of the average rateable value of the premises in each district would afford me a means of judging as to the comparative wealth of the inhabitants; but I found the differences so great, arising from the rateable value of railways, gas-works, theatres, markets, water-works, and other public buildings and works, as well as from warehouses, iron-works, and other large private premises, being included in the totals, as to necessitate some other standard of comparison being relied on. I therefore applied to Mr. Clode, the Secretary of the Census Office, for the number of domestic servants in each district, with which he kindly supplied me. I also obtained from the Reports of the Poor-law Board the number of poor receiving relief in each district on a given day in the year. By dividing the corrected number of inhabitants in 1866 (the middle of the period 1860-70) by the number of domestic servants employed and by the number of persons who received relief, I calculated the figures set out in the table before you.

I would mention here that the Superintendent Registrars' Districts do not correspond precisely with the districts into which the metropolis is divided for ordinary purposes. Thus Kensington includes Kensington, Paddington, and Fulham; St. George's includes St. George's, Hanover Square, and St. John's, Westminster; Westminster is made up of St. James's, Westminster, and St. Anne's, Soho; Strand, of the district under the control of the Strand Board of Works, less St. Anne's, Soho, but *plus* St. Martin's; and Holborn is made up of Holborn, Clerkenwell, and St. Luke's. London City includes the whole of the districts of the City of London. Under the name of St. Saviour's, we find St. Saviour's and St. George's, Southwark, as well as the whole of Newington. St. Olave's consists of St. Olave's, Bermondsey, and Rotherhithe; whilst Lewisham includes Lewisham, Sydenham, and Penge.

In order to obtain the true population of a district, I deducted the number of residents in the hospitals, and also of workhouses which did not belong to the districts in which they were situated; and then added the last to the population of the districts from which the residents in the workhouses came. In correcting the number of deaths for each district, I eliminated the deaths in hospitals altogether, deducted the deaths in extraneous workhouses, and restored them to their proper districts, which accounts for the great difference in some cases between my figures and those contained in the Registrar-General's Reports. Thus, for the City of London, I restored 2,876 deaths occurring in the City workhouses in Mile End, Poplar, and Hackney; and deducted above 6,000 deaths which happened in St. Bartholomew's and the City of London Lying-in Hospitals. Again, for Islington, I had to reduce the deaths for the ten years by nearly 7,000, as the Northern and West London Hospitals, as well as the Small-pox and Fever Hospitals, are situated in that district. Again, as regards Mile End, Poplar, and Hackney, the deaths in the City and other workhouses were eliminated from their registered numbers. In comparing the births with the deaths, the corrections were made for deaths in hospitals only, as the births were registered in the districts where they occurred, and cannot be distributed to the localities to which they belong. I make these explanations partly to show that due care has been taken to make the

figures as reliable as possible, and partly to account for the differences between my figures and those published by the Registrar-General in his Annual Summary of Births and Deaths in the Metropolis during 1872.

Superintendent Registrar's District.	Population in 1866, corrected for hospitals and workhouses.	Deaths in ten years, 1861-70, corrected for hospitals and workhouses.	No. of deaths to each 1,000 inhabitants living in 1866, corrected.	No. of births to 100 deaths, corrected, for deaths in hospitals only.	No. of persons living to an acre.	Average rateable value of each premises.	No. of persons to a pauper, March 1868.	No. of persons to a domestic servant.
1. Kensington	233,945	45,594	19.5	148	37	£ s. d.	33	12.3
2. Chelsea	66,109	15,782	23.9	138	53	33 3 0	27	17.4
3. St. George's, Hanover Square	155,745	33,133	21.3	149	76	33 3 0	19	9.3
4. Westminster	52,752	11,352	21.5	128	237	101 7 0	25	13.2
5. Marylebone	160,682	37,135	23.4	140	106	71 0 0	26	13.6
6. Hampstead	25,151	8,826	35.2	166	14	61 5 0	65	10.4
7. St. Pancras	209,827	47,038	22.4	156	83	48 4 0	24	24.4
8. Islington	18,801	37,758	20.5	177	69	37 14 0	37	24.2
9. Hackney	102,882	1,803	19.3	163	32	31 10 0	10	15.0
10. St. Giles's	54,523	14,656	27.3	153	219	66 3 0	23	16.8
11. Strand	44,452	9,085	20.5	144	95	139 5 0	17	16.3
12. Holborn	165,976	43,521	26.2	152	200	43 0 0	17	35.0
13. London (City)	95,704	24,465	24.6	125	104	270 15 0	12	33.3
14. Shoreditch	127,682	30,677	24.3	155	196	28 0 0	22	45.5
15. Bethnal Green	112,400	28,402	25.3	165	159	17 6 0	22	52.0
16. Whitechapel	77,135	21,735	28.2	124	190	35 2 7	16	32.9
17. St. George's, East	48,472	14,804	28.6	137	197	30 10 0	12	39.1
18. Stepney	57,004	15,240	26.4	119	104	32 0 0	11	39.2
19. Mile End (O. T.)	82,791	10,324	23.2	101	137	20 12 0	30	36.0
20. Poplar	57,571	33,869	24.5	157	44	28 1 0	11	39.1
21. St. Saviour's	174,234	4,239	24.2	154	150	25 3 0	17	39.3
22. St. Olave's	111,409	27,264	24.5	160	71	35 8 0	34	44.8
23. Lambeth	184,956	40,862	22.1	170	51	32 4 0	31	20.8
24. Wandsworth	97,726	13,824	19.5	169	11	17 0 0	34	21.2
25. Camberwell	61,197	19,578	21.4	162	25	22 4 0	34	20.9
26. Greenwich	92,173	22,157	24.0	158	26	21 12 0	13	23.8
27. Lewisham	41,768	9,775	23.2	197	5	41 8 0	28	13.6
28. Woolwich	74,427	15,404	20.7	187	10	30 7 0	50	33.1

Having premised very briefly the mode in which the figures have been calculated, I shall now proceed to discuss such of the columns as bear on the title of the paper. I do not propose using the column of average rateable value, as I think all persons acquainted with the metropolis will see that the figures are not at all comparable, and would therefore lead to erroneous results.

If we now examine the column containing the death-rates of the different districts, we perceive that it varied from 15.2 per 1,000 inhabitants to 28.6, or nearly double the lowest rate. If we divide the twenty-eight districts into fourteen of smallest and fourteen of highest death-rates, we find that in the former the range extended from 15.2 to 23.2 per 1,000 inhabitants, and in the latter from 23.4 to 28.6. The numbers for those districts which have not either hospitals or workhouses belonging to other districts situated in them, correspond with the death-rates published by the Registrar-General in the Annual Summary for 1872; but they differ considerably in those having hospitals or extraneous workhouses, or both. Thus the figures for Hampstead, Lewisham, Wandsworth, Woolwich, Lambeth, Camberwell, St. Giles's, and St. George's-in-the-East, are identical in all but Hampstead, in which the death-rate varies 0.1; but for the other districts the variation is rather considerable. Thus, in Hackney, there were 1,211 deaths in the East London Union, and 751 deaths in the German Hospital, during the ten years, or nearly 10 per cent. of the total mortality; so that, whilst the Registrar-General assigns 21.0 as the death-rate per 1,000 inhabitants, the corrected number is only 19.3. I have eliminated all deaths in hospitals, without redistributing them according to population, as the results would be nearly the same, and an additional element of doubt would have been introduced in the tables. As the number of persons in the hospitals has been deducted from the population in each case, I consider this to be the nearest approximation possible. On referring to the column showing the number of inhabitants to an acre, we cannot fail to be struck with the very great difference between the density of population in the least and in that of the most crowded districts. For instance, in Lewisham, which, as before stated, includes Sydenham and Penge, we find an average of only 5 persons to an acre; whilst in St. Giles's there are no fewer than 219, and in Westminster 237 persons to an acre. In Woolwich, there are only 10; in Wandsworth, 11; in Hampstead, 14; Camberwell, 25; Greenwich, 26; and Hackney, 32, to an acre; against 190 in Whitechapel, 196 in Shoreditch, 197 in St. George's-in-the-East, and

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

200 in Holborn. It is quite evident that these districts must vary in their death-rates even if everything else were equal, as epidemic diseases must spread more rapidly amongst a crowded than a sparse population. It is also well known that there must be good supply of air at all times to carry off or oxidise the excrementitious matters given off from the lungs and skin. The statistics of hospitals show that patients recover much more quickly, and die after operations or parturition much more seldom, when the cubic capacity of the ward exceeds 800 feet per patient. Now, as it is well known to medical officers of health and others that in a crowded neighbourhood it is almost impossible to obtain 400 cubic feet of air for an adult, and 200 for a child under ten years of age, it is evident that overcrowding, especially when continued for the whole year, must increase the death-rate. I say when continued for the whole year, because the most crowded district in the metropolis—viz., Westminster—has a very low death-rate. Here we have to deal with a very exceptional state of things. In the first place, the census is taken at a time when Westminster contains many wealthy people and their servants, who reside there for only a short time during the year; so that part of the death-rate of Westminster is really transferred to country districts. Again, it is very evident that, except amongst the poor, servants and workpeople, overcrowding in the sense above described—viz., a want of sufficient breathing space in the living and sleeping rooms—does not obtain in this district. These remarks apply with perhaps greater force to St. George's, Hanover Square, where the houses generally are larger and the summer exodus probably greater even than in Westminster. There are, however, according to the returns I have seen, a greater number of persons receiving Poor-law relief in St. George's than in Westminster.

In order to ascertain the value of overcrowding as a factor in increasing the death-rate, I would ask you to carefully examine the column showing the number of persons to an acre, when we shall see that, although the relation between death-rate and the density of population is not by any means uniform, yet there is an intimate relationship between the two. For instance, amongst the fourteen least crowded districts, no fewer than eleven have a death-rate of 23.2 per 1,000 and under; whilst amongst the fourteen most densely peopled districts, the same number—eleven—have a mortality in excess of 23.2. A close comparison of the numbers shows, however, that other causes of an increased death-rate must be in operation in some of the least as well as of the most crowded localities. Thus, in Greenwich, with only 26 persons to an acre, the death-rate was 24.0; in Poplar, with 44 to the acre, it was 25.4; in St. Olave's, Southwark, with 71 to the acre, it was 24.5; whilst in the Strand district, with 95 to the acre, it was only 20.5; in Mile End, with 137 persons to an acre, it was 23.2; and in Westminster, as previously stated, with 237 to an acre, it was only 21.5.

On adding together the sums for the least and most densely peopled districts, we obtain the following results: first, that in the former class there are, on an average, only 40 persons to an acre, with a mean death-rate of only 20.9 per 1,000 inhabitants; whilst in the latter, with an average of 155 persons to an acre, the mean death-rate is no less than 24.8 per 1,000 persons, or nearly 20 per cent. greater. I think we are, therefore, justified in concluding that overcrowding is a powerful means of increasing the mortality of a district.

I now propose considering the relation between the percentage of servants in, and the death-rate of, a given population; and for this purpose I have divided the twenty-eight districts into two sets of fourteen each, in one of which the number of servants was above, and the other in which it was below, the average. This proportion varies enormously in different districts, there being 10 servants in each 93 persons, or 10.7 per cent., in St. George's, Hanover Square, and only 10 in each 530 persons, or 1.9 per cent. of the total population, in Bethnal Green. In Hampstead, there were 10 servants in each 96 residents; in Westminster, 10 in 151; in Camberwell, 10 in 209; in Whitechapel, 10 in 320; in London City, 10 in 333; in Poplar and St. George's, East, 10 in 391; and in Shoreditch, 10 in 455. Now, when we consider that servants are generally in the prime of life, and therefore have a comparatively small death-rate amongst them, and further, that, when taken ill, they are sent either to their parents' homes or to a hospital, and so do not rate on the mortality of the district if death should occur, we see that a large proportion of servants in a population must alter the death-rate. But when we further consider that having one servant or more as a rule signifies the possession of the necessaries, if not most of the comforts of life, it is evident that the districts in which there is the largest proportion of servants should be those in which the death-rates are less than the average. A glance at the table shows this to be correct, and that the relationship between these is a little closer than between the death-rate and overcrowding; as, although the exceptions are the same in number in those districts

where the proportion of servants is greatest, yet they are less in those where the percentage was below the average, being 2 against 3. The mean death-rate for the fourteen districts in which there was the largest percentage of servants was only 20.8 per 1,000 inhabitants, against 24.9 in the districts where the percentage was smallest. The chief exceptions to the rule are the district of St. Giles on the one side and of Woolwich on the other; but this might have been expected as regards Woolwich, which has only 2.6 per cent. of its population for servants, but in which there are only 10 persons to an acre. As to St. Giles's, the frightful overcrowding, amounting to 219 persons to the acre, and the poverty of many of the inhabitants, will fully account for the large death-rate (27.3 per 1,000 residents), even after allowance has been made for the proportion of servants amongst the better classes of the district.

FOURTEEN DISTRICTS HAVING THE LARGEST PROPORTION OF SERVANTS TO THE POPULATION.				FOURTEEN DISTRICTS HAVING THE SMALLEST PROPORTION OF SERVANTS TO THE POPULATION.			
Percentage of Servants to Population.	Districts arranged in order of number of Servants.	Death-rate per 1,000 inhabitants.		Percentage of Servants to Population.	Districts arranged in order of number of Servants.	Death-rate per 1,000 inhabitants.	
10.7	St. George's, Hanover Sq.	21.3	4.5	St. Pancras	22.4		
9.6	Hampstead	15.2	4.2	Greenwich	24.0		
7.9	Kensington	19.5	3.1	Whitechapel	28.2		
7.6	Marylebone	24.4	3.0	London (city)	24.6		
7.3	Lewisham	16.2	2.9	Holborn	26.2		
7.2	St. Giles	27.3	2.8	St. Saviour's	24.2		
6.6	Westminster	21.5	2.8	Stepney	26.4		
6.4	Hackney	19.3	2.7	Mile End	23.2		
6.1	Strand	20.5	2.6	Woolwich	20.7		
5.8	Chelsea	23.9	2.5	Poplar	25.4		
5.0	Islington	20.5	2.5	St. George's, East	28.6		
4.8	Lambeth	22.1	2.2	St. Olave's	24.5		
4.8	Camberwell	21.4	2.2	Shoreditch	24.3		
4.7	Wandsworth	19.5	1.9	Bethnal Green	25.3		
6.7	Means	20.8	2.8	Means	24.9		

By forming a table with three columns out of the two previously considered, the first column containing those districts which are amongst the fourteen least crowded, and which are also to be found amongst the fourteen having the largest percentage of servants; and the second, in which are to be found the largest proportion of inhabitants to an acre, as well as the fewest servants; and the third, in which the density of population is less than the mean, or the number of servants larger than the average,—we obtain far more striking results than those just worked out. In the first column, we find the districts of Hampstead, Lewisham, Hackney, Kensington, Wandsworth, Islington, St. George's West, Camberwell, and Lambeth. The lowest rate, that of Hampstead, is only 15.2; and the highest, that of Lambeth, being 22.1. In the second column, we find Mile End, with a death-rate of 23.2, as the lowest; and St. Saviour's, Shoreditch, London City, Bethnal Green, Holborn, Stepney, Whitechapel, and St. George's East, with a death-rate of 28.6. It is particularly worthy of observation, that the highest death-rate in the first column is considerably below the lowest in the second column, and also that the second column contains all the districts in which the mortality is in excess of 25 per 1,000, except Poplar and St. Giles's. In the third column, which the heading shows to be a mixed one, we find some districts which have a low mortality, as Strand and Woolwich; whilst there are two with a decidedly high rate—viz., Poplar and St. Giles's. The means of the three columns are, I think, quite conclusive in the matter, as that of the first column is only 19.5; of the second, no less than 25.7, or about 32 per cent. greater than the first; whilst that of the third, which partakes of the peculiarities of both, is intermediate between the two—viz., 23.4.

Districts least crowded, and having the largest percentage of servants.	Death-rate.	Districts most crowded, & having the smallest percentage of servants.	Death-rate.	Districts least crowded, or having fewest servants.	Death-rate.
Hampstead	15.2	Mile End	23.2	Strand	20.5
Lewisham	16.2	St. Saviour's	24.2	Woolwich	20.7
Hackney	19.3	Shoreditch	24.3	Westminster	21.5
Kensington	19.5	London (city)	24.6	St. Pancras	22.4
Wandsworth	19.5	Bethnal Green	25.3	Marylebone	23.4
Islington	20.5	Holborn	26.2	Chelsea	23.9
St. George's, West	21.3	Stepney	26.4	Greenwich	24.0
Camberwell	21.4	Whitechapel	28.2	St. Olave's	24.5
Lambeth	22.1	St. George's, East	28.6	Poplar	25.4
				St. Giles	27.3
Mean	19.5	Mean	25.7	Mean	23.4

I do not propose bestowing much attention on the column showing the number of persons receiving relief in proportion to the whole population of the district, because the figures were obtained from the return for one year only. Still they are valuable, as showing the enormous disproportion of poor persons in one district, as compared with another. Had time allowed, I would have worked out the returns for the ten years 1861-70; but I began my paper only a short time since, on finding that the sanitary statistics of the metropolis would not otherwise be considered at this meeting. I propose, however, using the figures to eliminate from column No. 1 in the table just considered all those districts in which the proportion of persons receiving relief was about 1 out of each 23 inhabitants. We thus obtain six districts in which concur the three most favourable conditions—viz., least crowding, the largest percentage of servants, and the smallest proportion of persons receiving Poor-law relief. These districts are, Hampstead, with a death-rate of 15.2; Lewisham, 16.2; Wandsworth, with 19.5; Kensington, 19.5; Islington, 20.5; and Camberwell, 21.4. These give the exceedingly low mean death-rate of 18.7 per 1,000 inhabitants during the ten years 1861-70; whilst the mean rate for all London during the same period, excluding, as before stated, all the deaths in hospitals, was 22.8 per 1,000. I think, from this examination, we may fairly conclude that the death-rate of a place is not alone to be taken as the index of its sanitary condition; but that, before drawing definite conclusions adverse to a locality from the death-returns only, we ought to examine the conditions under which its inhabitants are placed as regards the possession of comforts and the amount of overcrowding. I shall very briefly allude to other circumstances which increase the death-rate of a place. It may be said that these results are well known; but, as the following occurs in the speech of a leading member of the Metropolitan Board of Works published a few days since, they cannot have obtained general circulation amongst the public. The extracts are as follows. "The average death-rates were annually, for London, 23.7; Leeds, 27.6; Glasgow, 31.1; Manchester, 30.9; and Liverpool, 29.3. These facts were sufficient to show the denizens of the metropolis the great superiority of the sanitary condition of London, which had been mainly brought about by the Metropolitan Board of Works." We here have a paragraph asserting the drainage system to have been the chief cause of the low death-rates of the metropolis; whereas sanitary improvements in the houses of the poor, a general rise in wages and the consequent possession of greater comforts, fewer hours of labour, and, it may be, better oversight of young children by the mothers, have undoubtedly assisted the main drainage in producing any improvement which has taken place in the mortality of the metropolis. I do not by any means undervalue the power of properly directed sanitary measures in reducing mortality; but I assert that at present we are not able to state statistically their precise value; and that, by overstating the case in favour of sanitary efforts, we run a very great risk of having an adverse reaction in the public mind at some future period.

The last column which I propose discussing is that which shows the proportion of births to deaths. The figures are corrected for deaths in hospitals only, as it was not possible to obtain the number of births in workhouses, so as to eliminate them from the returns of the districts to which they do not belong. As, however, the deaths in the workhouses are included in the districts where the births are registered, no material change is made relatively in the numbers. As the figures do not indicate the absolute number of births, but the ratio of births to deaths, we shall find that the largest birth-rates belong to districts with the lowest death-rates, and *vice versa*. The greatest proportion was registered in Lewisham, where there were 197 births to each 100 deaths in the ten years 1861-70; whilst in Whitechapel there were only 124. The total for the five highest is 892, and for the five lowest 776, against 500 deaths. This is very satisfactory, and furnishes additional proof of the good sanitary condition of the metropolis. Indeed, if I were asked for any one statistical evidence as to the good or bad sanitary state of a large district, I should select either the rate of births to deaths, or the proportion of children under one year old who die, as compared with the number born. It is true that in districts such as St. George's, Hanover Square, where servants form more than 10 per cent. of the population, the birth-rate cannot be so high as in Bethnal Green, where they are less than 2 per cent., because the proportion of married to unmarried must be very much greater in the latter; but then I should expect to find the larger proportion of deaths of children under one year old in Bethnal Green. This excess of births in certain districts, in proportion to the population, must affect the death-rate, as a very large percentage of the deaths at all ages occur under one year old; so that the greater the number of children under one year, the larger the death-rate will be, except in districts where the parents can give the greatest attention to the newly born. The five districts in which the largest birth-

rates in proportion to deaths were registered, include four in which the death-rates were low; and the exception, Bethnal Green, furnishes precisely an example of the kind mentioned, where poverty induces neglect of very young children. There can be no doubt that the excessive death-rate of Glasgow, Leeds, Manchester, and other large manufacturing towns, depends to a very considerable extent on the waste of infant life, from the mothers going out to work, and leaving their offspring at home. Good sanitary supervision will reduce a death-rate arising from the artificial conditions under which residents of large cities live, but it cannot lessen a death-rate arising from carelessness or neglect.

NOTES ON THE ACTION OF MEDICINES, OLD AND NEW.

By JOHN KENT SPENDER, M.D. Lond.,

Surgeon to the Mineral Water Hospital, Bath.

[Continued from BRITISH MEDICAL JOURNAL, June 15th, 1872.]

I CONTINUE my clinical notes on the Action of Medicines, drawing my illustrations and comments from the events of everyday practice, and relating the seeming effects of medicines without conscious bias or partiality. It is certain that a great amount of valuable material is lost to the profession, owing to the want of leisure which hinders general practitioners from recording their experience; nor are the failures of medicine less instructive than its successes. It is part of the imperfection of human science and art to fail; but it is necessary to distinguish that sort of failure which comes from our own ignorance, and that which arises from the natural shortcomings of the instruments which we use. It is sad to think that the latter is often made an apology for the former.

The concluding paragraph of my former paper referred to the nearly continuous use of *Bromide of Potassium* for a long time in the treatment of epilepsy. Dr. Sydney Ringer recommends that the medicine should be suspended at times for a few weeks; otherwise the system becomes accustomed to its presence, and it loses its power over the disease. But it is doubtful whether this be quite wise. It is more safe to discontinue the medicine for one week now and then, or to let the patient have only a single dose daily for two or three weeks; and with this reasonable precaution, the bromide scarcely ever ceases to hold its sway. Nor has it been my misfortune to see any of the so-called toxic effects of the long administration of the salt, save possibly a transient erythema or acne. In most cases, it may be given in liberal doses (one to two scruples) three or four times a day; and a very brilliant characteristic of the drug is, that these quantities often produce an immediate lessening or mitigation of the epileptic paroxysms. It must be confessed, however, that this favourable change is now and then of short duration, and the disease asserts its old supremacy, incapable of being checked by any medicine whatever.

It is an interesting matter for inquiry, why bromide of potassium should have been so long in winning its way with the profession; so that, more than ten years after its introduction as a remedy for epilepsy, it still required the earnest recommendation of our leading therapeutists to secure the general use of the medicine. Contrast this with the rapture which greeted the discovery of chloral, and its eager application to all sorts of even contrary maladies. The probable reason is not far to seek. Bromide of potassium was long known to us as a great deal more than a mere chemical curiosity; but its therapeutic virtues were so ill-defined, that no one seemed to know what to do with it; and uncertainty about a medicine is almost worse than suspicion and distrust. Hence, when an attempt was made to fix its value, scepticism was long in yielding to knowledge, and its use was for a long time quite random and wild. The doses in which it was administered were utterly insufficient to produce positive results; and the reputation of a medicine suffers greatly when it is prescribed in inadequate doses. But chloral sprang into the world fully armed (thanks to the previous physiological experiments of the discoverer), and we knew almost directly the full extent of its powers.

I am not going to illustrate further the almost exhausted subject of chloral. This medicine has unfairly been made to eclipse the merits of several old and trusted medicines; bromide of potassium among the number. A solicitor engaged in a large and troublesome practice could get no sleep, even when he entirely abandoned work and travelled about the country for pleasure. Opium was inadmissible for many reasons; chloral was most disappointing and uncertain; and now the bromide salt stepped in and produced exactly what was needed—continuous and refreshing sleep. Less collateral disturbance is commonly produced by this drug than by chloral. I may here refer to an interesting paper by Dr. Begbie in the *Edinburgh Medical Journal* (December, 1866), in

which the value of the bromide is exemplified, not only for those "distressing nervous affections" which are the "offspring of overtaxed brain," but for the "paroxysms of acute mania and delirium tremens," and also for some forms of diabetes.

I have been working lately with a combination of chloral and bromide of potassium, and with results sufficiently remarkable to justify a few comments. Seven or eight grains of chloral, added to about twenty-five grains of bromide of potassium, make a very successful hypnotic draught; the efficacy of the latter medicine is increased in a ratio much greater than its mere quantity. The early stages of some mental disorders are admirably treated by the same medicines; a moderate dose being given in the morning and afternoon, and a double or treble dose at bed-time whenever there is a tendency to wakefulness. Among the brain-derangements which ought to be combated in this way is melancholia, and, perhaps, the very first signs of excitement in a person who has once had sun-stroke (or "heat-apoplexy"), or who has suffered from acute mania. I can speak from my own experience of the good which may be thus effected for a patient who has a single delusion which distorts and depresses the intellectual powers. Thus, the wife of a tradesman has a strong impression that she will one day suffer a violent death, but the apprehension is almost entirely removed by her taking for a month a nightly dose of bromide of potassium (twenty-five grains) and chloral (eight grains).

Chlorate of Potash is a medicine about which disappointingly little is found in therapeutic text-books. Is this because so much marvel clings to it, and because it is asserted to be able to do such widely different things? Thus, it is said to cure ovarian diseases (*Edin. Med. Journal*, November, 1865); and no medicine was more firmly trusted in the treatment of some varieties of phthisis. Now, let us see what we can lawfully attempt with chlorate of potash. In the first place, few medicines have suffered so much in repute by being given in inadequate doses. The paltry quantities of three or four grains are often given to adults, when doses amounting to thirty to forty grains would not be excessive. In America, strong saturated solutions of the salt are administered in the treatment of phthisis; an ounce or more is dissolved in boiling water, which, when cool, is drunk from a jug by the patient *ad libitum*. The late Dr. Symonds had a high opinion of this plan. It is certain that by this means persons in the ultimate stage of exhaustion and emaciation may be made to live on in a seemingly unaccountable way, though, of course, there can be no repair of lost or damaged tissue. I have tested the treatment in several bad cases, and, even when it fails to do anything else, it almost always completely controls severe diarrhoea. But patients who are only in the second stage of pulmonary consumption may sometimes be made much better by the bold use of chlorate of potash; and the aphthous mouth, which is one of the chief troubles of this disease, is commonly relieved in a very rapid way by simple doses of the salt in solution every three or four hours.

For the ulcerative stomatitis of children, much larger quantities of this medicine should be given than are usually done.

On the other hand, the fabulous properties once accorded to chlorate of potash are no longer believed. It was assumed to be a "carrier of oxygen" (whatever this meant) to deoxygenated textures; and it was supposed to have special tonic virtues in many asthenic diseases. It is conventionally combined with cinchona bark and acids, but it may be doubted whether additional efficacy is conveyed thereby; and it is wise not to claim for a medicine more than can be rigidly proved.

Chlorate of potash is very useful in a case like the following, drawn from nature. A young man, a member of a consumptive family, suddenly suffered (from no very distinct cause) an enlargement of the tonsils, and of the cervical and submaxillary glands; the face was swollen, as if from venous pressure; the brain-functions were confused; there was very little fever, and no striking anæmia. Very speedy benefit came from the administration of the chlorate of potash in a dose of half a drachm twice a day; no other drug was given, except an occasional aperient, and nothing was applied externally but dry wadding.

An impartial review of the therapeutic history of this valuable medicine would show that much positive knowledge has been gained of it since the writings of Dr. Pereira, who thought that it would prove to be considerably over-rated. It only remains to say that the chlorate may sometimes be used in solution, as an external application, by means of pledgets of cotton-wool; though I think it is quite inferior, as a disinfectant, to chlorinated soda.

Ergot is a drug around which much interest has lately clustered. It is a decided poison, and toxic quantities of it produce "nausea, vomiting, colic, diarrhoea, giddiness, headache, and dilatation of the pupil," with "great retardation and weakness of the pulse." The fresh hot infusion is the best form of administration when quick effects on the muscular system are desired; the liquid extract of the British Pharmacopœia is otherwise very convenient and effective. There are many septs, even

now, about the action of ergot on the uterus; but, if a demonstration be needed of its rapid and decisive influence, let a very strong dose of the recent infusion be given to a parturient woman, in whom the uterus has failed in its action for an hour, the presentation and other circumstances being normal. The contractions of the uterus nearly always begin again in a continuous and almost tetanoid manner, and there is even a danger of the child being born half-asphyxiated, or perhaps dead. It is better (so it seems to me) to recognise distinctly this peril to the child, than to try to make ourselves believe that we can administer ergot to a woman in labour with reckless impunity.

I am not going to weary my readers with a discussion of all the diseases and disorders for which ergot is said to be a paramount remedy. I will enumerate three conditions in which I have prescribed it with more or less success, and which deserve particular attention. (a) I have given ergot in some cases of neuralgia, according to the advice of Dr. Woakes, of Luton;* but, though I have had particularly good results, I have not been able to remove pain entirely by the use of ergot alone. (b) I can endorse all the favourable views of ergot in the treatment of hæmoptysis, as related by Dr. Dobell and Dr. Anstie.† I have used the medicine for this purpose during several years past, having been originally led to do so by a consideration of its therapeutic analogies. It does not yet seem to be clearly defined whether there is any stage of phthisis, even the most advanced, which is absolutely beyond the control of ergot, when spitting of blood occurs. Of the exceeding value of the medicine in these cases (though it now and then unaccountably fails), there can be no doubt whatever; and, as the facts are very little known, attention cannot be too often called to them. (c) The action of ergot on the uterus is a proverb; why should it not affect in a similar way a neighbouring organ—the bladder? I have found that that quasi-paralytic condition of the bladder, which may come on in middle-aged persons from over-fatigue or from simple want of power in the coats of the organ, is greatly relieved by the continuous use of ergot, and may be altogether removed.‡ The so-called hysterical paralysis of the bladder in young women is admirably treated with the same medicine (though I cannot deny the occasional necessity for the use of the catheter). Whether this want of power be simply motor weakness, or secondary to some variety of abdominal neuralgia, there is no more splendid combination of medicines than ergot and strychnia (half a drachm of the fluid extract of ergot and five or six minims of the *liquor strychnia*, Ph. B., in chloroform water, three times a day); and these doses should be continued perseveringly for several weeks, as a very rapid benefit cannot be expected.

I venture now to lay before my readers a few illustrations of the ancient doctrine of *counter-irritation*—a doctrine which I believe to be wise and wholesome, and to be resolutely defended by all orthodox doctors. Even if it had been shown, beyond all cavil, to be an antiquarian relic of unphilosophical days, this is no reason for abandoning it, if we find it good for our patients, by preventing and quelling disease. And, if we can establish trustworthy landmarks in the use of the practice, we shall resort to it with the confidence which springs from exact knowledge. There is no room here to give any general theory of counter-irritation; but I may direct attention to Dr. Laycock's views,§ and insist on the importance of remembering that, by means of counter-irritants, we desire to alter the *condition of nerve-centres*, and so to influence motor, sensory, and trophic nerves.

Briefly, then (a), *counter-irritation may relieve pain*. Place a long narrow blister over the roots of the painful spinal nerves in a case of herpes zoster, and an excruciating neuralgia will be greatly relieved by this means alone. Most of us may have had some experience of the blister treatment of acute rheumatism; and even those who are least favourably impressed by its powers, will probably acknowledge its occasional good effects. (b) *Counter-irritation often relieves chronic inflammation*. Hence the unquestionable utility of "flying blisters" to the temples for some forms of chronic ophthalmia; and nothing is so beneficial for the chronic synovitis of so-called strumous subjects. In the latter case, the blister should be applied above (or on the cardiac side of) the affected joint; and there may be a distinct benefit in keeping a blistered surface "open" for some days at a time. (c) *Counter-irritation may remove obscure cerebral symptoms*. Many long-standing brain troubles, such as vertigo, congestion, and the like, are alleviated by a

* Mr. Woakes' theory is this. Some cases of neuralgia are supposed to depend upon an effusion of liquor sanguinis from the artery in the track of which the symptoms appear. The effused fluid compresses the nerve-fibrillæ, and it is the office of the ergot to restore the suspended vaso-motor function, the interruption to which had allowed the effusion to occur.

† Dr. Anstie's papers, in recent numbers of the *Practitioner*, should be consulted.

‡ See some remarks by Dr. Meadows on this point in the *Practitioner*, September 1863.

§ *Medical Times and Gazette*, June and August, 1871.

seton or an issue; and this not by reason of the discharge from a particular spot, and still less from the draining away of any supposed peccant humour, but by virtue of a dynamic impression on the central nerve-ganglia. (a) *Some very sudden inflammations of the brain and of the viscera of the chest are admirably treated by rapid blisters.* The old-fashioned acute cerebritis now and then seen should be combated in this way (the head, of course, having been previously shaven); and nothing affords such relief to the fearful dyspnoea of acute capillary bronchitis. The life of even a very young child, who may be attacked by this urgent disease, may be saved by the bold application of a cantharides blister. I am persuaded that there is much unnecessary terror about the use of blisters in the case of children—a terror which is increased, rather than quelled, by the authority of some text-books; but on this point I say no more at present, as I propose, shortly, to write some independent remarks in favour of the practice. Finally (c), *counterirritation deserves a trial in some forms of chronic consumption.* This is one of the traditions of what we term old-fashioned days, which ought to be highly commended. Damage to lung-tissue and all its consequences may be alleviated by blisters to different parts of the chest; and trustworthy observers have testified that the morbid process is sometimes arrested, if not altogether stayed. I am glad to add my own experience in this matter; for nothing, I think, can be better than the results which are now and then obtained by limited counterirritation of chest-surface in the earlier stages of pulmonary tuberculosis. In my next paper I hope to offer some statistics on this important topic.

[To be continued.]

INFECTIOUS DISEASES AND SANITARY LAW REFORM.

By JOHN LASCELLES, Esq., Barrister-at-law.

THE recent outbreak of typhoid fever in Mayfair and Marylebone has again forced upon public attention the desirability of legislation for preventing the spread of infectious diseases. It is now admitted that the outbreak in question was caused by infected milk, which had been obtained from a farm where one or two persons had lately suffered from a form of typhoid fever which had been prevalent in the neighbourhood. The Mayfair and Marylebone case is by no means exceptional. We know that several outbreaks of typhoid fever have, within the last two or three years, been traced to infected milk-supplies. One of these took place at Leeds early in the present year, and the infection was clearly traced to a farm near Harewood, from which the families affected obtained their daily supplies of milk; and at which the Corporation Officer of Health found six persons suffering from fever in a room on the ground floor, which opened into a kitchen from which there was a door into the dairy. He also discovered that the same woman acted as dairy-maid and as nurse to the fever-patients. Diseases have been thus often traced to infected milk-supplies, because outbreaks so caused are usually of sufficient importance to lead to public investigation. There can be no doubt, however, that large numbers of isolated families are desolated by infectious diseases which are conveyed to them by means of infected clothing, food, etc.; and that, as such outbreaks are not general, the public hear nothing about them. We are sometimes startled by stories of poor journeymen tailors who have used cloth, which had given them to make into overcoats, as temporary blankets wherewith to cover their wives and children who were suffering from fever or small-pox. We have been told of infected bakers who were employed in the manufacture of the bread which, perhaps, conveyed the seeds of death into some of our houses the next morning. These stories may or may not be true; but we cannot shut our eyes to the fact that infectious diseases, with all their terrible consequences, are conveyed into our homes by some means or other, and that, as our sanitary laws now stand, we have no means of knowing whether our milk, our clothing, or our bread will or will not, on any particular day, bring suffering and death into our households; we leave the matter to chance. Certain statistical tables, gloomy records of our apathy and folly, periodically remind us that infectious diseases destroy as many of our people every year as would be destroyed in a bloody and disastrous battle. These dry statistical tables speak to us, and we must not dare to pretend that we do not understand what they say. They tell us of desolate and poverty-stricken families; of fatherless children and widows; they awaken echoes in our hearts of distant sounds of suffering and lamentation and woe in thousands of English homes.

Now we know that much of the suffering and death caused by infectious diseases is preventable, and that it would be prevented if we could make up our minds to submit to suitable and necessary legisla-

tion. At intervals during the last three years, I have advocated a reform in our sanitary laws which would, I think, reduce our danger from such diseases to a minimum. The principle of my scheme has been approved of by men who were well able to judge of its merits. I first devised and drew it when acting with my friend Dr. Arthur Ransome as a subcommittee of the Manchester and Salford Sanitary Association. It was afterwards carefully considered, and was approved of by the Committee of that Association; and the Joint Committee on State Medicine and the Report of the Royal Sanitary Commission of the British Medical and Social Science Associations also considered it, and printed it in the appendix to their report. Nothing less, however, than a healthy and intelligent public opinion in favour of the scheme can enable its supporters to put it into the practical shape of a section in a future Sanitary Law Consolidation and Amendment Act. I think it well, therefore, to take advantage of the interest which has been recently awakened in the subject to which it relates, to submit it to more extensive criticism than heretofore, in order that what is valuable in it may gain additional supporters, and what is useless may be finally dismissed to the limbo of impracticable ideas and suggestions.

I have stated above that our safety from infectious diseases is now left to chance, but, I think, no one will seriously argue that this state of things should be allowed to continue. If we can protect ourselves and our families by taking a little trouble and forethought, it will readily be admitted that it is our duty to take the trouble and forethought required for that purpose. I am far from being an advocate of what is called over-governing the country, or of undue interference with individual liberty of action. Infectious diseases are, however, a source of danger to all persons in their vicinity; and the public have an undoubted right to insist that such precautions shall be taken by persons in charge of those who are suffering from them, as are necessary to reduce this danger to themselves to a minimum; and, this being so, they clearly have a right to take means to satisfy themselves that such precautions are duly taken in all cases. I will not support these propositions by arguments, for they will be admitted by even the most persistent advocates of the *laissez-faire* principle of government. Premising, therefore, that every part of England and Wales is now within the jurisdiction of some one local sanitary authority, I will proceed to submit the following proposals for legislation which, if properly acted upon, will, I think, give the people the protection they require.

In order that they may be clearly understood, I will state them as dryly and concisely as possible. All cases of fever, or any other infectious disease, shall be speedily brought under the notice of the sanitary authorities having jurisdiction over the areas in which they occur. In order that this may be done, medical men attending such cases shall be bound to give immediate notice thereof to such local sanitary authorities. They shall also be bound to declare their infectious character to the persons in charge of the houses in which they occur, so that some immediate precautions may be taken to prevent them from spreading. When no medical man is in attendance, the persons in charge shall themselves give the required notice to the local sanitary authorities. Every local sanitary authority receiving such a notice, shall immediately send printed directions as to the disinfection of clothing, etc., and as to precautions which should be taken to prevent the spread of infectious diseases, to the person in charge of the house where the infectious disease is. These directions shall include various methods of disinfection, some of which shall be capable of being adopted by persons in the humblest circumstances; they shall be drawn up and printed under the supervision of the medical officers of the Local Government Board; and each local sanitary authority shall keep a stock of them ready for immediate use. At intervals of not more than ten days, counting from the receipt of these directions, the person in charge shall send to the local sanitary authority the certificate of a properly qualified medical man that the directions have been duly acted upon. And he shall continue to do this until he send to such authority the certificate of a properly qualified medical man that no person in the house under his charge is ill of fever or any other infectious disease, and that those parts of it requiring disinfection, together with the bedding and clothing used by and about the person who was sick, have been thoroughly cleansed and disinfected. Medical men wilfully neglecting to give notice and to declare as mentioned above; medical men or other persons giving false certificates; and persons in charge of houses, having cases of fever or other infectious disease in them, wilfully neglecting to give the required notice when no medical man is in attendance, or to act upon the printed directions sent them, shall be liable to be fined. Moreover, the persons last mentioned, on being guilty of any of the defaults, or failing to send the periodical certificates referred to above, shall also be liable to have their houses entered by the officers of the local sanitary authorities, who shall have power to do the disinfecting required, to remove the infected persons to a hospital, and to charge the cost of such pro-

ceedings to such defaulters. The periodical sending of the certificates mentioned above appears to be the only plan by which the public can be adequately protected without putting the local sanitary authorities to the expense, and persons having infectious diseases in their houses to the annoyance of domiciliary visits. These certificates will generally be given by the medical men in regular attendance, so that persons who are disposed to act as they ought to act, and as all right-minded and reasonable men do act, without any compulsion whatever, will be put to very little extra trouble or expense in obtaining them, or in forwarding them to the sanitary authorities having jurisdiction over the areas in which their houses are situated; and for this trouble and expense they will be amply repaid by being speedily made acquainted with the best methods of disinfection, etc., which the most skillful and highly trained men of science in the country can devise. Those who are careless will be kept under effective supervision, and will be obliged to take proper precautions for the protection of their own families and of the public; and the whole country will be benefited if the provisions which I have described be put in force; provisions which will be a positive boon to the well-disposed, and which will only press upon the careless and the reckless. The people will be protected from infectious diseases, and medical science will be advanced by the valuable information which will be obtained by making use of the facilities which will be afforded for a reliable registration of such diseases when treated in private practice.

I shall not enter into details as to the form of the notices to be given to the local sanitary authorities, the form of the certificates to be given by medical men, the fees to be paid for them, etc. There is one point, however, which must not be left unnoticed. Men of science do not agree as to whether certain diseases are or are not infectious. It will be necessary, therefore, to give a list of diseases which shall be deemed to be infectious in the definitions and section at the end of any Act of Parliament containing provisions based upon the above proposals. It will be wise, moreover, to give the Local Government Board power to add, by means of provisional orders, to the number of diseases which shall be deemed to be within the Act. Increased knowledge and experience will then, from time to time, be readily made available for the protection of the people.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GENERAL HOSPITAL, NOTTINGHAM.

CASE OF HYDATIDS OF LIVER, DISCHARGING BY FISTULOUS OPENINGS.

(Under the care of Dr. RANSOM.)

Reported by L. W. MARSHALL, M.B., Resident Surgeon.

E. P., a lace girl, was admitted Nov. 13th, 1872, having a lobulated mass situated in the upper part of the umbilical region, extending as far as the umbilicus inferiorly, but leaving the epigastrium unoccupied. The tumour was dull on percussion, this condition being continued uninterruptedly through the right hypochondrium to the hepatic region. The hepatic dulness rose nearly to the level of the fourth rib; a slight bulging being observable in the right lateral region. The whole mass was movable by hand laterally to a limited extent, although the respiratory act had but little effect in altering its position, and the abdominal walls appeared to be carried with the tumour when shifted by this effort. To the hand the tumour felt tense and elastic, but distinctly fluctuating. Three cysts or lobes were to be made out, one of which was situated in the middle line immediately above the umbilicus, the other two being respectively on the right and left sides of the mesial line. Fluctuation was communicable from the left to the right cyst. The left cyst was larger and more tender and painful than the others. Between the conjoined cartilages and the left cyst was about a finger's breadth of resonance, continuous with that of the cardiac end of the stomach, the limit of which was at a point immediately below the left nipple. On deep palpation below the umbilicus, some indurated masses could be felt, which were believed to be either enlarged glands or smaller cysts, but they appeared to have some connection with the lower border of the tumour. On the posterior surface of the trunk, no undue prominence was to be found, neither was the hepatic dulness extended.

The tumour was first discovered eight years prior to admission, at which time she was tapped, and believed "about a pint of clear water"

was removed. Subsequently to this, she stated, she was put under chloroform, and the tumour was diminished on her returning to consciousness, and it was her belief she had been again tapped. She resumed work nine weeks after first operation, and continued in fair health until twelve months before the date of admission, when she was caused to discontinue her employment by pain in the side. The swelling had increased slowly until within a few weeks before she became an in-patient, but was then stationary. With the exception of pain in the left lobe, she complained of nothing. No important physical signs were discoverable elsewhere. Pulse 108, after examination; respiration 26.

Nov. 18th.—At the most elevated point (two inches above the umbilicus) she measured twenty-eight and a half inches in circumference. There she was tapped, two ounces of fluid escaping, which was tolerably clear until the last few drops, which were turbid and had a yellowish colour like pus. By this tapping the other lobuli were diminished in prominence, but not emptied. The wound was dressed with collodion. On microscopical examination of the fluid, the turbid deposit was found to be pus, besides which numerous echinococci, shreds of hydatid cysts, and plates of cholesterine were found. With the exception of some tenderness at the point of puncture, she appeared to be in no way inconvenienced by the operation.

Nov. 24th.—It was noted this day that there was an enlargement of the whole mass, with a considerable induration of the matrix. The said matrix was believed to be the left lobe of the liver.

Dec. 27th.—The cyst on the right side of the mesial line burst, a small quantity of blood and serous fluid escaping.

Dec. 29th.—Another opening was formed about an inch above the first, from which numerous cysts had escaped, accompanied by or floating in an opaque fluid. The integument being considerably thinned on the left side of the mesial line, it was thought expedient to make a puncture at that point with the needle of the pneumatic aspirator, but the action of that instrument was imperfect, from the tube becoming stopped by pieces of cyst. A small quantity of fluid was withdrawn by the use of the instrument. This opening was covered by lint and collodion; the other (first) by carbolie gauze. Cysts and fluid escaped for four or five days, no constitutional disturbance having been caused by the tapping. The lower opening was kept open for a week or more by sea-tangle tents, these, however, being soon replaced by a drainage-tube; cysts and purulent fluid escaped freely at the same time.

Jan. 16th, 1873.—The dull region was confined to the space above and in immediate neighbourhood of the fistulous opening. The discharge was diminished.

Feb. 2nd.—The aspect of the abdomen was normal, the lobulated tumour having disappeared. The edge of the liver was felt an inch below and in a line with the umbilicus. In the position of the tumours, which burst naturally, nothing was felt but flat indurated liver-surface. In the position of the separate cyst on the left margin of the left lobe, which was punctured by the aspirator, the same physical signs were present, with slight oedema. There was very little tenderness. The principal opening through which cysts had come was contracting, but closure was prevented by lint and carbolised oil.

Feb. 25th.—The openings were closed. The area formerly occupied by the multiple tumours was now slightly resonant, but on deep palpation was felt to be indurated. That part occupied by the cyst on the left side, which was punctured by the aspirator and did not suppurate, was flat, boggy, and slightly oedematous, with patches of vascular injection in its centre. It threatened to suppurate, and the skin was adherent to the tissues beneath.

March 5th.—She was re-admitted with a fistulous opening on the left side, from which (prior to admission) a small quantity of bloody fluid had escaped. She complained of no pain. There was slight tenderness.

April 6th.—She was convalescent. The edge of the liver could not be felt, neither was there any discharge from the fistulous openings, which had been closed about seven days.

CASE OF COMPOUND FRACTURE OF TIBIA AND FIBULA: HÆMORRHAGE STOPPED BY SOLID PERCHLORIDE OF IRON.

(Under the care of Mr. WRIGHT.)

Reported by L. W. MARSHALL, M.B., Resident Surgeon.

G. B., a boy, aged thirteen years, was admitted Dec. 29th, 1872, with the injury mentioned above; the lower end of the upper fragment of the tibia being protruded half an inch through a wound on the upper and inner side of the limb. Reduction was effected by removal of a portion of the tibia, but bleeding continued from between the two fragments. The posterior tibial artery could be felt distinctly behind the inner malleolus; but the anterior tibial, although felt, was not so

distinct as the posterior. A pledget of lint was placed between the ends of bone, and the limb fixed on an outside splint for two hours; when, hæmorrhage still continuing, it was thought to be necessary to adopt other means for controlling it. The solid perchloride of iron, as used by Mr. Spencer Wells for coating the pedicle in ovariectomy, was passed between the bones, and the wound was re-plugged with lint, the splint also being re-applied, and the case left with the determination to amputate if this did not succeed.

Jan. 30th.—The following morning there was a slight rise of temperature and some flushing of the face. The wound was not touched, the hæmorrhage having ceased.

Jan. 31st.—The febrile symptoms had gone. From this date his recovery was steadily arrived at, without any untoward circumstance. No dressing but cotton-wool was used throughout.

Feb. 26th.—He left the hospital, the wound being healed and union firm.

SELECTIONS FROM JOURNALS.

SURGERY.

PERFORATING ULCER OF THE FOOT.—MM. Duplay and Morat (*Arch. Génér. de Méd.*, March and May, 1873) discuss perforating ulcer of the foot to a degeneration of the nerves of the part. This degeneration may be of entirely peripheral origin, just as frost-bite induces degeneration of the nerves and a tendency to ulceration; or it may be connected with a more deeply seated affection of the sciatic nerve, or with disease in the spinal cord. The authors, therefore, place perforating ulcer of the foot in the same category with the ulceration of the cornea which follows section of the trigeminus nerve. The principal symptoms agree with this view, being indicative of disturbance of sensation and nutrition. The inflammation which surrounds the ulceration affects all the tissues, including the arteries, which are sometimes diseased to so great an extent that many have attributed the ulceration to arterial sclerosis. The prognosis will evidently depend on the possibility of treating the nervous disorder with success.

EPISTAXIS FROM A LEECH IN THE NOSE.—Dr. Amaducci was called to a boy aged 6 years, who had had obstinate epistaxis for a week, for which no cause could at first be assigned; the boy was healthy, and there was no family history of hæmorrhagic diathesis. On being questioned, he said that the hæmorrhage commenced some hours after he had drunk water from a brook. Cold water was injected into the right nostril, and the coagula were removed; a leech was then discovered adhering to the mucous membrane, and was removed by polypus-forceps. After this, the epistaxis ceased entirely. Dr. Amaducci believes that the leech was first taken into the mouth, and that it thence crawled into the nostril.—*Il Raccoglitore Medico*, No. 25, 1873; and *Allgemeine Medicin. Central-Zeitung*, August 13th.

REMOVAL OF BOTH SUPERIOR MAXILLARY BONES.—The *Centralblatt für die Medicin. Wissenschaft*, for June 21st contains a brief note of a case related by Podrazki in the *Asterr. Zeitschr. für prakt. Heilkunde*, No. 1, 1873, in which he removed both upper maxillæ from a man aged 42. They were the seat of a tumour which had the appearance of being malignant, being attended with pain and swelling of the lymphatic glands. It was, however, found to be a large ivory exostosis, which had almost obliterated the sinuses and nares. The patient died of pyæmia.

PATHOLOGY.

DISEASE OF THE HEART IN SOLDIERS.—Dr. O. Fränzel states, in Virchow's *Archiv* (vol. lvii), that, during the war of 1870-71, he met with ten cases of dilatation and hypertrophy of the left ventricle, and two cases in which the right, and three in which both ventricles were thus affected. In two other cases, there was dilatation only of the right or of the left ventricle. None of the patients had had any disease of the circulatory or respiratory organs, or of the kidneys, which could account for the hypertrophy, the symptoms of which first appeared while they were engaged in active service in the field. Fränzel, therefore, attributes the lesion to the fatigue and muscular exertion to which they were subjected for months. The increased activity of the respiration, conjoined with the impediment to the expansion of the chest produced by the uniform, explain, in Dr. Fränzel's opinion, the continued increase of pressure in the pulmonary arterial system, which finally led to dilatation and hypertrophy of the right ventricle; and the corre-

sponding change in the left side of the heart was the result of the excessive muscular exertion, aided, in the cold of winter, by the contraction of the peripheral arteries and consequent increase of the blood-pressure in the aorta. The occurrence, in a few cases, of dilatation without hypertrophy is explained on the supposition that the pressure was too great, or the resisting power too small, to allow hypertrophy to take place; or that the nutrition of the individuals affected was impaired.

ANEURISM OF THE ABDOMINAL AORTA.—Dr. G. Goldschmidt relates in the *Allgem. Wiener Medizin. Zeitung*, Nos. 32 and 33, 1873, the case of a woman who had for six months suffered from severe pain in the sacral region. At first, nothing abnormal could be discovered beyond extended liver-dulness and increased pulsation of the abdominal aorta. The urine deposited a copious sediment of bone-phosphates, urates, mucus, and epithelium; and at a subsequent date the amount of phosphates in the urine was less. The pain became more violent, and was accompanied by increased resistance and pulsation in the epigastrium, where, after some time, a tumour of the size of a hen's egg was felt lying deeply. On pressure with the finger, a thrill could be felt; and, on auscultation, a double blowing murmur was heard. Collapse suddenly set in, and the patient died. The left pleural cavity contained about a pound of loosely coagulated blood. The abdominal aorta bulged forwards between the lesser curvature of the stomach and the left lobe of the liver. On laying open the anterior wall, an opening, with swollen smooth edges, was seen in the posterior part of the vessel, leading to an elliptical sac nearly as large as a man's fist, filled with blood and coagula. At its upper part was an aperture leading into the left pleura. The bodies of the three upper lumbar vertebrae were much eroded. Dr. Goldschmidt suggests that the abnormal amount of phosphates in the urine may be explained by the destruction of the bone.

DISEASES OF WOMEN.

SPONTANEOUS RUPTURE OF AN OVARIAN CYST.—Dr. Menzel, of Trieste, relates in the *Wiener Medizinische Wochenschrift*, for September 13th, the case of a woman, aged 67, who was admitted into hospital under Dr. Lorenzutti. Her abdomen was as large as in the later months of pregnancy; the lower limbs were cedematous, the thoracic organs were sound, and an abundance of free fluid could be detected in the abdomen. The uterus was freely movable; the diagnosis made was, probable cirrhosis of the liver. Dyspnoea being urgent, Dr. Lorenzutti proceeded to perform paracentesis; no fluid, however, escaped, and, on introducing a catheter through the cannula, some gelatinous matter was removed. The case was then transferred to Dr. Menzel as one of ovarian cyst; and, on examination, he found the same conditions as above described. As the dyspnoea was still very severe, he made a puncture with a large trocar in the linea alba, but without removing anything, until, on applying aspiration by means of a syringe, he drew off a small quantity of structureless yellow gelatinous material, containing numerous lymphoid cells. The patient died on the following day; and, on *post mortem* examination, an enormous quantity of gelatinous fluid was found in the abdominal cavity. The peritoneum was covered with a layer of fibrine several lines thick, partly tough, partly softened. There were adhesions of the intestinal convolutions to each other and to the neighbouring parts, by means of an easily lacerable cellular tissue. A colloid cyst, as large as a man's head, sprang from the left ovary and lay on the uterus. The walls were very thin and easily lacerable. In this case, the symptoms came on gradually, and the woman at no time experienced any sudden sensation which would indicate the bursting of the cyst and the effusion of fluid into the peritoneum. Until a few days before her death, she was able to move about.

PUERPERAL AMAUROSIS.—F. Weber has examined into the correctness of the statement that amaurosis is a premonitory symptom of puerperal convulsions. Of four cases described by him in the *Berliner Klinische Wochenschrift* (Nos. 23 and 24), in one only the blindness preceded the convulsions; in two it followed the eclampsia, and in a fourth case there were no convulsions. He is therefore unable to connect the occurrence of the amaurosis with uræmic poisoning, and agrees with Arlt in ascribing it to a temporary overfilling of the vessels of the bulb of the eye. No ophthalmoscopic examination was made in any of the cases. In only one of the patients was albumen found in the urine. Three of the patients were from 30 to 42 years old; one, the only primipara, was 17 years of age. The duration of the amaurosis (which was always followed by complete restoration of sight) was respectively two, four, five, and fourteen days. In the treatment, Weber ascribes much benefit to the use of bromide of potassium.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 27TH, 1873.

THE PATHOLOGY OF INFLAMMATION.

An essay, entitled *New Researches on Inflammation*, from the pen of Professor Cohnheim, has recently appeared. He says that, since the publication of his doctrine of the passage of the red and white blood-corpuscles through the walls of the vessels, none of the still obscure processes attending inflammation have been rendered more clear, but the labours of others have placed the theory of inflammation on a broader basis. With regard to the assertion of Stricker and his disciples, that the fixed cellular elements (the connective tissue corpuscles) undergo such changes in inflammation as lead to their transformation into pus-corpuscles, he objects that no evidence of such change has been adduced.

The explanation of inflammation given by Cohnheim in his earlier works on the subject has been much contested. He assumed that the colourless corpuscles possessed spontaneous contractility, that the increase of the blood-pressure was due to the red corpuscles, that the dilatation of the walls of the vessels by these enlarged the stomata, and that herein lay the essential condition of extravasation. Hering and Schlawewsky, on the other hand, denied the existence of stomata and of spontaneous contractility, ascribing the phenomenon of extravasation to the slow filtration of a colloid substance through the walls of the vessels. To this Cohnheim replies, that this opinion is easily shown to be untenable, by placing an animal in the required conditions for mere physical transudation, when none of the phenomena which he has described will take place. Not a single red or white corpuscle passes through the walls of the vessels, in spite of the walls of the veins being lined with white corpuscles, and of the increased blood-pressure in the capillaries.

The subjects of which Cohnheim especially treats on the present occasion are:—1, inflammation by cauterisation; 2, inflammation by the application of croton oil; 3, traumatic keratitis; 4, inflammation from excessive cold and heat; 5, inflammation following removal of the integument.

To produce inflammation by cauterisation, Cohnheim used a stick of nitrate of silver, which he applied to a portion of the flat surface of a frog's tongue, taking care to avoid the large vessels. At once, there was not only rapid dilatation of the arteries and veins immediately affected by the caustic, with great distension of the capillaries, but the neighbouring vessels were similarly affected. The rapidity of the blood-current was enormously increased; and, after some time, the influence of the caustic on the walls of the vessels was manifested by the stagnation of the blood in them as far as the nearest collateral branches. An hour or two after the application of the caustic, narrowing of the vessels and reduction of the rapidity of the blood-current set in, first appearing in the vessels most remote from the seat of irritation, and gradually proceeding towards the centre; the irritated part, however, not fully regaining its normal condition, though, notwithstanding that the dilatation of the vessels continued, the blood-current was slower. After six or eight hours, when the eschar had become black, the blood

in the vessels in the immediate neighbourhood of the eschar was at a complete standstill, while the arteries, veins, and capillaries leading to the part were dilated, and the circulation in them was slow—the vessels in the other part of the tongue being in a normal state.

At this stage, partial dilatation commenced in the parts adjoining the eschar, and extravasation set in; first of the colourless corpuscles only from the veins and capillaries, then of the red corpuscles also, until the interspaces between the vessels were in great part filled. From two to four days after the cauterisation, there was a narrow zone of absolute stasis around the eschar; then a broader zone of stagnant capillaries, through the walls of which an enormous migration of red corpuscles was taking place; and beyond this, a still broader zone of capillaries, with a slow blood-current, and with an abundant migration of coloured and colourless corpuscles.

With all this, there was much migration from the dilated veins in the neighbourhood. This migration was naturally accompanied by abundant exudation; this, however, disappeared in a few days, as did also the white corpuscles, while the red ones remained longer.

The same appearances were produced by the application of common salt, acetic acid, caustic potash, nitric oxide of mercury, and other caustics. Experiments on the web of the frog's foot led to similar results, though less well defined.

Dr. Cohnheim dissents from the opinion of Lovén, that the dilatation of the vessels is a reflex phenomenon. He regards it as the direct result of the action of the agent applied on the walls of the vessels. The fact that the dilatation ceases in spite of the continued presence of the irritant, is opposed to Lovén's reflex theory; and this dilatation readily explains the increased rapidity of the blood-current. The more rapid narrowing of the arteries than of the veins he ascribes to the greater muscularity of the former, and to the chemical condition of the blood contained in them. The application of the actual cautery produced enormous hyperæmia, increased rapidity of the circulation, then narrowing of the arteries and veins, and retardation of the flow of blood; but there was no migration of corpuscles.

To explain the further results of cauterisation, Cohnheim refers to the change in the walls of the vessels; believing that the stuffing of the vessels in the part acted on, and the relative retardation of the current in the neighbourhood, may be referable to increased frictional resistance or to some other unknown condition. But, with regard to the extravasation, he cannot decide how the changes in the vascular walls act—whether it is that the vessel becomes porous, or only simply weakened; all that he puts forth as his opinion is, that somehow the vessels become incapable of retaining the blood contained in them.

Cohnheim regards as characteristic of inflammation produced by cauterisation, not the dilatation of the walls of the vessels with active hyperæmia (*Wallungshyperæmie*), but the second series of results. By acting on the scantily vascular membrana nictitans of the frog, as well as on the rabbit's ear, he has found that dilatation of the vessels is not an absolutely necessary preliminary to migration of the corpuscles.

In applying croton oil to the papillary surface of the frog's tongue, Cohnheim found that, when pure, or but slightly diluted, it acts as a caustic. It must, therefore, be much diluted (about one part in twenty-five or thirty), and washed off from five to ten minutes after being applied. The general results of its application are the same as those which follow the use of nitrate of silver, etc.:—adhesion of the corpuscles to the walls of the vessels, migration of colourless corpuscles from the veins, and of red corpuscles from the capillaries, and retardation of the blood-current. In the stagnant veins, the extravasation and transudation cease, and the red and the white corpuscles are collected in alternating masses. That here, also, the change in the vascular wall is the cause of extravasation, Cohnheim is convinced by the fact that, in the rabbit's ear, where the vessels are more protected than in the frog's

tongue, a longer time is required for the production of swelling and redness; and that the extravasation is greatest at the parts where the oil most readily penetrates the tissues. Another argument against the reflex theory is derived by him from the fact that inflammation can be readily induced by croton oil after division of the cervical sympathetic, and even when the rabbit's ear is tied down in such a way that only the median auricular artery and vein remain free.

The next subject of which Cohnheim treats, is traumatic keratitis. It is well known, that acute keratitis never occurs without injection of the conjunctival vessels; and, according to Cohnheim, this is not a reflex phenomenon. The introduction of a fine thread into the cornea of an animal, without penetrating its entire thickness, at first produces no change in the conjunctival vessels; after a time they become injected, at first partially, then generally; this injection reaches its maximum in a time varying from twenty-four to thirty-six hours, and remains for some time at the same degree of intensity, while the cornea becomes opaque from the border inwards, especially in the neighbourhood of the thread. If the thread be not removed or spontaneously thrown off, panophthalmitis may destroy the eye. In other cases, there is neither general nor circumscribed inflammation, such as is observed to follow the removal of a small portion of the cornea, or the careful application of lunar caustic to the actual cautery. And here, again, he finds evidence against the hypothesis of reflex action, inasmuch as the proceeding is not followed by dilatation of the conjunctival vessels.

The experiments with cold and heat were performed on rabbits, fastened in such a way that their ears were dependent, and could be immersed in hot or in cold fluids. The effect of cold varies with its degree. A temperature of -7 or -8 deg. (17.8 or 19.4 Fahr.) produced only slight oedema; while one of -18 deg. to -20 deg. cent. (0 deg. to -4 deg. Fahr.) gave rise to purulent exudation. The only difference between the inflammation produced by croton oil and that by cold was, that the purulent infiltration was greatest in the first where the oil could best reach, while in the latter it was more moderate, and the number of red corpuscles outside the vessels was smaller. A similar result followed the immersion of the ear in hot water. At a temperature of $46-53$ cent. (about 115 deg. to 127 deg. Fahr.) oedema appeared after a longer or shorter time, or more or less extravasation and migration, and sometimes also partial death of the part. This was when the ear was tied down so as to leave only the vessels free; when it was not tied, a higher temperature was required.

In summing up the results of his observation, Cohnheim expresses the opinion that the essence of inflammation are not to be found in either the dilatation of the vessels, in the increased rapidity of the flow of blood, or in the subsequent contraction of the vessels; but in some local change in the walls of the vessels of the affected part. What this change is, however, he is unable to say, as he has not succeeded in finding any structural alteration.

ARMY MEDICAL MATTERS.

ALTHOUGH the first keenness of discontent with recent military medical arrangements has passed away, we must not for one moment suppose that our brethren in the department find the new warrant work more smoothly as time goes on. The irritating and unnecessary alterations which have disfigured this document, and prevented its many excellent points from obtaining due recognition, only become more vexatious with further experience; and whatever savings have been effected, must be dearly bought at the expense of good will and contentment. Mr. Cardwell has, however, shown himself so willing to receive the numerous suggestions which have been laid before him, and to weigh with intelligent interest the temperately expressed grievances of those whose interests have been seriously compromised, that we have looked forward with some anxiety to see what the next stage in the proceedings may be. We, therefore, share to the fullest extent the

disappointment which is now being freely expressed around us, at the long delay in giving more tangible form to those hopes which were raised by the Secretary-at-War's parliamentary reply to Mr. Dalrymple. When once placed on the dusty shelf of official consideration, we know too well what the fate of public questions often is; for one event follows the other so rapidly in political action, that out of sight, or rather out of hearing, out of mind, becomes an over true motto.

But, on the other hand, we are fully alive to the difficulties of Mr. Cardwell's position. The labours of an exhausting session, in which army matters have come in for more than their due share of discussion, and where the keenness of debate was frequently sharpened by the acrimony of professional criticism, must now render repose very necessary, and suggest the postponement of anything but points of extreme importance. The Director-General has left town, most of the great Government offices are short-handed from the absence of their staff on leave, and last, but not least, the recent alterations in the Ministerial team must have rendered the pace of the coach somewhat slower for the time being; and in this we cannot but see hope. Several of the more objectionable features in the late warrant were evidently inserted with the view of economy, and their repeal will require the co-operation of the Minister who happens to be in charge of the national purse-strings. Now, it is well known, that money has been lately very "tight;" there has been a tendency to devise small savings without much regard for their popularity, and that the success of these devices has hardly been equal to their ingenuity. But the obstacle has now been removed from our path; and the broad and comprehensive views of the eminent statesman who now presides over our Exchequer, will be the best guarantee for the favourable consideration of any arguments affecting the welfare of great departments of the public service.

We are glad to note also, that, although the authorities have not intimated their intentions in any formal way, they have already practically conceded one or two points which pressed heavily on medical officers. We believe, for instance, that the claims of one or two men who had sunk large sums in uniform and necessary expenses, have lately been investigated, with a view to compensation; and, in addition to this, that the junior surgeons of cavalry have been, so far as possible, permitted to remain with their regiments. This evidence of a just and conciliatory spirit cannot fail to give satisfaction when it becomes more generally known.

A very instructive commentary on the feeling of the profession and the medical schools in this matter, has been furnished by the results of the recent entrance examination on the 11th inst. Although not all that could have been desired, this has been so far satisfactory, as showing that the pressure for admission into the service is now exceedingly feeble, and that competition has now quite ceased to be an element on these occasions. It is no secret that the appointments exceeded the number of candidates by at least three, and that, even out of this little band, several failed to come up to the necessary standard, and were requested to continue their studies before presenting themselves again. This presents a strange and significant contrast to the few years immediately following the famous warrant of 1858, when examinations were held once a fortnight, and when competition was invariably developed in the best and keenest sense of the word, notwithstanding the rapidly growing popularity of the Indian medical service. But the truth is, that the constant changes in the regulations of the department, the worrying way in which a concession granted one day is taken away the next, and the natural feeling of uncertainty which such a line of conduct begets, has slowly but surely alienated the faith of those whose duty it is to advise young men in the choice of their career. It is not that civil life has more inducements than formerly, but that a military career has less; and that those who have most experience in such matters, are very chary in recommending the best of students to don a red, rather than a black, coat. For we cannot disguise the fact that, progressive and valuable as the reconstruction of our service undoubtedly is, in so far as it involves unity and consolidation, the very nature of these changes destroys much of the social prestige and comfort of military medical life. Our sur-

geons can never again be so much part and parcel of their regiments as formerly; the home-like feeling, the good fellowship, and *esprit de corps*, will be broken up, and many of them will be doomed to spend long series of years in the general hospitals shortly to be organised at all our large stations. And, in the mean time, the evils of a transition period press heavily upon many, and more especially at Aldershot, which seems to have been specially affected by the shuffling of the cards which has followed the break-up of the regimental system. A considerable proportion of the recently promoted surgeons happened to be doing duty there, and of these a large number have been removed to other spheres of action. As a direct consequence of this, surgeons-major of twenty years' standing have been reduced to perform duties from which their seniority had long held them exempt; and, in addition to the more strictly professional work of hospital and out-patient practice, they are now compelled to attend all field-days, and even to take their turn in superintendence at ball-firing. The garrison is now so short-handed that leave has been necessarily refused to several medical officers who had every claim to demand this as a right, but for whose duties the weak state of the department was unable to make any provision. It may, of course, be argued that these are hitches inevitably resulting from any process of rearrangement, and that, when the new machine fairly gets into working order, much of the just ground for dissatisfaction will be removed. We hope it may be so. In the meantime, it is discouraging for those surgeons who have served their country for many hard years, to find themselves once more thrown back upon subordinate duties, and to see that, while their work becomes more onerous and monotonous, no corresponding recompense is made in any way. To their juniors we would only say, wait a little longer before taking any decisive step; and those who are looking forward to joining the service at no distant date, we can only strongly recommend to hold their hands, and abstain from entering the list of candidates until some concession has been made to the universally expressed voice of public opinion.

THE Social Science Congress will commence its proceedings at Norwich on Wednesday.

Dr. MOORE, of the Rajpootana Agency, has obtained the Government prize of 2,000 rupees for the best manual of Indian family medicine.

Mr. A. O. McKellar has been appointed resident assistant-surgeon to St. Thomas's Hospital, in the room of Mr. Wagstaffe, promoted to be full assistant-surgeon.

Dr. STELLWAG VON CARION, the eminent ophthalmologist, has been appointed to the additional professorship of Clinical Ophthalmic Surgery, instituted in the University of Vienna.

THE biennial festival of the London Hospital Medical College will be holden at the Albion Tavern, Aldersgate Street, on October 1st, Dr. Herbert Davies in the chair.

IN consequence of indisposition, Dr. Roberts will be unable to deliver the introductory lecture at University College. An address will be given by Mr. Erichsen.

THERE was no death from typhus fever in Liverpool during the week ending September 13th—an exemption which had not been reported since 1848.

THE *Druggist* of New York reports a death in July, in Providence, from Mrs. Winslow's Soothing Syrup; and rightly suggests that there should be some power to stop the sale of a poison which is sold under the false pretence that it is perfectly safe.

IT is stated in the Annual Report of the Birmingham General Hospital, that an appeal made to the working classes for contributions to the various medical charities in the town on the 15th of March, resulted in the handsome sum of £4,700 being raised simultaneously in the different manufactories.

DR. ELIZA WALKER has sent in her resignation of the office of house-surgeon to the Bristol Hospital for Women and Children, and the Committee have advertised for a successor. The grounds of resignation were personal.

MR. HOLMES, the Curator of the Pharmaceutical Society's Museum, is desirous of securing the good offices of British and foreign botanists to enable the Council to carry out their desire of forming a complete herbarium of medical plants, officinal or otherwise, from all parts of the globe.

THOMAS GODDARD, dairyman, and owner of ten cows, at Lovegrove Street, Old Kent Road, has been fined £20 at the Southwark Police Court for selling half a pint of milk and water to one of the sanitary officers of Camberwell as genuine milk. Mr. Partridge told the defendant that, if the milk had been adulterated with anything injurious to health, he should have fined him in the full penalty of £50.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE meeting of the British Pharmaceutical Conference at Bradford last week, under the presidency of Mr. H. B. Brady, F.C.S., F.L.S., was most successful. The papers were fully up to the ordinary standard. It has been decided to hold the conference next year in London, Mr. T. B. Groves of Weymouth being the President-elect.

THE THAMES MYSTERY AND THE ASSOCIATION OF LUNATICS.

DR. RAYNER, Medical Superintendent of the Hanwell Lunatic Asylum, writes to us regarding the latest theory, viz., "the Association of Escaped Criminal Lunatics," mentioned in the *Times*. He points out that the combination or association of lunatics in any such undertaking is quite opposed to all experience, and not worth consideration for a moment.

SEA-SICK BUT VALUABLE.

LATE last session, Mr. Goschen justified in Parliament his refusal to accept the resignation of one or more naval surgeons, on the ground that the service could not spare their valuable services. The naval medical service must, indeed, be singularly bare of candidates, and singularly unattractive to suitable men, if it cannot afford to spare the services of an officer whose life is rendered unbearable from sea-sickness. That, we are informed, was the unhappy predicament of their most urgent petitioner. It is very doubtful whether a "pressed man," so discommoded, can really be a great comfort and stay to his ship-mates; and the oppressive folly of resisting his prayer to be allowed the ordinary privilege of resignation, is not likely to make the service more popular in the schools, or volunteers more numerous.

DEATH OF M. NÉLATON.

M. NÉLATON died, after a long and painful illness, at his residence in Paris, on Sunday morning. He was a Norman by birth, and was born on June 17th, 1807. M. Nélaton, though favoured by fortune to an extent which would have enabled him to lead an independent life, adopted the medical profession, of which he was passionately fond. The natural sciences, particularly Botany, were his favourite pursuits. He commenced the study of medicine in 1830, and in 1836 received his degree of Doctor of Medicine of the Faculty of Paris. After this he was successively appointed hospital surgeon, then *agregé*, and in 1851 he became professor of Clinical Surgery. In 1867, owing to failing health, he resigned the latter appointment; but in consideration of the important services he had rendered to the science and art of surgery, the faculty conferred on him the title of honorary professor. In 1856, he was elected Member of the Academy of Medicine and in the Section of Surgery. In 1865, M. Nélaton was appointed surgeon to his late Majesty Napoleon III; in 1867, he was raised to the dignity of Grand Officer of the Legion Honour, and to that of Senator in 1868. Although he had already distinguished himself in surgery, yet his reputation may be said to have only really begun in connection with the extraction of the

bullet which was lodged in Garibaldi's foot. His reputation was further increased by his successful treatment of the malady to which the Prince Imperial was subject, and which threatened to make him a cripple for life. M. Nélaton designed a number of particular modes of surgical operation, and his name will ever be associated with the invention of the probe which he employed for the discovery of the bullet in Garibaldi's foot. M. Nélaton had not much time for writing, but what he did write was well done, and his works are now among the best authorities on pathological and operative surgery. A pupil of the celebrated Dupuytren, M. Nélaton almost equalled his master in reputation. He was a most prudent surgeon, a skillful operator, and an engaging professor; and although he was not very eloquent, yet his expositions were so clear and simple that he always had a full class of students and practitioners in the amphitheatre of the Hôpital des Cliniques, of which he was surgeon and professor. This was the last official post which he held.

THE MEDICAL ARRANGEMENTS FOR THE ASHANTEE WAR.

THE naval medical arrangements for the approaching African campaign are as yet in a formative state, especially as regards the number of extra surgeons who may be detailed for service with the expedition. There is already a full staff, even for Africa, of medical officers at the seat of war; and they will be at once reinforced if there should be any extraordinary amount of sickness, or if Sir Garnet Wolseley, on his arrival, should think it advisable. A very large quantity of quinine and other drugs, and a liberal provision of preserved meats, soups, "medical comforts," and luxuries of all descriptions for the sick, are being despatched. The *Simoom* is now on the coast as a hospital ship for the seamen and marines, and, as ships go, no better could have been selected for the purpose. The vessel has the ordinary complement of medical officers, and, in addition, Staff-Surgeon Irwin has been specially appointed. The *Victor Emmanuel* will serve as a floating hospital for the soldiers, and will be under the direction of the Army Medical Department. The Land Hospital Department is to be administered by narrow vehicles suited to the narrow tracks through the bush, the medicine-chests being fitted upon trucks, and stretchers upon wheels, such as were brought into notice during the late continental war, being substituted for the ordinary ambulance-wagons. A good deal has been said about the absurdity of sending five hundred tons of rice to Cape Coast. No doubt, in ordinary times rice is plentiful enough there; but lately, owing to the disturbed state of the country and the ravages of the Ashantees, cultivation has been neglected and crops destroyed. Discontented mercenaries are worse than useless; if we want our black auxiliaries to fight well, we must feed them regularly, and recent events show that it will not be safe to depend on the coast tribes for any supplies or assistance whatever.

THE CHOLERA IN GERMANY.

IN Berlin, from September 6th to 18th, 166 persons were attacked with cholera. From the outbreak of the epidemic to the latter date, there were 716 cases, of which 481 were fatal and 120 remained under treatment. On the 16th and 17th, there were 50 cases and 21 deaths. In Magdeburg, the disease has almost disappeared, after causing 1321 deaths in 2702 cases between July 16th and September 11th. The cholera has also decreased much in Königsberg, and has entirely disappeared in Dresden. Cases of cholera have appeared in a number of places in Upper Bavaria.

THE CHOLERA IN AUSTRIA.

THE daily returns of cases of cholera occurring in hospital and private practice in Vienna during the week from September 14th to 21st, show the following numbers for the several days: 43, 60, 56, 65, 41, 46, 54, 52. The sudden increase on three of these days was due to the continued importation, in spite of orders to the contrary, of cholera patients into the Wieden Hospital, and the consequent spread of the disease among twenty-one patients and attendants in the institution. Numerous cases

of diarrhoea had also appeared in the wards. The occurrence of cholera in the hospital was also favoured by the sudden cutting off of the ordinary water-supply without the knowledge of the managing body of the hospital, and the consequent use of the water of the hospital wells for drinking purposes. The reports from the provinces are, on the whole, more favourable. The disease shows itself in most places in a mild form, but still continues to spread, even into the mountainous districts.

THE EMPEROR OF AUSTRIA AND THE VIENNA "SANITÄTS-PAVILLON."

ON the 17th instant, his Majesty the Emperor of Austria visited the "Sanitäts-Pavillon" in the international exhibition in Vienna. He was received by the Archduke William, Dr. Wittelschöfer, Baron Königsbrunn, Dr. von Mosetig, and Dr. Folvaczny, and examined with great interest the collection of transport-wagons for the wounded, kitchen-wagons, etc., all which were explained to him. The inspection lasted more than an hour, and his Majesty expressed his great satisfaction at what he had seen.

MILK AND TYPHOID FEVER.

IN the current number of the *Glasgow Medical Journal*, Dr. Russell reports an outbreak of typhoid fever connected with milk-supply, which occurred in January, 1873, in Parkhead, a suburban district of Glasgow. He discovered that, of the total thirty-nine families affected, one dairyman supplied thirty-two. In the families supplied by this milk-vendor, several members were usually attacked; while, in those who derived their milk-supply from other sources, only isolated cases occurred. Is it not likely that many of these single cases contracted the fever casually by drinking the milk at the homes of the infected families, or in some such way? The fact that the fever was more severe in the families regularly supplied by the dairyman in question, would rather favour such a hypothesis; for it is not improbable, indeed it is most likely, that the disease would become intensified and more prolonged if those already infected were fed, as they no doubt were, by the poisoned article. The exact manner by which the milk became affected is, however, somewhat obscure, although the evidence afforded by Dr. Russell conclusively proves the milk to have been the cause of the mischief. During December and January, there was typhoid fever in the dairyman's house; but Dr. Russell does not offer any more probable explanation of the manner in which the poison gained admittance into the milk, than that the person who habitually milked the cows was the person who nursed the children. Such an explanation is, at least for many reasons, open to question. The milk being kept in the same dwelling, and in proximity to the infected persons, may possibly explain the milk-pollution; but even this is quite hypothetical in the present state of our knowledge.

THE CHOLERA IN PARIS.

ACCORDING to a return made by M. Delpsch to the Academy of Medicine on the 23rd instant, the number of deaths from cholera, from the 16th to the 22nd, both days included, was, in the civil hospitals, 47; in a military hospital, 1; at the homes of the patients, 55; total 103. Two deaths had occurred in the suburbs of St. Denis and Neuilly. In Havre, from August 1st to September 14th, the number of deaths from cholera was 169. In Rouen, from September 6th to 13th, there were 17 deaths in the town, 17 in the General Hospital, and 9 at the Hôtel Dieu. The number was 23 less than the preceding week. Several cases and deaths have occurred at Caen.

EPIDEMIC HOSPITAL AT PORTSEA.

THERE appears to be considerable ferment just now in Portsea on the erection of an infectious diseases hospital, which is being erected by Government adjoining the military hospital. At a meeting of the local authority, it was agreed to forward a memorial to the War Department, setting forth the great danger to health, and loss which would arise from the erection of the hospital in the neighbourhood of dwelling-houses, and praying the Department to select another site.

DEATH OF MR. DONALD DALRYMPLE, M.P.

We deeply regret to announce the sudden death of Mr. Donald Dalrymple, M.P., which took place on Saturday morning at Southampton. Mr. Dalrymple was a son of Mr. William Dalrymple, a surgeon of much eminence in Norwich, where he was born in 1814. His medical education was received in his native city, at Guy's Hospital, and in Paris. He was a fellow of the Royal College of Surgeons, and a licentiate of the Apothecaries' Society, and became a member of the College of Physicians of London in 1859. He practised many years in Norwich, and retired from the profession in 1863. He was sheriff of Norwich in 1860-61, and was a magistrate and Deputy Lieutenant of Norfolk, and chairman of the Governors of King Edward's Schools at Norwich. Mr. Dalrymple, who had announced his intention not to seek re-election for Bath, will be chiefly remembered in Parliament by his Habitual Drunkards Bill, which proposed to place habitual drunkards in a lunatic asylum. To this measure, and to the preparation of the evidence upon which it was based, Mr. Dalrymple devoted a large amount of time and labour, and undertook a personal investigation of the facts in America. The death of Mr. Dalrymple was so little expected, that he had himself fixed this week as the date at which it would be convenient for him to be present in London at a meeting of the State Medicine Qualification Committee of the British Medical Association. Mr. Dalrymple was always strongly in sympathy with all endeavours to protect medical interests in Parliament, and the Association has always been able to count upon his unwearied assistance and his judicious counsel. One of his last acts in Parliament was to move for the publication of the correspondence between the Secretary of State for War, Mr. Cardwell, and the Chairman of the Parliamentary Bills Committee, Mr. Hart, on the subject of the grievances of army medical officers. He had also placed on the paper, during last session, resolutions providing for the payment of Poor-law medical officers for sanitary services required by the Public Health Bill of Sir C. Adderley, and for payment for death certificates. Mr. Dalrymple had achieved a good position in the house, and was respected for his good sense and judgment, as well as for his uniformly courteous and considerate demeanour. His decease, lamentable in every respect, is greatly to be regretted as a heavy loss to medical interests, already but too scantily represented in Parliament.

TREATMENT OF THORACIC ANEURISM BY ELECTRO-PUNCTURE.

The patient with thoracic aneurism, whom Mr. Beck has been treating by means of electro-puncture, died on Tuesday night. He was suffering from a large and rapidly growing aneurism of the descending aorta, which not only caused bulging of the lower ribs on the left side, but had eroded several of them, and gave rise to a pulsating tumour just below the angle of the scapula. Mr. Beck first operated on the 2nd instant; he inserted the wires into the most prominent part of this tumour, and passed the current between them for about an hour and a quarter. The effect, as we stated in the JOURNAL of the 6th instant, was very encouraging; the tumour became decidedly firmer, the impulse less heaving, and the pain was greatly diminished; there was no irritation about the seat of puncture. This improvement lasted five or six days, when the impulse became stronger, and the tumour began again to enlarge. On the 10th, Mr. Beck repeated the operation; but this time the improvement was but slight, and of a still more fugitive character. A few days afterwards, it was found that some inflammation had been set up round one of the punctures; and, on pressure, a small quantity of pus escaped. The aneurism, though it never became absolutely diffused, now spread rapidly under the skin of the back, and it was found that the dulness was extending upwards over the left side of the chest; that the heart was being pushed more and more to the right, and the lung becoming compressed. The aneurism, as the necropsy showed, had burst into the left pleura. The patient gradually sank, and died of exhaustion. Before death, the skin round the inflamed puncture had become quite dark and gangrenous. The lesson from this case is, that treatment by electricity must be commenced at an early period of the disease, in order to give

any prospect of success. That it does induce extensive coagulation in the sac, seems evident; and it is very desirable that any method which gives reasonable hopes of curing what has hitherto been a necessarily fatal disease, should be thoroughly tried before being condemned.

DEATH OF M. COSTE.

OUR Paris correspondent reports to us the death of M. Coste, Professor at the College of France. He was born in 1807, and while yet very young, devoted himself to the study of the natural sciences, and particularly to that of embryogeny. At the Museum of Natural History, he so distinguished himself, that he was appointed Professor of Physiology at the College of France. In 1851, a vacancy having occurred at the Academy of Sciences by the death of M. de Blainville, M. Coste was elected member in his place, and shortly after nominated Chevalier of the Legion of Honour. Latterly, M. Coste occupied himself a good deal in the art of increasing the number of fish, which were rapidly disappearing in the rivers of France. He endeavoured to replace the fish by means of artificial fecundation. In consequence of his report on the result of this proceeding, a model *piscine* was founded at Huningue, which in two years enabled him to furnish the Rhine with 600,000 salmon and trout, and he was afterwards charged with filling the artificial lake of the Bois de Boulogne with fish. In 1862, M. Coste was appointed Inspector-General of the river and coast fisheries, and in that capacity was enabled to carry out with success his researches on ostreiculture, which on the coast of Brittany and Lochmariaker has contributed much to the prosperity of the populations. Among the works published by M. Coste, we may mention his practical instructions in pisciculture, and his travels of exploration on the coasts of France and Italy. After having enriched the natural sciences, M. Coste himself died almost in poverty.

SICK ALLOWANCE TO MEDICAL MEN.

A MEETING was held at Birmingham, on the 18th instant, in connection with the British Provident Life and Guarantee Association (Limited). It was stated that medical men could, for £10 a-year, insure, in case of sickness, £5 a-week for thirteen weeks, the half of that amount for the next thirteen weeks, and the fourth of that amount for the remainder of the time the sickness lasted. It was alleged that £10,000 would be set apart for sick allowance; but the Chairman of the Association was apparently not able at the meeting to guarantee that the sick fund would be sufficiently protected.

PAUPER MEDICAL RELIEF AT GUILDFORD.

AT a recent meeting of the Guildford Board of Guardians, the question of the propriety or not of permitting the relieving officer to countermand, if he thought fit, the orders of the medical officer, came under discussion. The case actually under consideration was that of a child who was receiving meat and milk by the medical officer's orders; but it appears that the rest of the family were in distress, and appropriated the food in large measure. The relieving officer accordingly stopped he supply, apparently without informing the medical officer; hence the protest of the latter gentleman, who complained of numerous acts of interference of the same nature. The view expressed by the Chairman was to the effect that the order was merely an expression of opinion on the part of the medical officer, and that the power of granting relief rested with the guardians. This is no doubt literally true, but we think that to place in the relieving officer's hands the power of interfering in any way whatever with the directions of the medical officer without first consulting that officer, is altogether a mischievous procedure.

THE PROTECTION OF INFANT LIFE.

IN Paris, the Society for the Protection of Infant Life is advancing in popular esteem as rapidly as its best friends could wish. The number of members has increased within the last few years so much, that the committee is anxious to extend the action of the society to the provinces, where the mortality among infants is terribly significant of the treatment which they receive. Out of the 1,682 infants committed to its care

during the past year, the society only lost 60, or less than 4 per cent., while the mortality among infants put out to nurse in the provinces was about 60 per cent. The secretary, in his report, cites an instance of one woman who had "lost" as many as twenty-seven of the children entrusted to her care; while her daughter, who has evidently profited by the maternal example, can already boast of having lost nearly a dozen. The work of the society is carried out in a very practical spirit, and the medical inspectors employed by them are required to furnish a monthly report concerning the children under their surveillance. The mothers of the children are able to obtain every information as to their health and progress by applying at the offices of the society in Paris; but it is clear that the maternal instinct is not very strong, when we are told that of the 1,682 infants under their care, 952 were never inquired after throughout the year.

HAIRY MEN.

THE anthropological interest attaching to *homines hirsuti*, always very considerable, has much increased since the observations of Darwin. Two remarkable examples—Russians, father and son—have lately arrived in Berlin, and have been the subject of a lecture by Professor Virchow, of which we find an abstract in the *Edinburgh Medical Journal*. They are peculiarly remarkable in being edentulous. They are not hairy men in the ordinary acceptation of the term, but more resemble some of the monkey-tribe (the Diana monkey, Cuxio, etc.); while their edentulous condition carries them yet lower in the animal scale. The eldest is a man aged over 55, Andrian by name, said to be the son of a Russian soldier from the district of Kostroma. He was born during the period of service of his reputed father, and has no resemblance to him, to his mother, or to a brother and sister whom he possesses. To escape the unkindness of his fellow-villagers, Andrian fled to the woods, where he lived in a cave, and was much given to drunkenness; even yet he is said to live chiefly on *sauerkraut* and *schnapps*, but his mental condition, which is truly none of the sharpest, does not seem to have suffered, and he is, on the whole, of a kindly disposition and affectionate to his son and those about him. Andrian was married, and had two children, who died young; one of these was a girl resembling her father; but of the other, a boy, nothing can be ascertained. Fedor, the boy, exhibited with him, is three years old, and comes from the same village; he is said to be Andrian's son, born in concubinage; and it is most probable that this is the case, as it would be singular were two such creatures to originate independently in one small village. The peculiarity of these individuals is, that they have an excessive growth of hair upon one particular part of the body, namely, the face and neck; on the body and lower extremities there is also a stronger growth of hair, and particularly on the back and arms of the child there are sundry patches of .15 to .24 inch in diameter, covered with soft yellowish white hair, .12 to .24 inch long. Andrian himself has on his body isolated patches strewn, but not thickly, with hair 1½ to 2 inches long. But all this is trifling and subordinate compared with the hair-growth on the face, to which attention is mainly directed. Andrian has only the left eye-tooth in the upper jaw; Virchow has not stated how many teeth are in his lower jaw, but from the context it is improbable that he has more than his son, viz., four incisors. The son has no teeth in the upper jaw, hardly any alveolar process, and the upper lip is very narrow, so that the upper jaw appears depressed; the father presents the same appearance. It is somewhat singular that a similar family has long been known to exist at Ava, and was first described by Crawford in 1829, and since then by Beigel. Three generations of this family are now known to exist. The grandfather, Shwe-Maon, had a daughter, Maphoon, and she again a son; all of whom present precisely the same peculiarities as in the family of Andrian, not only as to the growth of hair, but also as to the teeth. The grandfather has in the upper jaw only four incisors, in the lower jaw four incisors and one eye-tooth, and these teeth did not appear till he was twenty years of age. Maphoon has only four incisors in each jaw; the eye-teeth and molars are wholly wanting; the first two incisors

appeared during her second year. The peculiarity of the hairiness in these individuals is of the same type as in Andrian and his son, in whom every part of the face and neck, usually only covered with lanugo, is covered with long hair, the very eyelids being so covered, the eyelashes being normal, while flowing locks come out of both nostrils, and also out of the meatus auditorius externus. At first sight, the occurrence of two such families in two such distinct parts of the world seems to point them out as "missing links"—as the unreformed descendants of an earlier race of man. And our thoughts are carried back to the Ainos or hairy Kuriles, who are believed to be the remains of the aborigines of Japan, and who now inhabit the northern parts of the island of Jesso, and the southern part of the island of Saghalien. At first these aborigines were stated to be as hairy as our wild men; but from more accurate information, obtained by the Berlin Anthropological Society through the German resident, Herr Von Brandt, accompanied by numerous photographs and Japanese pictures of these Ainos, and from an examination of a skull recently obtained through Privy Councillor Von Pelican, Virchow is able to state with positiveness that, neither in respect of the formation of hair nor in regard to the teeth, have the Ainos any analogy with the Russian or Burmese hairy men. The Ainos are certainly hairier on the chest and extremities than the nations around them, but there is nothing peculiar in the distribution of the hair, and the males have hair only on the typical parts peculiar to man. There is not a shadow of a race-connexion between the Ainos and the Russian hairy men, and only the most prurient imagination could connect the latter with the Burmese family. No doubt, careful breeding could raise a new race of men from this accidental variety, just as various new races of domestic animals, dogs for instance, have been propagated from accidental varieties. Virchow, however, believes that the peculiarities belonging to the Russian as well as to the Burmese families depend upon peculiarities of innervation depending upon accidental congenital abnormalities in the trigeminus, within whose domain all these peculiarities present themselves, only to be ascertained by careful dissection.

THE SANITARY CONDITION OF BRENTFORD.

THE daily papers have been, during the past fortnight, the arena of a public conflict between the sanitary authorities, and others, of Brentford and Ealing, regarding the insanitary and rather sloppy condition of that district. On Wednesday, Dr. Williams, the medical officer of health, presented a report to the guardians, in which he states that the fever which has for the last few weeks prevailed in Brentford is scarlatina. The greater number of the cases have been comparatively mild; some, however, have presented severe symptoms. The present outbreak of scarlet fever commenced during the second week in August. The source of the contagion in the first case cannot be satisfactorily traced. Up to the time of the report, forty cases had come under the treatment of the several medical men of the town. There had been one death from albuminuria and dropsy. There remained eleven cases under medical care. The sanitary condition of the houses is particularly unfavourable. In front is the filthy ditch known as the Ealing watercourse; at the back is a faulty drain. There has not been any outbreak of typhus or typhoid fever. It was unanimously resolved by the local authorities to ask for an immediate Government inquiry.

THE WATER-SUPPLY OF LONDON.

MR. FRANK BOLTON, the water examiner of the Local Government Board, has reported on the condition of the water supplied during August by the metropolitan water companies. The state of the river at Hampton, Moulsey, and Sunbury, where the intake of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, and East London Companies is situated, was good from the 1st to the 26th, when it became turbid and slightly coloured, and it remained more or less in this condition for the remainder of the month. The highest flood state of the river at Hampton during the month was four inches above the (six feet) summer level, and the lowest two inches below. At Ditton (where the Chelsea Company now alone draws its supply)

the state of the water in the river was good during the whole of the month. The highest state of the flood-water at this place was seven inches, and the lowest was at summer level. The highest temperature of the water during the month was 70 degs., and the lowest 63 degs., while the highest temperature of the air at the same place was 77 degs., and the lowest 55 degs. These observations were made daily at 9 A.M. The Lambeth Company are carrying out extensions and improvements in their works. At Moulsey, the reservoirs are being constructed to contain 110,000,000 to 120,000,000 gallons of water, with pumping engines to fill them to a level of 12 feet above the river. When full, these reservoirs will contain ten or twelve days' winter supply to the district, and during the months when floods prevail (by selecting the times of pumping when the river-water is in the best condition) a good deal of flood-water will be allowed to pass. Several days' subsidence will thus be provided, and consequently an improvement in the water should take place. The water from the reservoirs will run by gravitation through the new conduit to the filters at Ditton, which are in course of extension by the conversion of the two reservoirs there into filter-beds, which, when finished, will increase the present filtering surface by 70 per cent.

THE HEALTH OF MARGATE.

THE *Builder* has an interesting and complimentary little note on this subject. Of course, Margate, visited as it is by thousands and tens of thousands of our London citizens in the summer of every succeeding year, has a mortality in large excess of its own. Many a poor soul, when, alas! all hope of life is waning, hastens to its waters, and to inhale the fresh sea breezes which bring renewed life and vigour to others, or gone; and in this manner the mortality of Margate—more, it is stated, than that of many other sea-side resorts—is augmented to a considerable degree. The following statement will speak for itself:—1870, total population, 13,600; deaths from all causes—visitors, 98, inhabitants, 217; 1871, total population, 14,000; deaths from all causes—visitors, 82, inhabitants, 230; 1872, total population, 14,555; deaths from all causes—visitors, 93, inhabitants, 208. And this shows a total of 928 deaths from all causes in a population of about 42,155, or 22 to 1,000; but of the inhabitants only 655, which is an average of 15.7 per 1,000 for the three years of 1870, 1871, and 1872; and, as the normal average for England during the three years in question was 17 deaths per 1,000 inhabitants, it must be admitted that the resident population of Margate are exceptionally healthy. These facts, which we believe are unquestionable, must be of considerable interest, not only to the 14,000 residents of the district, but to the hosts of summer visitors; for, with a resident normal population of about 14,500 only, we find the returns of the South-Eastern Railway Company show no fewer than 898,093 passengers to have arrived and departed by that line alone within the year 1872, and it is to be remembered that the London, Chatham, and Dover Railway conveys at least an equal number to the town, while the number of visitors landing and embarking from the pier and jetty by the steamboats (of which there are sometimes five in the course of the day), from London only, have reached the high figure of 3,000 and upwards in single day of July this year. It has been estimated that a census taken, about the 10th of August, in any average year, would show the population of Margate at the height of her season to be 44,000 or 45,000, or more than three times the winter average. Few watering-places on the entire English coast can at all compare with Margate in her great popularity as a resort both for health and amusement, and she has well justified the legend on her corporation mace, "*Porta maris, portus salutis*."

THE AUSTRIAN MEDICAL ASSOCIATION.

THE first meeting of this Association was held in the Academy of Sciences in Vienna on the 9th, 10th, and 11th instant, under the presidency of Professor Ritter of Prague; Professors Leidesdorf of Vienna and Hussa of Klagenfurth being vice-presidents. About one hundred and fifty members of the profession from various parts of the empire were present. The constitution of the Society and its functions formed the

sole topic of discussion, and the following resolutions were agreed on. 1. Representative bodies of legally qualified members of the profession are to be formed in each of the provinces of the empire. 2. They are to be constituted of delegates chosen by the various electoral colleges. 3. The electoral colleges are to be formed, according to the circumstances of the provinces, either of the local and district societies, or of collegiate bodies of practitioners (*Doctoren-Collegium* and *Landes Aerztecologium*) combined for the purpose of sending delegates. 4. Every practitioner in a district shall become a member of the electoral college on declaring his intention. Those societies only can act as electoral colleges in which admission is free to all medical practitioners. A member can vote only in his own society. 5. The professional representative bodies may, if they see fit, appoint committees for the management of their affairs in the chief towns of the provinces. The local societies are each to meet at least once a year for the transaction of business, which is to include, *inter alia*, the formation and regulation of a fund for aged and infirm practitioners and their widows, and the consideration of subjects relating to public health and forensic medicine. The committees are to meet once monthly. The proceedings ended with a dinner, at which nearly all who had attended the meeting were present.

DEATH OF A MEDICAL MAN FROM CHLOROFORM.

WE regret to record the death from the use of chloroform of Mr. James Cruickshanks, of Ayton, Berwickshire, on the 9th instant. Mr. Cruickshanks had practised in Ayton about nine years; and his active and temperate habits, and general good health, seemed to promise a long and successful career. Unfortunately, he had for several years habituated himself to the occasional use of chloroform for the relief of fatigue or other uneasiness, although seriously warned of the danger of the practice by a medical friend. On the morning of the 10th instant, he was found in his ordinary dress, lying on his face across his bed, cold and stiff, death having evidently taken place at least twelve hours previously. A two-ounce bottle, still containing about two drachms of chloroform, was beside him. Owing to his wife having been confined only two days before, he was occupying a separate room; otherwise, his condition might have been detected in time to save his life. It appears that he had retired to this room shortly after dinner on the 9th; and the contents of the stomach having been vomited, his face lay in a mass of undigested food, which, in his state of insensibility, produced suffocation. He was about 45 years of age.

LONDON DIETARY.

DR. BERNAYS has made his first quarterly report as analyst to the Camberwell vestry. One sample of mustard was so old as to be useless, one sample of milk was of "extraordinary goodness," a second of fair average quality, a third very deteriorated by the removal of cream. Of six samples of butter, one was a mixture of butters of very inferior quality. Sixty-one samples of bread were analysed. In seven only was there any alum, in one there was not enough to weigh, and in another there was not much more. He suggests half a pound of salt being mixed with a hundred pounds of bread to preserve it, and adds, "The children of many poor people obtain all the salt they take as food either in their bread or in their butter. If, then, the salt be almost absent from bread, an unhealthy condition of the body must be engendered."

CHINCHONA IN INDIA.

A PARLIAMENTARY paper on the progress of India in 1872, gives information respecting the cultivation of the chinchona plant, which was introduced into the hill districts in 1860. The total expenditure of the experiment was £61,719. There are now 2,639,285 plants in the Government plantations on the Neilgherry Hills alone, without counting those of private planters in this and other districts. The largest trees are 30½ feet high, and over 3 feet in girth round the trunk. The area covered by the plantations amounts to 950 acres, and is being largely added to

every year. The bark under cultivation is stated to be much richer in quinine and other alkaloids than the wild bark of South America. During last year 7,295 lbs. of excellent bark were sold in the London market, while 65,688 lbs. were supplied to the local manufactory. This year 20,000 lbs. will be sent home. The alkaloid is manufactured on the spot in an exceedingly cheap form for the use of local medical stores, and hundreds of fever patients are thus annually cured. The object of providing an abundant supply of the febrifuge at a price within the means of the population at large is rapidly being realised.

IPCACUANHA IN INDIA.

Dr. G. HENDERSON, of the Royal Botanical Gardens, Calcutta, reports that there are now 7,000 plants either at Rugbee or Calcutta, and that no difficulty apparently exists in propagating the plant artificially. Experiments are being made to determine under what conditions it will flourish in the open air.

CANADA MEDICAL ASSOCIATION.

THE Medical Association of Canada appears to have been happily successful in its sixth annual meeting of 1873. It was held early in August, at St. John, New Brunswick, under the presidency of Dr. James Grant, M.P. for the county of Russell. The attendance was very considerable. The members have elected as their next place of meeting the Falls of Niagara. This will offer opportunities to members of the profession of shaking hands across the water, and thereby fulfil the social aims of an association of medical men.

SCOTLAND.

MR. YOUNG, President of the Trustees of the Andersonian Institution in Glasgow, has presented one thousand volumes on Chemistry to the library.

DR. J. BATTY TUKE has been appointed by the patron, Dr. Morison, to the Morisonian Lectureship on Mental Diseases in the Royal College of Physicians of Edinburgh.

THE NURSING AT THE ABERDEEN ROYAL INFIRMARY.

It is gratifying to us to observe that the managers of the Aberdeen Royal Infirmary, notwithstanding a somewhat temporary and very obstinate determination to shut their eyes for a time to the disagreeable truths, do at length show, in some measure at least, a desire of reform. It has been our lot to have to record many of the imperfections of this institution, and to point out the vagaries of the management. Perhaps the indigenous caution may have postponed many reforms clearly demanded, and which were as plainly, sooner or later, to be of necessity carried out; but it must be admitted that the managers have lately shown considerable energy in carrying out schemes, whatever may have been their character. They have secured additional fever accommodation; they have promised not to make the infirmary so much of a fever hospital as before; they have purchased a house as a convalescent hospital, and they now propose to put the hospital nursing on a better footing. The proposals of the committee are to afford better sleeping accommodation for the nurses, and to pay them more liberally, and they are to be relieved from the menial duties which have been hitherto demanded of them, while a head-nurse is to be engaged to superintend their work. We hope to hear of still further improvements in the administration of the institution.

HOW EPIDEMICS ARE SPREAD.

THE Medical Officer of Health for Glasgow, in a report for the fortnight ending September 18th, says that during that period 37 cases of small-pox were known to the department, and of these, 35 were removed to hospital. During the previous fortnight there were only 14 cases. This sudden increase was entirely local. On August 29th, the Registrar's returns showed that a death from small-pox had been registered as having occurred at 14, X Street. On inquiry, it was found

that the deceased—a boy aged 9, and unvaccinated—had sickened on August 19th; that, as his mother worked out, he had been taken to friends at 49, Y Street during the early part of his illness; but that finally he died at 14, X Street on August 28th, in a house of one apartment, ticketed for and occupied by five. The neighbours were led to believe that the disease was measles. No qualified medical man saw the boy during life. 14, X Street leads to a small court surrounded with houses, containing sixty-six families. The subsequent development of the disease was as follows, house to house visitation being carried out daily, and the patients being removed as soon as the disease could be certified. Between September 4th and 11th, 19 families were infected and 22 persons attacked. Of these, thirteen families were from 14, X Street (the court in which the boy died), three from 43, and 49, Y Street (where the boy lay for a time), and two were respectively the barber's and the dairyman's of the district. Five deaths have occurred among those persons. As the secondary cases can hardly have propagated a tertiary series, having been removed sharply, it may be hoped that this little outbreak has been stamped out. Had this case been reported to the Sanitary Department, the boy would have been removed, and all the mischief could have been prevented.

IRELAND.

THE Portumna Board of Guardians have increased the salary of the medical officer of the Portumna Dispensary District from £100 to £120 per annum.

PRESENTATION TO DR. THOMAS P. EDWARDS.

THE friends of this gentleman, who has, from ill-health, resigned the position of medical officer to the Ballyboggin Dispensary District, have lately presented him with a beautifully illuminated address, and a purse containing eighty sovereigns, as a token of esteem for his high professional attainments, and kind, generous disposition. The Board of Guardians of the Edenderry Union have also allowed Dr. Edwards a pension, equivalent to two-thirds of his salary, as a retiring allowance.

CHOLERA EPIDEMIC.

ON the 4th inst., at the weekly meeting of the guardians of the South Dublin Union, it was unanimously resolved, that a floating hospital should be constructed for the reception of such patients as may arrive in Dublin, suffering from cholera. The proposed hospital has been agreed to be constructed for £975, and will give ample accommodation for sixteen patients.

CASE OF ATHETOSIS.

AN example of this rare affection, first described by Dr. Hammond, of New York, has lately been published by Dr. H. S. Purdon, of Belfast. The chief characteristic of this disease consists in an inability to keep the fingers and toes from continued motion; even during sleep these movements are present, more or less. Dr. Purdon's patient is a tailor, aged 54, who suffers from weakness, and trembling of both upper and lower extremities, the agitation being similar to that observed in paralysis agitans, but slower, the thumb and little finger being chiefly involved; there is no pain, and the muscles are well developed. The prognosis is unfavourable, and Dr. Hammond does not think that any treatment is of service. As regards morbid anatomy, nothing is known, as a *post mortem* examination has never been made; it is probable, however, that the corpus striatum and the optic thalamus are the seat of this affection.

MORTALITY OF FLAX-WORKERS.

A GOOD deal of valuable information on the sanitary condition of the flax-workers of Belfast has lately been published by Mr. C. Purdon, certifying surgeon. They number about 28,000, and Mr. Purdon divides the principal causes of death from which they are liable into five classes—viz., 1. Inflammatory diseases; 2. Zymotic; 3. Phthisis and diseases of the

respiratory organs; 4. Neurotic affections; and 5. Decay of nature. It is apparent from his returns that phthisis and the allied diseases are far more fatal to the flax operatives than to the artisan and labouring classes, the proportion being as three to two; whilst zymotic diseases affect both classes almost equally. The flax-workers are divided into nine varieties, differing in the nature of their employment, and in the affections consequent on each variety of occupation. In the department called the "preparing room", consumption carries off annually 31 per 1000 of the workers. The "hacklers" come next, their mortality averaging 11 per 1000. The annual death-rate of the spinners and weavers amounts to 9.5 and 9 per 1000 respectively; while the machine boys, winders, and warpers exhibit a mortality of 6, 5.3, and 5 per 1000. The special mortality of these flax-workers may be traced to a considerable extent, over and above the unhealthy nature of their occupation, to causes arising from three sources. These are, firstly, the early age at which the children are put to work; secondly, neglect of sanitary law; and thirdly, insufficiency and inferiority of diet and clothing. Mr. Purdon proposes as remedies for this condition of things, that no "half-timers" should be allowed to work before they are ten years of age; that no person under fifteen should be permitted to be occupied in the unhealthy processes (the machine and preparing rooms); that these rooms should be properly ventilated, and that the wearing of the Baker respirator for the workers should be compulsory.

LUDWIG SCHOOL OF MEDICINE.

At a late meeting of the proprietors of this institution, Dr. Arthur W. Foot, physician to the Meath Hospital, was appointed lecturer on the practice of medicine in the vacancy caused by the death of the late Dr. Henry Eames. The appointment is one which will give almost universal satisfaction, as Dr. Foot has laboured long and zealously in the cause of medical science.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Chemical and Therapeutical Properties of Propylamine: Thesis of Dr. Hamdy: Opinions of Dr. Sée: Physiological Experiments. The Cholera in Paris.

YOU have so frequently noticed the chemical and therapeutic properties of propylamine in the JOURNAL, that I feel loath to say anything more about it; but, as there has been an excellent thesis just written on the subject, and as the knowledge of the therapeutic action of this substance itself is as yet in its infancy, I trust that these two circumstances combined will be sufficient apology for bringing it once more to the notice of your readers. This I do in the form of a short review of a thesis by Dr. Aissa Hamdy, an Egyptian by birth, who has just been admitted into the Faculty of Medicine of Paris.

The work under notice is entitled *Etude Clinique et Physiologique sur la Propylamine et la Triméthylamine*, and consists of a serious and impartial inquiry into the nature of the above substances, which he pursued on clinical and scientific grounds. According to Dr. Hamdy, the propylamine of commerce is an alkaline solution prepared from herring-brine, and is composed principally of ammonia and triméthylamine, with very little propylamine in it. After having gone through the distinctive characters of propylamine, he passes in review the clinical experiments performed with this substance, since those published by Awénarius and M. Dujardin-Beaumetz, who in France was one of the first who called attention to it. The author then relates the results of seven cases of rheumatism, treated either with the simple or the hydrochlorate of propylamine, the notes of which he took in Professor Béhier's ward in the Hôtel-Dieu, as well as in the wards of M. Roger at the Children's Hospital. These observations prove, says the author, that, if the new medicament is not a specific in articular rheumatism, it promptly relieves the pain and fever, and thus finally effects a cure. But this number, I fear, is not sufficient for sceptics to form any grounds of argument in favour of this substance; and I heard Professor Sée, a well-known therapist, remark at a public lecture lately that the cures announced by the partisans of propylamine were those that would have been effected by any other treatment, or even without any

treatment at all, as, from what he could learn from the observations published, the propylamine was generally administered about the middle or near the decline of the attack. To form a just estimate, continued M. Sée, of the real value of any new remedy, it should always be given at the very commencement of a disease; and it is only after having observed its effects in some hundreds of cases, and not in sixes and sevens, that one might be better able to assign it a place in therapeutics. This applies particularly to rheumatism and to all affections that run a certain definite course which is natural to them. In short, after a close study of the chemical, physiological, and clinical properties of propylamine, M. Sée found that its effects are due to the presence of ammonia, in which case it would be far better to adopt the latter than the filthy stuff extracted from herring-brine.

But, to return to M. Hamdy's thesis, I may bring to notice his own researches on the mode of action in the first place of the propylamine of commerce, and then of the hydrochlorates of triméthylamine and of the genuine propylamine, which he prosecuted by experiments on animals. His first experiments were performed with compound solutions extracted from herring-brine, as it was the only product then procurable, to which were attributed the properties so well known. With the propylamine of commerce, procured from different sources, M. Hamdy experimented on frogs, birds, and mammals (rabbits, dogs, mice, etc.); and the result was always the same. In his experiments as to the local action on the different histological elements, he discovered an irritating action on the one hand, and an anæsthetic effect on the other, which he sums up as follows.

1. The diffusible action of propylamine on the nervous and muscular system, whether on frogs, birds, or mammals, is manifested by a double period of excitement and of collapse. Shortly after the hypodermic injection of propylamine, and still less after inhalation of this substance, the animal becomes excited, and soon afterwards he is seized with trembling, muscular contractions, followed by true convulsions, indicating a superexcitation of the bulbo-spinal centre. These convulsions in a bird extend so far as to cause death by the spasmodic stoppage of the respiration; in frogs, the convulsions are manifested by short and irregular twitches. The central motor ganglia participate in this superexcitation, as, simultaneously with the general convulsions, a very strong contraction of the capillary vessels and a temporary increase in the tension of the arteries are observed. The period of collapse which follows the convulsions is constituted in the highest degree by the complete abolition of voluntary movements, whether respiratory or reflex; the heart at the same time continuing to beat. This paralysis of the movements of locomotion and of respiration is due principally to the loss of excitability of the bulbo-spinal centre, for it is produced at a period when the motor nerves and muscles have not as yet lost their activity. Later on, the motor nerves entirely lost the property of electric excitability, whilst the muscles have retained their irritability, and the heart continued to beat. Another modification of the nervous system noticed by M. Hamdy is the tendency manifested by all the animals to drowsiness, extending in birds to profound sleep; from which, however, they are readily roused, owing to the great excitability which the animals experienced at the commencement of "propylamism". From this M. Hamdy drew the following deduction, which, in a chemical point of view, he considers of the highest importance; namely, that the doses of propylamine, even the most feeble, which are unable to raise the bulbo-spinal centre to the degree of convulsive excitability, are sufficient to excite the central vaso-motor ganglions, and to produce a constriction of the capillary vessels, and thus efface the articular swellings (fluxions) of rheumatic subjects, and reduce the febrile combustion, which thus becomes one of the predominant curative effects of propylamine. Another important effect observed by M. Hamdy is the marked fall of the temperature in the rabbit experimented on—a fact which, compared with the diminution of urea in the urine of man already shown by MM. Fargier-Lagrange, Bouchard, etc., places beyond all doubt the diminution of organic combustion under the influence of propylamine, and explains in some degree its antipyretic effects.

II. In M. Hamdy's experiments with the hydrochlorate of triméthylamine on mice, birds, and frogs, he obtained effects identical with those furnished by the propylamine of commerce, which he summarises as follows. 1. Superexcitability of the central motor nerves, bulbo-spinal as well as ganglionic, as manifested by a greater activity, trembling and convulsions, extending to spasmodic asphyxia in birds and mammals; by vomiting and alvine evacuations; finally, by contraction of the capillary arterioles, carried to the arrest of the peripheric circulation and the exsanguineous state of the capillary vessels at a period where the heart just begins to slacken. 2. The species of somnolence and of sluggish voluntary movements which exists from the commencement; the loss of excitability of the sensitivo-motor centres at the end;

later on, paralysis of motor nerves; and, finally, stoppage of the heart's action by the paralysis of the nervous ganglionic centres, followed by that of muscles. The phenomena observed in the physiological experiments on animals present a striking analogy with the results observed in man, which would admit of a rational interpretation, and which are fully described at page 108 of M. Hamdy's thesis.

As the cholera was assuming the character of an epidemic in Paris, the Academy of Medicine, the Government, and the Municipal Council, are all up in arms to meet the dire enemy. While the former body are discussing the different means to be adopted in the treatment of this terrible affection, the Government and Municipal Council are taking measures to destroy it in the germ, or prevent its incursion in this city. The official returns furnished by the Prefect of Police are from motives of economy (false economy), no longer supplied to the medical men as in the days of yore. They are very defective, as they do not show the number of persons attacked with the disease; for surely it would be more comforting for the public to know that the disease is not always fatal, but, to a certain extent, curable. The disease has evidently been on the decline, if one may judge from the number of admissions into the hospitals, though, I am sorry to say, I am not able to give the statement in figures. This fall is attributed to the change in the weather, which, from having been dry and almost tropical, has become rainy and cold.

ASSOCIATION INTELLIGENCE.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch will be held at the Town Hall, Oundle, at 2 P.M., on Tuesday, the 30th instant. Luncheon will be kindly provided by D. Webster Tomlinson, Esq., at his house, previously.

Gentlemen who intend to read papers or communications are requested to forward the titles of the same as early as convenient to Dr. Bryan, President.

W. MOXON, *Honorary Secretary.*

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting will be held at the Lion Hotel, Shrewsbury, on Monday, October 6th, at 1 P.M.; S. BETTON GWYNN, Esq., in the chair.

Dinner will be served at 3 P.M. for the convenience of the country members. Tickets, exclusive of wine, 7s. 6d. Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. Wright of Liverpool, will be provided as usual.

Gentlemen intending to read papers, etc., will oblige by communicating the titles of such, before the 29th instant, to

JUKES STYRAE, *Honorary Secretary.*

Shrewsbury, September 12th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will be held on Tuesday, October 7th, at Petworth; HENRY BOXALL, Esq., of Wisborough Green, in the Chair.

Any gentleman desirous of reading a paper or bringing forward cases is requested to communicate forthwith with the Honorary Secretary, in order that a notice of the same may be inserted in the circular convening the meeting.

WM. J. HARRIS, *Hon. Sec.*

Worthing, Sept. 15th, 1873.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting of this Branch will be held in the Museum, Shrewsbury, on Wednesday, October 8th, at two o'clock; DR. GREVILLE THURSFIELD, President-elect.

Papers will be read, etc.

The Dinner will take place at the George Hotel at four o'clock. Members may introduce friends.

SAMUEL WOOD, *Hon. Secretary.*

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE forty-ninth meeting was held at the Royal Sea-Bathing Infirmary, Margate, on Thursday, September 4th.

Papers.—The following papers were read.

1. Dr. ROWE (Margate) read an interesting account of a case of extensive Caries of both Feet occurring in a lady, which was successfully treated by rest alone without surgical operation. The treatment extended over eight years, mostly by the seaside. The disease occurred after typhoid followed by scarlatina. The case was brought forward with the object of showing what Nature can do when she is not interfered with. Plaster casts of the feet and ankles were exhibited.

2. Mr. TREVES (Margate) related the history of a successful case of Ovariectomy. The patient, a married woman, aged 35, mother of eight children (the youngest twelve months old), dated the commencement of her illness four years back, when she strained her side in lifting a heavy washing shawl. After her last confinement, her abdomen remained enlarged, and she noticed a swelling commencing in the left side. The operation was performed on January 5th, 1873, after one tapping three weeks previously. The tumour was multilocular, and contained about four pints of thick grumous fluid. The wall of the cyst was adherent to the great omentum. The pedicle was transfixed, tied in two portions by hempen ligature, and returned. The wound was closed by hare-lip pins, and the abdomen covered with thick layers of cotton-wool. The wound healed by first intention, and the case made good progress for the first week, when she had some amount of pelvic cellulitis with tympanitic distension of the abdomen. These symptoms continued for a week, but gradually abated. The woman was convalescent about three weeks after the operation. The interesting points in the case were the large amount of ascitic fluid and the favourable union of the wound protected by the cotton-wool.—A discussion took place as to whether a woman had not a better chance of recovery from ovariectomy in the country and in her home than in a general hospital.

The wards of the Infirmary were then visited, and Mr. Thornton made some observations upon the more interesting cases under his care.

Dinner.—The members afterwards dined together at the Cliftonville Hotel.

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Bristol Library and Institution, on Thursday, July 10th; T. G. STOCKWELL, Esq., President, in the chair. Forty-five members were present.

Mr. STOCKWELL, after a few remarks, resigned the chair to EDWARD LONG FOX, M.D., President for 1873-74, who read an address on Pathology and Therapeutics.

Mr. FRICHARD proposed, and Mr. H. ALFORD seconded, "That the thanks of this meeting be given to Dr. Fox for his admirable address."

Representatives in the General Council.—The following members were then chosen to represent the Board on the General Council of the Association: J. S. Bartrum, Esq.; F. Brittan, M.D.; J. G. Davey, M.D.; E. L. Fox, M.D.; H. Marshall, M.D.; J. K. Spender, M.D.; C. Steele, Esq.; T. G. Stockwell, Esq.; R. N. Sone, Esq.

Mr. BOARD read the following annual report of the Branch.

Report of Council.—In presenting the thirty second annual report of this Branch, your Council feel much satisfaction in being able to inform you, that during the past session of 1872-73, sixteen new members have been added to this Branch, whilst eight only have been lost. Two members have left the neighbourhood, four have resigned membership, and one has been removed from the list.

It is the painful duty of your Council to report the death of Mr. W. F. Morgan, an old and very highly respected member of this Association. The Bristol Royal Infirmary has lost one of its most valuable consulting officers, and one whose opinion carried the greatest weight with every member of the staff; and his more intimate acquaintances have lost a steadfast, straightforward, and genuine friend. Mr. Morgan had not long retired from the Council of this Branch, of which he had been a member for many years. The number of members belonging to this Branch is now 198—an increase of eight members over last year.

Eighteen papers have been read during the session (including several on "the Administration of Anæsthetics"), which have given rise to long and interesting discussions. The attendance at the meetings has been uniformly large.

Your secretaries have attended several of the meetings of the Committee of Council of the Association, and wish to draw your attention to the fact, that it is proposed to increase the number of the elected members of that Committee from ten to twenty: this will be brought before the general meeting of the Association. It was proposed, also, to recommend that the Branch secretaries should no longer be members of the Committee of Council; but this was negatived by a large majority of the meeting, which at the same time expressed a wish that the Branch secretaries would always attend if possible.

The financial condition of the Branch continues most satisfactory, there

being a balance in hand of £23 6s. 6d. Your Council recommend that the subscription of three guineas to the Medical Benevolent Fund be repeated as heretofore.

The scrutineers appointed to examine the voting-papers, report the following members elected to fill the vacancies in the local councils. For Bath—Dr. Falconer, and Messrs. Stone, Mason, and Harper; and for Bristol—Dr. Brittan, Dr. Martyn, and Messrs. Prichard, Steele, and Leonard.

It was proposed by Mr. MASON, and seconded by Mr. PRICHARD, "That this report be adopted."

An amendment to increase the subscription to the British Medical Benevolent Fund was proposed by Dr. GOURLAY, but was negatived. The report was adopted.

President-elect.—It was proposed by Dr. BRITTAN, and seconded by Dr. GOURLAY, "That F. Mason, Esq., be President-elect." The proposal was carried by acclamation.

Votes of Thanks.—Dr. DAVEY proposed, Mr. STONE seconded, and it was resolved, "That the thanks of the Branch are due, and are hereby offered, to the retiring President, T. G. Stockwell, Esq., and to the Council for their admirable arrangements during the past year."—It was proposed by Dr. SPENDER, seconded by Dr. T. E. CLARK, and carried, "That the best thanks of the Branch are due to Messrs. Fowler and Board for their valuable services as Secretaries, and that they be asked to continue in office."

New Members.—Dr. Caddy, of H.M.S. *Dadalus*, was proposed as a member of the Association and of this Branch by Mr. C. LEONARD, and seconded by Mr. BOARD.

A Vote of Thanks to the Committee of the Institution for the use of the room closed the proceedings.

REPORTS OF SOCIETIES.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, JUNE 28TH, 1873.

LOMBE ATTHILL, M.D., Vice-President in the Chair.

Intra-uterine Porte-Cautique.—The CHAIRMAN exhibited an instrument which he had devised for facilitating the application of caustics to the interior of the uterus. It consists of a platinum cannula, two inches in length, of the size of a No. 8 catheter at the distal end, but enlarged to that of a No. 10 catheter at the other. To this cannula is adapted a curved stilette ending in a bulb, which fills the cannula accurately. The cannula being inserted into the cavity of the uterus, the stilette is withdrawn, and a long uterine probe, carrying the caustic, is inserted through the cannula. By this method the caustic can be applied to any part of the interior of the uterus, without being weakened by contact with any other part which it is not desirable to touch, or by admixture with any discharge from the mucous membrane.

Fibrous Tumour of the Uterus.—Dr. CRANNY showed the uterus of a patient, aged 47, mother of five children. Five months before admission to the Rotunda Hospital she had suffered from severe uterine hæmorrhage. The uterus bulged slightly forward, and a tumour could be felt, through the patulous os, springing from the posterior wall. This tumour was partly removed by operation, and nitric acid was applied, but the patient sank. The growth was fibrous, with a membranous capsule, and was apparently of epithelial formation.

The Diagnosis and Treatment of Uterine Polypi.—Dr. THOMAS MORE MADDEN read a long and interesting paper on this subject. The tumours which the author had observed varied in form and size from the small, gelatinous, pea-shaped polypus, growing near the os, to the intra-uterine fibroid, as large as the mature foetal head, attached to the fundus uteri. There were three classes of uterine polypi, namely, mucous, fibroid, and cystic. The first were developed from the uterine mucous membrane or from the glands of the cervix; the second, formed within the pseudo-mucous substance of the uterus, were interstitial, subperitoneal, or submucous. The distinction made between intra-uterine tumours and intrauterine polypi was quite untenable. The most prominent symptoms of uterine polypus were menorrhagia or persistent metrorrhagia, and a profuse or foetid leucorrhœa; enlargement of the uterus, with a sense of weight and fulness in the pelvis, and a varying degree of pain; symptoms of pressure on the bladder or rectum, resulting from uterine displacement; lastly, general anæmia, cardiac palpitation, anorexia, dyspepsia, and irritability of stomach with retching. The treatment of uterine polypi fell under two heads, surgical or curative, and medical or palliative. The revival of the former, or surgical method (for it was at least three hundred years old, dating from the time of

Ambroise Paré), was due to M. Levret, who, in 1749, used the ligature for the removal of uterine polypi from the vagina. In 1829, Dr. Gooch modified and improved this method, but it remained imperfect until Sir James Simpson suggested the dilatation of the os and cervix uteri by means of sponge-tents preparatory to the performance of the operation. Even this procedure was not novel; for Philip Barrough, in the *Methode of Physick*, published in 1639, had proposed dilatation of the mouth of the womb. Dr. Madden described the various methods employed at present for the removal of these growths. The medical treatment of cases of this disease had not kept pace with the improvements in its surgical treatment. Among serviceable remedies, the iodides and bromides of ammonium and potassium, and iodine in small doses, might be mentioned, a lengthened course being required. Savage's method of iodine injection into the uterine cavity, and brushing over the tumour with a solution of iodine in glycerine (ten or twelve grains in an ounce), were useful. To relieve uterine congestion, tepid or cold local injections were to be commended, administered by means of Dr. Graily Hewitt's vaginal douche, or by a new syringe which Dr. Madden exhibited to the Society. The symptoms of uterine polypi, in cases where operative measures were inadmissible, might disappear under a course at a suitable iodated or bromated spa, such as Kreuznach, Wildegg, or Schinznach. Details of twelve cases of the affection were then given, and the specimens, in many cases, were shown to the society.—The CHAIRMAN advocated the surgical treatment of uterine polypi in most cases. Dilatation of the os uteri, for the purpose of applying medicinal agents, was to be avoided as far as possible, the consequences often being severe.—Dr. KIDD could not place much reliance in the treatment of these tumours, either by medicated waters or by chloride of calcium and other remedies.—After some remarks from Dr. H. KENNEDY, Dr. CHURCHILL spoke of the dangerous consequences which sometimes resulted from the introduction of even a single sea-tangle tent.—Dr. MORE MADDEN replied.

Case of Ovarian Dropsy.—Dr. J. R. KIRKPATRICK read a paper for Dr. BRUNKER, of Dundalk, giving an account of the case of a woman, aged 40, who was admitted into the Louth County Infirmary, on July 29th, 1872, with an enormously enlarged abdomen. The circumference was sixty-three inches. Her general health was good, and a year before the patient had given birth, at full term, to a child, although the swelling was even then of old standing. Paracentesis was performed, and ten gallons of a dark oily fluid were drawn off. After the reduction of the swelling, no tumour could be felt. The abdomen refilled, and, in June 1873, had reached the same size as before. Tapping was again performed, and about the same quantity of a fluid, similar to that drawn off eleven months before, was evacuated. The patient continued in good health.

CORRESPONDENCE.

INFLAMMATION.

SIR,—May I ask you to extend to me the privilege you have granted to Dr. A. P. Stewart, and allow me to supplement by a few remarks the kind mention of my name by Dr. Parkes in his Address in Medicine?

The transit of blood-cells through the coats of the vessels in inflammation is only a small part of a very great matter, viz., the return of vascular tissue to its embryonic condition for purposes of reparation.

It is in a vast assemblage of cells that the first blood-vessels of the human embryo are established. It is in an assemblage of similar cells that new vascular tissue, whether for reparation or as a morbid product of inflammation, is formed.

Many years ago, it was stated by Gulliver that he found in blood of young embryos colourless cells very nearly as numerous as the red ones. About the same time, I found in the blood of inflamed parts many more colourless cells than could be seen in a like quantity of blood taken from other parts of the same person at the same time; showing that, over the area of inflammation, blood itself reverts to a quasi-embryonic condition.

In embryo growth, blood, minus its red corpuscles, is transferred from circulation to the coats of the vessels; likewise in inflammation. In reparation and inflammation we have the same material and the same kind of phenomena as in the embryo body, with this difference: in the embryo there is development and no retrogression; in reparation and inflammation retrogression precedes new growth, inasmuch as fully formed blood-vessels revert to the embryo state before new vessels can join on to them.

The phenomena witnessed—suppuration and granulation—are desirable or undesirable, physiological or pathological, according to a

variety of contingent conditions; desirable and physiological, when reparation is thereby accomplished; undesirable and pathological, when an irremovable obstacle lies behind, making the action chronic, impoverishing, or abnormal, contaminating the blood. Retrogradation of vascular tissue to its embryonic state is the law of reparation. For the application of this doctrine to various parenchymatous degenerations, I refer the reader to my published works.

I am, etc.,

WILLIAM ADDISON.

Brighton, September 8th, 1873.

CRAIGENTINNY MEADOWS, NEAR EDINBURGH.

SIR,—With regard to your quotation in last week's JOURNAL touching the above heading, I beg leave to state that, when in Edinburgh a few months ago, I took the trouble of specially visiting and examining the Craigentenny meadows, so well known with reference to their extraordinary production of meadow-grass, in consequence of the sewage-irrigation system so perfectly applied in that locality.

The following facts will go to prove the fallacy of the notion that the milk of cattle fed on sewage-farms, or any grass irrigated by sewage, or the gas or effluvia proceeding from it, will produce or create typhoid fever in those who drink the milk, or inhale the effluvia.

Since my visit to the meadows, I was amused at the exaggerated and very incorrect account that Dr. Letheby gives of them in his *Sewage Question*, page 25. He observes: "These meadows have been long notorious as the most filthy and offensive plots of cultivated ground in Great Britain." The reverse of this is actually the case, which is proved by the fact that sheep (which are very particular about what they eat) fed on them for one quarter in the year, and grow fat in an unusually short time. Surely Dr. Letheby has never seen them, or his remarks would be more consistent with the real facts—that the Craigentenny meadows are the best paying, best kept, and perhaps the best managed, irrigation meadows or fields in Great Britain.

The Craigentenny Farm consists of 200 imperial acres, close by the sea-shore, with farm-offices and dwelling-house in the centre. The following notes I took last April from the farmer, who rents a great part of the meadows at an average of £30 per acre yearly, and who keeps and lives on the profits of a large dairy. The cows are fed the whole year on this sewage-grass, the milk of which is daily consumed in Edinburgh; and up to this date, so far as is known, has not produced any bad effects. Farmer: "I have lived here six years; I have six children, varying from the age of 3 to 20; I keep twenty milk cows that I feed always with the meadow-grass. I, with my family, drink the milk daily; the extra supply I send twice a day to Edinburgh. I never felt the smell or effluvia doing myself or my family any harm; none of us have been ill for six years, except my youngest boy, who had last year a slight attack of diarrhoea." I may add that my visit to these meadows was in a sanitary point of view, and that I was perfectly satisfied, after a rather searching investigation of every part of them, and also the immediate neighbourhood, that fever has not been more prevalent in that locality since the irrigation system has been adopted than it was previously to its use.

I am, etc.,

ANGUS MACKINTOSH, M.D.,

Medical Officer of Health, Chesterfield.

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

- ABINGDON UNION—Medical Officer for District No. 3: £110 per annum.
 BETHLEM HOSPITAL—Two resident Medical Students. Applications, 11th October, to A. M. Jeaffreson, Clerk.
 FIGGLESWADE QUEEN'S HOSPITAL—Medical Officer for the Sandy District.
 BIRMINGHAM: QUEEN'S HOSPITAL—Physician.
 BRISTOL GENERAL HOSPITAL—Physician.
 BRISTOL HOSPITAL FOR WOMEN AND CHILDREN—House Surgeon: £120 per annum, furnished rooms, etc. Applications, 7th October.
 BRISTOL ROYAL INFIRMARY—Assistant-Surgeon.
 BRISTON, STREATHAM, and HERNE HILL DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 6th October, to Secretary, at Dispensary, Water Lane, Brixton.
 BROMPTON HOSPITAL FOR CONSUMPTION, etc.—Two Resident Clinical Assistants. Applications, 6th October.
 BURY ST. EDMUND'S—Public Analyst: £10 10s. per annum; 10s. per analysis for the first fifty, and 5s. per analysis beyond. Applications, 20th October, to Wm. Salmon, Town Clerk.
 BURY ST. EDMUND'S URBAN SANITARY DISTRICT—Medical Officer of Health: £12 10s. for one year.
 CHELTENHAM URBAN SANITARY DISTRICT—Medical Officer of Health: £300 per annum for three years. Applications, 11th October, to E. T. Brydges.

CHESTERTON UNION—Medical Officer and Public Vaccinator for District No. 4: £50 per annum and fees. Applications, 2nd October, to F. Barlow, Clerk to Guardians, Cambridge.

CONWAY UNION—Medical Officer for the Creuddyn District: £50 per annum, and fees. Applications, October 2nd, to William Hughes, Clerk to Guardians.

CORK DISTRICT LUNATIC ASYLUM—Assistant Medical Officer.

CUMBERLAND INFIRMARY, Carlisle—House-Surgeon: £60 per annum.

ENNISCORTHY UNION—Medical Officer and Public Vaccinator for the Killan Dispensary District: £90 per annum, and fees. Applications to Thomas Redmond, Hon. Sec.

GLOUCESTER COUNTY LUNATIC ASYLUM—Junior Assistant Medical Officer: £80 per annum, board, etc. Applications, 6th October, to the Committee of Visitors.

HAMADRYAD INFIRMARY SHIP, Cardiff—Resident Assistant Medical Officer.

HUDDERSFIELD—Public Analyst. Applications, 1st October, to Joseph Batley, Town Clerk.

HARTLEPOOL HOSPITAL and DISPENSARY—House-Surgeon and Secretary: £80 per annum, board, etc. Applications, Oct. 1st, to F. H. Drake, Sec.

JERVIS STREET CHARITABLE INFIRMARY, Dublin—Surgeon. Applications, 2nd October, to John M'Cann, Secretary.

KANTURK UNION, co. Cork—Apothecary for the Newmarket Dispensary: £50 per annum. Applications, 5th October, to George Smith, Hon. Sec., The Cottage, Newmarket.

KILMATHOMAS UNION, co. Waterford—Medical Officer for the Workhouse: £50 per annum. Applications, 30th instant, to Wm. Hunt, Clerk to Union.

LONGFORD UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Drumlish Dispensary District: £100 per annum, and fees. Applications, 7th October, to John Reynolds, Hon. Sec.

LOUTH DISPENSARY—Physician.

MANCHESTER ROYAL EYE HOSPITAL—Three additional Medical Officers. Applications, 15th October, to P. Goldschmidt, Chairman of the Board.

MERTHYR TYDFIL URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum for two years. Applications, 30th inst., to Thomas Williams, Clerk to the Authority.

MIDDLETON UNION, co. Cork—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Middleton No. 2 Dispensary District. Applications, 4th October, to Thomas S. Coppinger, Honorary Secretary.

MORPETH DISPENSARY—House-Surgeon: £120 per annum, furnished house, etc. Applications, 1st Oct., to D. F. Wilson, Hon. Sec.

NARBERTH UNION—Medical Officer for District No. 3: £45 per annum, and fees. Applications, Oct. 4th, to John Thomas, Clerk to Guardians.

NEWPORT UNION, co. Mayo—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballycroy Division of the Achill Dispensary District: £100 per annum and fees. Applications, 7th October, to John Carr, Hon. Sec. Murelan, Achill.

NEATH UNION—Medical Officers and Public Vaccinators for the Llangonoyd, first Eastern and second Eastern Districts: £15 and £25 per annum and fees, respectively. Applications, 29th instant, to Howel Cuthbertson, Clerk to Guardians.

OSWESTRY DISPENSARY—Surgeon. Applications, 3rd October.

ROYAL LONDON OPHTHALMIC HOSPITAL—Curator; Assistant-Surgeon. Applications, 30th inst., to Robert J. Newstead, Secretary.

ROYAL CORNWALL INFIRMARY, Truro—House-Surgeon, Secretary, and Dispenser: £120 per annum, and increase of £10 per annum for three years. Applications, 8th October, to Robert Tweedy, Treasurer.

ROYAL HOSPITAL FOR SICK CHILDREN, Edinburgh—Assistant to the Extra Physicians: £52 10s. per annum. Applications, 4th October, to John Henry, Honorary Secretary.

STOKE-UPON-TRENT Parish—Medical Officer for the Bucknall District: £20 per annum.

WAYLAND RURAL SANITARY DISTRICT—Medical Officer of Health: £50 for one year. Applications, 30th instant, to E. Cubitt, Bintry, near East Dereham.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- BROWN, George, Esq., appointed Demonstrator of Anatomy at the Westminster Hospital Medical School, in place of Mr. Ramsay, who has resigned.
 DRENCHFIELD, Julius, M.D., appointed Honorary Assistant-Physician to the Manchester Royal Infirmary, vice C. Currie Ritchie, M.D., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

MILLER.—On September 22nd, at 15, Shandwick Place, Edinburgh, the wife of A. G. Miller, M.D., F.R.C.S.E., of a daughter.

MARRIAGE.

GIBBES—TIMMON.—On September 17th, at St. John's Church, Napier, by the Rev. J. Townsend, Incumbent, John Murray Gibbes, M.B., son of the Rev. Dr. Gibbes, Rector of Bradstone, Devon, and grandson of the late Sir George Gibbes, of Bath, to Florence Hyde, third daughter of the late J. J. Timmon, M.D., of Liverpool.

DEATHS.

JUCKES, Charles, Esq., Surgeon, late of Manchester, at Shifnal, aged 55, on September 8th.
 LYFORD, Henry G., M.D., late of Winchester, at Brighton, on September 10th.

VACCINATION GRATUITY.—Mr. Robert M. Mann of Manchester has received from the Local Government Board £104 11s., granted as extra remuneration for successful vaccinations in his district.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 3 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 7.30 P.M. Meeting of Council. 8 P.M. Dr. Wiltshire, "On the Common Skin-Diseases of Children"; Dr. Tilt, "On the Diagnosis of Subacute Ovaritis"; and other papers.—Royal Microscopical Society, 8 P.M. Mr. F. Kitton, "A Description of some New Species of Diatomacea"; Dr. Maddox, "On an Organism found in Freshpond Water".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. J. W. MOORE (Dublin).—It shall be attended to on the Editor's return.

DR. BRADBURY (Cambridge).—The matter shall be attended to.

THE Annual Edition for 1873-74, of Mr. Herbert Fry's *Royal Guide to the London Charities* has just been published. The fact of its having reached an eleventh edition is sufficient evidence of its usefulness, without any further commendation from us.

By an accident, Dr. Whitmore's letter in last week's JOURNAL was dated August 16th, instead of September 16th.

MR. A. WILSON (Newmills).—Dr. J. Ford Anderson, of Buckland Crescent, Belsize Park, London, will no doubt be glad to afford information regarding the working of provident dispensaries. A small work on Cottage Hospitals, by Dr. Horace Swete, has been published.

ARNOLD AND SONS' SPECIALITIES.

SIR,—In reply to Mr. Greenway's letter in to-day's JOURNAL, I beg most positively to state that my method of fixing the hinged splints on my apparatus is *not* after his "own suggestion." Sufficient proof of this will be to refer to my letter in the *Medical Times and Gazette* of July 18th, 1873, before Mr. Greenway's letter of July 19th, a week later. Messrs. Arnold and Sons have for a very long time made my apparatus in both forms, for the reason that the one without *travelling* side-splints can be made at a cheaper rate. I cannot imagine that Mr. Greenway can pack his "limb-suspender" in such a small space as my apparatus; viz., about three inches in depth of box, unless he carries out some new suggestion.

I will not, however, enlarge on a description of the conveniences of my apparatus, suffice it to say that in a letter I received a short time ago from Messrs. Arnold and Sons, they state: "We already have more orders for your cradles than we can possibly make for some short time to come, and we find them very much liked and approved by nearly all who have seen them."

I shall not again, sir, write on this subject, as much has already been written in other journals, and has proved, I think, more as an advertisement than otherwise.

I am, etc.,

Martock, Somerset, September 20th, 1873.

SUGGESTION AS TO CHLOROFORM.

SIR,—Dr. Fothergill has shown, in his admirable prize-essay, that digitalis exerts a tonic action on the heart; and that, under its use, the contraction of the ventricles becomes complete, and the pulse steadier, firmer, and less compressible. It has occurred to me that it might be useful, as a prophylactic, to give a moderate dose of tincture of digitalis and brandy before administering chloroform, especially in cases of deficient expulsive power of the heart's walls, in which anaesthesia, though attended with risk, is nevertheless practised as, on the whole, the best for the patient. Many surgeons give a little brandy before using

chloroform, and I think, as a rule, with good effect; but I believe this is the first time that digitalis has been recommended. Deaths from chloroform have occurred too frequently of late, and this is my reason for submitting the above simple suggestion to my professional brethren. It will no doubt startle those of your readers who still cling to the old doctrine of the action of digitalis.

I am, etc., JOHN ROSE, M.D.

Chesterfield, September 24th, 1873.

GIVING ANÆSTHETICS TO HORSES.

SIR,—I was with Dr. C. B. Taylor when he extracted the lens from a horse's eye, as mentioned in your last. I administered the chloroform for him, and I may say that there was not the least difficulty in doing so. The animal was thrown for the operation, and was under the influence of the chloroform in about three minutes. No untoward symptoms presented themselves, and the animal shortly recovered itself, but was very unsteady on its legs at first, and fell once or twice, which must be provided for by a groom having a bundle of straw ready to throw down for it to fall upon. I feel sure if anaesthetics were more frequently given to horses the range of practicable operations would be largely increased, and much suffering saved to the animals.

I am, etc., BEVERLEY R. MORRIS, M.D.

Nottingham, Sept. 22nd.

THE EXAMINATION OF BLOOD-STAINS.

SIR,—Allow me to mention, as a note to your article on this subject last week, that there is nothing in the report of Messrs. Mialhe and others which has not been well known in England for several years. The chemical test by peroxide of hydrogen (or rather antozone) was discovered by Dr. Day of Geelong in 1867, and fully examined by Dr. A. S. Taylor, who gave a full account of his experiments in the *Guy's Hospital Reports* of the following year. See also the *BRITISH MEDICAL JOURNAL*, September 5th, 1868. The spectrum examination of blood has been fully worked out for the purpose of testing by Mr. Sorby, and described by him in several journals, particularly in a paper in the *Monthly Microscopical Journal* for July 1871.

I am, etc., T. SCATTERGOOD.

THE INDUCTION OF UTERINE ACTION.

SIR,—I did not see Dr. Radford's note in your issue of the 13th inst. until Saturday last, the 20th. I am obliged to Dr. Radford for setting me right as to the originator of the large uterine galvanic conductor, and regret I should not have given him the credit he deserved for inventing so valuable an instrument. As to the induction of premature labour by galvanism, if I understand Dr. Radford rightly, he only claims to have *suggested* that application of it; and I still think Mr. Varley (for I claim no merit for myself) entitled to our thanks, not only for altering and perfecting the instrument, but also for putting the plan into successful action, and certainly without any knowledge that the idea had originally been suggested by Dr. Radford.

I am, etc., BEVERLEY R. MORRIS, M.D.

Nottingham, Sept. 22nd.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Ipswich Journal; The Manchester Guardian; The Aberdeen Daily Free Press; The Bath Express; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Bolton Chronicle, September 20th; The North Devon Herald, Sept. 18th; The Bolton Chronicle, Sept. 20th; The Merthyr Express, Sept. 20th; The Wolverhampton Chronicle, Sept. 17th; The South Durham and Cleveland Mercury, August 16th; Australian and New Zealand Gazette, September 20th; The Advertiser, September 20th; The Constitution, September 23rd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Hugh Miller, Glasgow; Dr. Mac Cormac, Belfast; Mr. Roebuck, Leeds; Mr. R. M. Mann, Manchester; Mr. Christopher Jeaffreson, Newcastle-on-Tyne; Mr. George Chater, Tenby, South Wales; Dr. Duncan, Dublin; Dr. Andrew Clark, London; Our Dublin Correspondent; Mr. John K. Spender, Bath; Mr. Bradbury, Cambridge; Mr. Greenslade, Martock; The Rev. J. D. Martin, Marketfield; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Surgeon Major Barry, Twickenham; Our Paris Correspondent; Mr. Scattergood, Leeds; Dr. Rutherford, Bradford; Dr. Norris, Nottingham; Dr. James Totherick, Wolverhampton; Mr. C. Stevens, London; Dr. Alfred Hill, Birmingham; The Medical Officers of the Charing Cross Hospital; Dr. Skinner, Liverpool; Dr. Yellowlees, Bridgend; Dr. Kelly, Taunton; Our Dublin Correspondent; Mr. H. T. Browrigg, Dublin; Dr. P. W. MacLagan, Berwick; Mr. Walter Rivington, London; Mr. Hensman, London; Dr. Durant, Ipswich; Dr. Steele, Dublin; Mr. F. Morrison, London; Mr. Shadeggut, Doncaster; Dr. Tripe, London; Mr. W. R. Hughes, Liverpool; Mr. F. Mason, London; Dr. Phillips, London; Mr. Thomas Partridge, Stroud; Dr. Rumsey, Cheltenham; Mr. J. Skrimshire, Holt; Dr. Wilson Fox, Kendal; Mrs. Lyford, Brighton; Mr. J. Davies, Bath; Mr. T. Clarke, London; Mr. A. Arnold, London; Mr. Palmer, London; Dr. J. Rose, Chesterfield; The Editor of the *Athenæum*; Mr. George Brown, London; Dr. Macdonald, Hexham; Dr. Ball, Spalding; Dr. Mackintosh, Chesterfield; Dr. Elliott, Carlisle; Mr. J. W. Langmore, London; The Editor of the *Daily Telegraph*, London; Mr. Callender, London; Mr. A. Wilson, Newmills; Mr. J. H. Wathen, Fishguard; The Principal and Medical Professors of King's College, London; Mr. S. A. Lane, London; Dr. Rayner, Hanwell; etc.

BOOKS, ETC., RECEIVED.

Annual Report of the Committee of the Manchester and Salford Sanitary Association. Manchester: 1873.
Report of the Sanitary Condition of Neath. By E. R. Morgan. 1873.
The Nature of Zymotic Diseases; with Rules for the Management of Epidemics. By F. Fox. London: 1873.

AN ADDRESS ON RECENT ADVANCES IN ANATOMY AND PHYSIOLOGY.

*Delivered in the Subsection of Anatomy and Physiology at the
Annual Meeting of the British Association, 1873.*

By WILLIAM RUTHERFORD, M.D.,

Professor of Physiology in King's College; President of the Subsection; etc.

GENTLEMEN,—In addressing you upon the subjects of Anatomy and Physiology, I would invite your attention to some of the features which characterise these departments of Biology at this present time, and to some recent advances in Physiology, the consideration of which you will find to be possessed of deep interest and importance.

Anatomy, dealing as it does merely with the structure of living things, is a far simpler subject than Physiology, whose province it is to ascertain and to explain their actions. It was not a difficult thing to handle such instruments as a knife and forceps, and with their aid to ascertain the coarser structure of the body. Accordingly, the naked eye anatomy of man has been fully investigated; and although the same cannot be said of that of many of the lower animals, it is nevertheless, as far as this kind of inquiry is concerned, a mere question of time as regards its completion. But minute or microscopic anatomy is in a different position. Requiring, as it does, the microscope for its pursuit, it could not make satisfactory progress until this instrument had been brought to some degree of perfection. Doubtless, much advantage is still to be derived from improvements in the construction of this instrument; but probably most of the future advances in our knowledge of the structure of the tissues and organs of the body may be expected to result from the application of new methods of preparing the tissues for examination with such microscopes as we now have at our disposal. This expectation naturally arises from what has been accomplished in this direction during the last fifteen years. For example, much valuable information has been gained regarding the structure of such soft tissues as the brain and spinal cord by hardening them with such an agent as chromic acid, in order that these tissues may be cut into thin slices for microscopical study. How greatly has the employment of such pigments as carmine and the aniline dyes facilitated the microscopical recognition of certain elements of the tissues. What a deal we have learned regarding the structure of the capillaries, and the origin of lymphatics, by the effect which nitrate of silver has of rendering distinctly visible the outlines of endothelial cells. What signal service chloride of gold has rendered in tracing the distribution of nerves by the property which it possesses of staining nerve-fibrils, and thereby greatly facilitating their recognition amidst the textures. Moreover, of what value osmic acid has been in enabling us to study the structure of the retina. In the hands of Lockhart Clarke, Beale, Recklinghausen, Cohnheim, Schultze, and others, these agents have furnished us with information of infinite value; and those who would advance microscopical anatomy may do so most rapidly by working in the direction indicated by these investigators. In human microscopical anatomy, indeed, there only remain for investigation things which are profoundly difficult, such as, for example, the structure of the brain, the peripheral terminations of nerves, the development of nerve-tissue, and other subjects equally recondite. But in the field of comparative anatomy there is far greater scope for the histological investigator. He has only to avail himself of those reagents and methods which have recently proved so useful in the microscopical anatomy of the vertebrates; he has only to apply these more fully than has yet been done to the invertebrates, and he will scarcely fail to make discoveries. For the lover of microscopical research there is, moreover, a wide field of inquiry in the study of comparative embryology; that is to say, in the study of the development of the lower animals. Since it has become clear that a knowledge of the precise relations of living things one to another can only be arrived at by watching the changes through which they pass in the course of their development, research has been vigorously turned in this direction; and, although an immense mass of facts has long since been accumulated regarding this question, Parker's brilliant researches on the development of the skull give an indication of the great things we may yet anticipate from this kind of research. Speaking of micro-

scopical study before this audience, I cannot but remember that in this country more than in any other we have a number of learned gentlemen who, as amateurs, eagerly pursue investigations in this department. I confess that I am always sorry to witness the enthusiastic perseverance with which they apply themselves to the prolonged study of markings upon diatoms, seeing that they might direct their efforts to subjects which would repay them for their labours far more gratefully. I would venture to suggest to such workers that it is now more than ever necessary to abandon all aims at haphazard discoveries, and to approach microscopy by the only legitimate method, of undergoing a thorough preliminary training in the various methods of microscopical investigation by competent teachers, of whom there are now many throughout the country.

With regard to Physiology, the present standpoint is not so high as in the case of Anatomy. Physiology, resting as it does upon a tripod consisting of anatomy, physics or mechanics, and chemistry, is many-sided. The most minute anatomy, the most recondite physics, and the most complex chemistry, have all to be taken into account in the study of the physiology of living things; so that it is not surprising that it should, in its development, lag behind the comparatively elementary subject—anatomy. Until not very long ago, anatomy and physiology were in most of our medical schools taught by the same professor, who, although professing to teach both subjects, was generally more an anatomist than a physiologist. This arrangement gave to physiology a bias which was eminently anatomical, and this bias continued in many quarters, notwithstanding the separation of the physiological from the anatomical tuition. I am aware that there are still some distinguished anatomists who intermingle physiological with anatomical teaching. I am not questioning the usefulness of the practice when carried to a moderate extent. I wish merely to point out what appears to me to have been a result of the practice, and I believe that the result was to give to physiology an anatomical tendency. It was natural for the anatomist who dealt with visible structure to constantly refer to this in explaining physiological action or function. The physiologist with the anatomical tendency always tried to explain a difference in the action or function of a part by a difference in its structure; and when his microscope failed to show any structural difference between the cells which form saliva and those which produce pancreatic fluid, between the egg of a rabbit and that of a dog, he, baffled on the side of anatomy, was too ready to adopt the conclusion that, inasmuch as the microscope reveals no difference in the structure, there is really no difference between them, and that the only way in which the difference in action can be explained is by having recourse to the old hypothesis that the metamorphoses of matter, and the actions of force, are in the living world regulated by a metaphysical entity termed a vital principle, and that dissimilar actions by similarly constructed parts are only to be explained by referring them to the guiding operations of this principle. [After alluding further to the hypothesis of the vital principle and its supposed actions, and after stating that he did not follow the teaching of those who still adhere to this doctrine, the lecturer said that, viewed from the physical side, there appears to be no reason for supposing that two particles of protoplasm, which possess a similar microscopic structure, must act in the same way; for the physicist knows that molecular structure and action are beyond the ken of the microscopist, and that within apparently homogeneous jelly-like particles of protoplasm there may be differences of molecular constitution and arrangement which determine widely different properties.]

A great change is now taking place in physiological tuition in this country;—a superabundance of physiological anatomy, and an almost entire absence of experiment, are no longer the characteristic features of our tuition. The study of physics, too much neglected, is happily now being more and more regarded as important in the preliminary training of the physiologist, as the study of anatomy and of chemistry; and I trust that the day is not far distant when, in our medical schools, the thorough education of our students in mathematics and physics will be insisted upon as absolutely essential elements in their preliminary education. Until this is done, physiology will not advance in this country so rapidly as we could wish. I would not in this place have alluded to a question concerning medical education, but for the fact that the progress of physiology will always greatly depend upon the education of medical men, for only those who are conversant with physics and chemistry, and who, in addition, are acquainted with the phenomena of disease—that is to say, with abnormal physiological conditions—can handle physiology in all its branches. Physiology owes not a little to the study of pathology—that is, of abnormal physiological states. The study of a diseased condition has, on several occasions, given a clue to the discovery of the function of an organ. Nothing was known regarding the function of the spleen until the pathologist observed that an increase in the number of white

corpuscles in the blood is commonly associated with an enlargement of this organ. Hence arose the now accepted doctrine that the spleen is concerned in the growth of blood-corpuscles. The key to our knowledge of the functions of certain parts of the brain has also been supplied by a study of the diseased condition of that organ. The very singular fact that the right side of the body is governed by the left, and not by the right side of the brain, was ascertained by observing that palsy of the right side of the body is associated with certain diseased conditions of the left side of the brain. That the corpus striatum is concerned in motion, while the optic thalamus is concerned in sensation; that intellectual operations are manifested specially through the cerebral hemispheres, are conclusions which were indicated by the study of diseased conditions. Moreover, by the pursuit of the same line of inquiry the key has been given to the discovery of many other facts regarding the brain-functions. Some years ago, M. Broca made the remarkable observation that, when a certain portion in the front part of the left side of the brain becomes disorganised by disease, the person loses the power of expressing his thoughts by words, either spoken or written. He can comprehend what is said to him, his organs of articulate speech are not paralysed, and he retains his power of writing, for he can copy words when told so to do; but when he is asked to give expression to his thoughts by speaking or by writing, or even to tell his name, he is helpless. With a palsy of a portion of his brain, he has lost his power of finding words—he has lost his memory for words; and yet, although he loses his power of finding words, his intelligent perception of what passes around him and of what is said to him is not lost. It is true that this condition of aphasia, as it is termed, has been found to exist when various parts of the brain have been diseased; for example, it has been found to coexist with a diseased state of the posterior instead of the anterior part of the cerebrum. This fact renders it very difficult at present to assign a precise locality to the faculty of speech. It is not, however, my intention to discuss this question, because my object is merely to show how the study of disease has given a clue to the physiologist. Broca's observation led to the thought that, after all, the dreams of the phrenologists would be realised *in so far as* they supposed that the various mental operations are made manifest through certain definite territories of the brain.

It has until lately been supposed that the convolutions of the cerebrum are entirely concerned in purely intellectual operations, but this idea is now at an end. It is now evident, from recent researches, that in the cerebral convolutions—that is, in the part of the brain which was believed to minister to intellectual manifestations—there are nerve-centres for the production of voluntary muscular movements in various parts of the body. Dr. Hughlings Jackson, from the observations of various diseased conditions in which peculiar movements occur in distinct groups of muscles, came to the conclusion that in the cerebral convolutions are localised centres for the production of various muscular movements. It has always been taught that the convolutions of the brain, unlike nerves in general, cannot be stimulated by means of electricity. This, although true as regards the brains of pigeons, fowls, and perhaps other birds, has been shown by Fritsch and Hitzig to be untrue as regards mammals. These observers removed the upper portion of the skull in the dog, and stimulated small portions of the exposed surface of the cerebrum by means of weak galvanic currents; and they found that, when they stimulated certain definite portions of the surface of the convolutions in the anterior part of the cerebrum, movements were produced in certain definite groups of muscles on the opposite side of the body. By this new method of exploring the functions of the convolutions of the brain, these investigators showed that, in certain cerebral convolutions, there are centres for the nerves presiding over the muscles of the neck, the extensor and adductor muscles of the forearm, for the flexor and rotator muscles of the arm, the muscles of the foot, and those of the face. They, moreover, removed the portion of the convolution on the left side of the cerebrum, which they had ascertained to be the centre for the movements of the right forelimb, and they found that, after the injury thus inflicted, the animal had only an imperfect control over the movements of the part of the limb in question. Within the last few months these observations have been greatly extended by the elaborate experiments of my former pupil and now able colleague in King's College, Professor Ferrier.

Adopting the method of Fritsch and Hitzig—but instead of using galvanic he has employed Faradic electricity, with which, strange to say, the investigators just mentioned obtained no very definite results—he has explored the brain in the fish, frog, dog, cat, rabbit, and guinea-pig, and lately in the monkey. The results of this investigation are of great importance. He has explored the convolutions of the cerebrum far more fully than the German experimenters, and has investigated the cerebellum, corpora quadrigemina, and several other portions of the brain not touched upon by them. There is perhaps no part of the

brain whose function has been more obscure than that of the cerebellum. Dr. Ferrier has discovered that this ganglion is a great centre for the movements of the muscles of the eyeballs. He has also very carefully mapped out in the dog, cat, etc., the various centres in the convolutions of the cerebrum, which are concerned in the production of movements in the muscles of the eyelids, face, mouth, tongue, ear, neck, fore and hind feet, and tail. He confirms the doctrine that the corpus striatum is concerned in motion, while the optic thalamus is probably concerned in sensation, as are also the hippocampus major and its neighbouring convolutions. He has also found that in the case of the higher brain of the monkey there is what is not found in the dog or cat—to wit, a portion in the front part of the brain, whose stimulation produces no muscular movement. What may be the function of this part, whether or not it ministers to certain intellectual operations, remains to be seen. These researches of Jackson, Fritsch and Hitzig, and Ferrier, mark the commencement of a new era in our knowledge of brain-function. Of all the studies in comparative physiology there will be none more interesting, and few so important, as those in which the various centres will be mapped out in the brains throughout the vertebrate series. A new, *but this time a true*, system of phrenology will be founded upon them; by this, however, *I do not mean* that it will be possible to tell a man's faculties from the configuration of his skull, but merely this, that the various mental faculties will be assigned to definite territories of the brain, as Gall and Spurzheim long ago maintained, although their geography of the brain was absurdly erroneous, and their notions regarding the indications afforded by the configuration of the skull ridiculous.

I have alluded to the subject, not only because it affords an illustration of the service which a study of diseased conditions has rendered to physiology, but also because these investigations constitute the most important work which has been accomplished in physiology for a very considerable time past. We may, I think, term this the Renaissance period of English physiology. It seems strange that the country of Harvey, John Hunter, Charles Bell, Marshall Hall, and John Reid, should not always have been in the front rank as regards physiology. The neglect of physics must be admitted as a cause of this; it is also to be attributed to the, until a few years ago, almost entire absence of experimental teaching; but it would be unjust not to attribute it in great measure to the limited appliances possessed by our physiologists. It is to be remembered that physiology could not be successfully cultivated without proper laboratories, with a supply of expensive apparatus. Without endowments from public or private resources, how can such institutions be properly fitted up and maintained by men who can, for the most part, only turn to physiological research in moments snatched from the busy toil of a profession so laborious as that of medicine? In defiance of these difficulties, we are now striving to hold our place in the physiological world. A new system of physiological tuition is rapidly extending over the country. In the London schools, in Edinburgh, Cambridge, Manchester, and elsewhere, earnest efforts are being made to give a thoroughly practical aspect to the tuition of our science, and notwithstanding the imperfect results which must necessarily ensue in the absence of suitable endowment, we can nevertheless point to the fact that the effect of these efforts has been to awaken a love for physiological research in the mind of many a student, and the results of this awakening are already apparent in the archives of Royal Societies, in the *Journal of Anatomy and Physiology*, and elsewhere. But physiological research is most expensive and laborious, and it is, moreover, unremunerative. The labours of the physiologist are entirely philanthropic; all his researches do nothing but contribute to the increase of human happiness by the prevention of disease, and the amelioration of suffering; and I would venture to suggest to those who are possessed of wealth and of a desire to apply it for the benefit of society, that, in view of the wholly unselfish and philanthropic character of physiological labours, they could not do better than follow the admirable example set by Miss Brackenbury in endowing a physiological laboratory in Manchester. In London and elsewhere the laboratories exist, but they need endowment: indeed, there is no physiological laboratory in this country which is adequately endowed, consequently research is greatly crippled. The endowment of a dozen such laboratories throughout the country would immensely aid in the development of physiological research amongst us.

We anticipate great benefit to the community not only from an advance of physiology, but from a diffusion of a knowledge of its leading facts amongst the people. This is now being carried out in our schools on a scale which is annually increasing. Thanks to the efforts of Huxley, the principles of physiology are now presented in a singularly palatable form to the minds of the young. The instruction communicated does not consist of technical terms and numbers, but in the elucidation of the principal events which happen within our bodies, together

with an explanation of the treatment which they must receive in order to be maintained in health. Considering how much may be accomplished by these bodies of ours if they be properly attended to and rightly used, it seems to be a most desirable thing that the possessor of the body should know something about its mechanism; not only because such knowledge affords him much material for suggestive thought—not only because it is excellent mental training to endeavour to understand the why and the wherefore of the bodily actions, but also because he may greatly profit from a knowledge of the conditions of health. A thorough adoption of hygienic measures—in other words, of measures which are necessary to preserve individuals in the highest state of health—cannot be hoped for until a knowledge of fundamental physiological principles finds its way into every family. This country has taken the lead in the attempt to diffuse a sound knowledge of physiological facts and principles among the people, and we may fairly anticipate that this will contribute not a little to enable her to maintain her high rank amongst nations; for every step which is calculated to improve the physiological state of the individual must inevitably contribute to make the nation successful in the general struggle for existence.

A CASE OF MELANOTIC TUMOUR DEVELOPED NEAR A CONGENITAL MOLE.*

By FRANCIS MASON, F.R.C.S.,
Senior Assistant-Surgeon to St. Thomas's Hospital.

THE patient, from whom this specimen was removed, was a man, aged 64, who was the subject from birth of a black mole, about the size of a pea, situated on the right cheek, an inch from the angle of the mouth. He remained quite well until a year before his admission into St. Thomas's Hospital, in October last, when he noticed what he described as a "pimple," situated on, or at least very close to, the mole already spoken of. "The pimple" steadily increased in size, and made rapid progress during the last two months. He had never suffered any pain in the tumour, and, excepting for its unsightly appearance and the local inconvenience, he would not have sought advice. For the following notes of the case, I am indebted to the dresser, Mr. E. Scott.

On admission, a fungating mass, about the size of a small orange, was observed on the right cheek (see fig. 1). The skin at the base of the



Fig. 1.

tumour was thin, and had a purplish appearance. The growth was soft to the touch, and was freely movable, apparently not involving the mucous membrane of the mouth, nor occupying any portion of that cavity. The open surface was scabbed over, and, on removing the scabs, a dark livid mass was exposed, from which a thin, sanious, inoffensive fluid exuded. On raising the tumour, the congenital mole was seen on its lower surface, apparently isolated from the rest of the growth. There had never been any severe hæmorrhage from the part. Several glands in the submaxillary region were enlarged, and evidently were deeply adherent. There was no family history of tumour, nor of cancer in any form, and there were no other similar growths visible about the patient.

On October 23rd, I removed the tumour by an incision around the base, dissecting it carefully away; and, after leaving a perfectly healthy raw surface, the edges of the wound were brought together with hare-lip pins. An attempt was made to take away the enlarged glands; but, in enucleating them with the fingers, the capsules burst, allowing a dark brown semi-solid fluid to escape, and, as they were firmly attached deeply, their complete extirpation was scarcely possible, having regard to the important neighbouring structures which would thereby be necessarily involved. As it was, the facial artery was opened and had to be ligatured.

The subsequent history of the case is told in a few words. There was some oozing in the neck soon after the operation, but pressure alone sufficed to arrest it. The hare-lip pins were removed from the face on the third day, and, on the fifth day, the wound had healed by first intention (see fig. 2, from a photograph taken ten days after the operation).



Fig. 2.

The wound in the neck, too, which had been dressed with a weak solution of permanganate of potash, was almost closed, there being little, if any, discharge from it. He left the hospital in about three weeks, quite well.

I may add that I have recently received a letter from the patient's wife, who gives a completely satisfactory account of her husband. He continues his work as a labourer, and there is no evidence of return of the tumour either in the cheek, or, more strangely, in the neck. A section of the tumour presents, to the naked eye, numerous characteristic points. It has generally a nodulated form, and is studded with black spots, the colour varying from light brown to a decided black. Large dark, as well as perfectly white, patches are also observed, with various intermediate shades of pigmental infiltration. The growth is firm in some places, and readily breaks down under pressure in others.

A microscopic examination ($\times 250$) shows the tumour to be made up of a number of delicate cells, chiefly of a spindle shape, containing a varying amount of dark granules, some cells being quite colourless, others having a jet black hue. Here and there, scattered throughout the tumour, but more especially observed at the circumference, there are masses of round cells, containing more or less of the same brownish material. On examination under a higher power ($\times 400$), some cells, containing one or two distinct dark-coloured nuclei, are seen. (Fig. 3.)

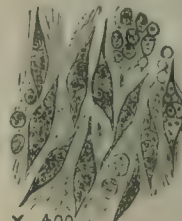


Fig. 3.

The chief points of interest in this case seem to be the following. 1. The fact, already noticed by pathologists, that melanotic tumours have a remarkable tendency to be developed either in, or in the immediate neighbourhood of, a congenital mole. I have reason to think that in this case, for it was carefully examined, the tumour was connected with the mole. 2. The curious circumstance, that the congenital mole should remain quiescent, and give no inconvenience whatever for over three-score years; and, lastly, the remarkably healthy condition of the patient, both locally and constitutionally at the present time; for, as some of the tumour was undoubtedly left in the neck, it is surprising that there should be, after ten months, no sign of the recurrence of the growth in this region. How long this satisfactory state of the part is to continue, of course remains to be proved. But the case is one which I venture to think is not altogether devoid of interest, nor wholly unworthy of being brought under the notice of the members of the British Medical Association.

* Presented to the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

INSANITY AND INTEMPERANCE.*

By D. YELLOWLEES, M.D.,

Medical Superintendent of the Glamorgan County Asylum.

IN the second half of the year 1871, the Glamorgan County Asylum received only 24 male patients, whereas 47 and 43 were received in the preceding and succeeding half-years. Again, in the first quarter of the year 1873, the same asylum received only 10 male patients, whereas 21 and 18 were received in the preceding and succeeding quarters. While there was thus on two occasions, for periods of six and three months respectively, a sudden fall in the male admissions to half their usual number, the female admissions showed scarcely any disturbance.

During the same periods, a like experience was made at the county prisons, the production of crime as well as of insanity being strikingly diminished.

These two exceptional periods correspond exactly with the last two "strikes" in the coal and iron trades, in which Glamorganshire is extensively engaged; and these results only afford another proof that ignorance and self-indulgence can make prosperity a curse instead of a blessing. The social aspect of these facts, and the remedies they demand, are not within the scope of this paper, but it is impossible to exaggerate their significance and urgency.

The decreased production of insanity during a strike seems mainly due to two causes—the one physical, the other moral;—there is no money to spend in drinking, and there is no time to think of anything but the strike. This moral cause is more potent than might at first appear. The strike excites universal interest, and, in the districts chiefly affected, there is continual discussion of its varying prospects, its certain advantages, and its probable termination. The subject has the deepest personal interest for all, and so engrosses attention, that it gives stability and force to weak and wavering minds—just as a demented patient becomes reasonable and intelligent for a time when his attention is aroused, and his scattered faculties are concentrated by an illness or an accident. But the enforced abstinence from drinking and debauchery is beyond doubt the chief cause of the decreased insanity; and this is strongly confirmed by the fact that the diminution is observed only among the men, a large proportion of whom are habitually dissipated.

Intemperance has a threefold relation to insanity; it may be a cause, an early symptom, or a result. These relations are often associated and often confounded. Each claims separate notice.

The temporary insanity produced by a single intoxicating dose of alcohol sufficiently indicates the baneful effects which its frequent and excessive use must entail on mind and brain; and experience too sadly confirms this indication. With the single exception of hereditary predisposition, intemperance is by far the most fruitful of all the causes of brain-disease; and even hereditary predisposition is often but another name for parental intemperance.

The simplest form of the insanity which intemperance produces is—

1. *Delirium Tremens*—the brief, fierce delirium with which the brain resents prolonged alcoholic poisoning, and which is caused more frequently by spirituous drinks than by the slower and less complete alcoholisation induced by beer.

2. *Transient Acute Mania*, distinguished by great violence and excitement—the true *mania a potu*—is the next form. This seems to occur in some persons instead of the more frequent form of delirium tremens. It usually attacks a brain exhausted by a period of general debauchery, and unable longer to maintain it, although spurred incessantly by stimulants. It often very closely resembles the acute mania of commencing general paralysis, but is happily brief and curable.

The next form is that which constitutes—

3. *The Insanity of Intemperance* in Dr. Skae's classification. It has two phases, acute and chronic. The acute form follows the excessive debauch of a habitual drinker. Suspicion, jealousy, and temporary hallucinations are the prominent symptoms. The patient hears robbers coming into the house, and watches behind the door with a pistol; or he sees a man dogging him in the street, and carries a knife to defend himself; or he detects a neighbour making signs to his wife through an imaginary hole in the wall. Deeds of violence are frequently committed under the influence of these delusions, and the insanity which prompted them is often unrecognised or ignored. The prisoner is quickly sobered by abstinence, and by the knowledge of the deed he has committed; he is sane or apparently sane on trial; the prison officials have seen no insanity; the jury are instructed that drunkenness is no palliation of crime, and the prisoner is found guilty. This actually occurred in the case last mentioned, where a man, who

murdered his wife under the influence of this hallucination, was condemned to death, and subsequently reprieved on medical testimony as to his true condition. When this form of insanity occurs before middle life, or early in the career of indulgence, the patient recovers; but, of course, the same cause is too apt to induce subsequent attacks. Ultimately, or in less favourable cases, the disease subsides into the *chronic* condition, presenting the same symptoms, but in a milder or more intermittent form. The patient is habitually moody, self-contained, irritable, and repellent; forms no friendships; shows no interest in anything; does no work, or does it in a grumbling or in a listless fashion; often detects poison in his food; often fancies himself slighted or put upon by others; has hallucinations of the senses, chiefly of hearing, and under their influence often scowls and threatens, or has a brief outburst of noisy abuse. This condition is hopeless, as regards recovery. Phthisis, the result partly of the previous habits, partly of the insanity, is a frequent cause of death; and this class of cases has helped not a little to give suspicion so prominent a place in the descriptions of phthisical insanity.

Another distinguishable type of the insanity caused by intemperance is—

4. *The Insanity which occurs in persons who had previously been much addicted to Drinking, but who had become, and had been, perhaps for years, Abstainers*.—Although the habit has been discontinued, the evil it has wrought lives after it, and some moral cause—a reverse in business, or the death of a relative—upsets the brain, which old excesses had weakened, and induces a melancholia, which too often proves permanent.

5. *Chronic Alcoholism*—the apparently uncomplicated result of long saturation of the brain with alcohol, gradually destroying memory, motion, and life, is the next form.

Lastly in this dire catalogue comes—

6. *General Paralysis*, where the brain-ruin is probably attributable, not to the alcohol alone, but also to the other vices—notably the sexual vice—with which intemperate habits are often associated; at least, this disease is less apt to follow fierce bouts of drinking than those slower forms of habitual dissipation which favour other excesses.

These direct effects of intemperance on the individual constitute unfortunately but a small part of the evil it produces. In numberless cases, it produces insanity indirectly by establishing and transmitting a proclivity to nervous disorder, and by awakening and developing such proclivity where it already exists. The evil thus wrought by intemperance is simply incalculable; at once so secret that it cannot be known, and so great that it cannot be estimated. No vice is more hereditary than intemperance, and none more certainly entails nervous deterioration. The occurrence of idiocy in a non-neurotic family is sometimes directly attributable to the drunkenness of a parent, while the more gradual deterioration shows itself in hereditary intemperance, in mental weakness, and instability, or in any of the various forms of nervous disease. This deterioration, commenced in intemperance and aggravated by the same vice in descendants, runs no uncertain course; a few generations suffice for the extinction of the race in dementia or idiocy, and sterility.

If we add to all this evil the insanity produced by the poverty, disease, and violence which intemperance begets, and the lamentable number of cases where intemperance the vice excites or grows into intemperance the disease, it is surely within the truth to assert that half the existing cases of insanity are due, directly or indirectly, to this social curse.

Not infrequently, however, intemperance is assigned as the cause of mental disorder, when in truth it is only one of its early symptoms. In the earliest stages of derangement, and in the emotional disturbance which constantly precedes it, when the patient is unsettled and unlike himself, but when the true nature of his disorder has not even been suspected by his friends, unwonted drinking frequently occurs. It is then only one of the indications that the patient is losing control over himself, and is easily led away by opportunity and temptation. This is especially observed in commencing general paralysis, while the other symptoms of that disease confirm the mistake of the friends, and are attributed by them to the newly acquired habits of dissipation. Little experience is needed to guard against this error; but, on the other hand, there is a large class of cases where no definite line can be easily drawn, and where intemperance, while at once the most frequent cause and the most constant symptom of the insanity, is yet more truly its result.

The various forms of insanity already enumerated may be caused by habits of intemperance, without the existence of any predisposition to nervous disorder; the special type of insanity developed in each case apparently depending on individual peculiarities, or on the form of the intemperance. Dipsomania, on the other hand, while sometimes apparently due to the vice alone, is habitually associated with some form of

* Read before the Psychological Section at the Annual Meeting of the British Medical Association in London, August 1873.

inherited neurosis; and this association is so constant that the intemperance must be regarded, at least ultimately, as *the result*, rather than the cause, of the insanity.

Dipsomania has three forms—acute, periodic, and continuous. In the *acute form*, the patient, formerly temperate, takes suddenly to excessive drinking usually after some loss, shock, or disappointment, becomes utterly indifferent to all claims of family, business, or duty, and drinks himself to death as speedily as possible. The history of such a case is almost certain to reveal unstable nervous organisation; and probably suicide in a more sudden form has been a consequence of similar moral causes in some other member of the family.

The *periodic or paroxysmal form* is yet more constantly associated with some hereditary neurosis. The patient is correct and abstemious in habits, irreproachable in character, and, perhaps, of superior attainments; but occasionally, from anxiety, overwork, or casual indulgence, he is seized with a fierce and uncontrollable craving for stimulants. At the same time, his whole nature seems changed, and he becomes in every respect the opposite of his former self; he forgets and sacrifices everything in the gratification of this passionate craving, chooses the vilest associates, frequents the lowest haunts, resorts to cunning lies to conceal himself, lives chiefly on brandy, and is at length discovered, probably in some low pothouse, dirty, haggard, and exhausted, with the brandy by his side, for which he still craves even when the irritated stomach refuses to retain it. The attack is followed by utter loathing of alcohol and of himself for yielding to the temptation; but, after a varying number of months, the wretched experience is only too certain to be repeated.

No form of brain-disorder is more definite than this; and, as already said, it is almost invariably associated with a hereditary tendency to intemperance, or to some form of nervous disease, which may or may not have been awakened by convivial habits, but in which habits the attacks often seem to begin.

The third form—*continuous or constant dipsomania*—is that where the difficulty is usually greatest in drawing the line between the vice and the disease. It is often the outcome and the result of intemperate habits, often associated with other vices, and always associated with an active form of the moral insanity, which is usually negative or merely periodic in the other types of dipsomania. It is distinguished by an amount of acute cunning, plausible hypocrisy, and fearless lying, which it is often difficult to regard as mental weakness, and difficult to describe except as blackguardism—so difficult, indeed, that one who has never seen this form of insanity may be pardoned for doubting its existence; but no such scepticisms are ever found among those whose friends or relatives have been its victims.

I believe the mere habit of intemperance in the individual rarely produces this condition, but that it is usually a result and development of the baneful heritage entailed on their descendants by intemperate progenitors; the vice of one generation becoming the weakness of the next, liable to be evoked at any time by the parental vice, and then bringing a double curse.

The inherited tendency to intemperance may itself prompt to the habits which develop the disease; or these habits may be easily acquired in social life, the patient thoughtlessly tempting his fate; or, again, the inherited weakness may be evoked by brain-disturbance from quite other causes, such as injury, sun-stroke, or moral shock. But, however excited, the existence of this predisposition to intemperance or nervous disorder seems the chief and essential fact in connexion with dipsomania.

The limits of this paper allow only a word or two as to its treatment. The absolute withdrawal of alcohol, except in the very rare cases where physical prostration forbids it, and the seclusion of the patient from all temptation and opportunity to indulge his habits, is of course the first and imperative step; the next, restoration of tone, physical and moral; and, lastly, confirmation by time of the amendment thus secured. Unfortunately, while it is easy thus to prescribe the treatment, properly to carry it out is a most difficult and trying task. The proverbial difficulty of reclaiming an inveterate drunkard is enormously increased when the drunkenness is not a habit, but a disease. While the repentance and good resolutions of the drunkard are sadly apt to be evanescent, they are at the time earnest and sincere. The dipsomaniac is scarcely ever sincere, although he can simulate sincerity most perfectly; and scarcely ever earnest, except in accomplishing the gratification of his passion, and hating those who prevent it.

The proper treatment of dipsomania is only possible in an asylum, and seldom successful even there. At the best, it needs years of treatment; and even then a relapse is always to be feared. Unhappily, asylum treatment is often impossible, since an action for damages is an unwellcome form of gratitude, and the medical and legal definitions of insanity are strangely at variance.

If the admirable endeavour to provide asylums for inebriates fortunately prove successful, they will doubtless receive dipsomaniacs as well as habitual drunkards; but it will be almost useless to provide them without power of compulsory detention, and absurd to provide them at all without lessening the needless multitude of public-houses which so liberally supply suitable inmates.

Lastly, upon us, as physicians and alienists, a special duty rests in this matter. We see more than others of the evils of intemperance, and we are bound to tell in earnest words how dire and far-reaching is the curse it brings.

ON THE ACTION OF ALCOHOL.

By JAMES ROSS, M.D., Waterfoot, near Manchester.

As I was prevented from being present when Dr. Edmunds' paper on "The Physiological Action of Alcohol" was read at the late annual meeting of the Association, and at the subsequent discussion which took place, I hope to be allowed to make a few remarks upon the subject. It is a pity that the observations of Professor Binz could not have been reported at greater length; but the simple sentence quoted indicates the general nature of his views. Professor Binz is reported to have classified alcohol physiologically with quinine; and his opinion with regard to the action of quinine upon the white blood-corpuscles is now very generally known. Quinine, alcohol, and other allied agents, check the movements of white blood-corpuscles, and of other minute masses of living protoplasm; and Professor Binz, so far as I can understand his views, believes that the effects produced by these agents upon the higher organisms depend mainly upon their fundamental action upon protoplasm.

The explanation of the action of alcohol which Dr. Rutherford is reported to have given is, that it has a stimulant action upon the circulation; but, although it may be perfectly true that alcohol does, under certain circumstances, stimulate the circulation, yet the recognition of this fact is by no means an adequate explanation of its action. The forces which produce circulation are so manifold, and so complicated in their collocations, that, even if all the other effects of alcohol could be explained from this effect alone, we are almost as far as ever from a true explanation of the action of alcohol upon the higher organisms. We are led to ask, Why does alcohol stimulate the circulation? Does it stimulate the circulation under all circumstances? If not, why not? and under what circumstances does it produce no effect, or, it may be, an opposite effect? If, on the other hand, the main effects of alcohol can be deduced from its action upon simple protoplasm, we are much nearer to a true explanation of the point. The forces which produce the simple movements of protoplasm are so few and little involved, when compared with those which produce the circulation of the higher animals, that, if the effects of alcohol upon the higher organisms could be deduced from the former action, the whole question would be resolved into simpler elements. And, indeed, living protoplasm, as represented by white blood-corpuscles and monera, is so similar to dead proteinaceous compounds, that we may entertain the hope that the action of alcohol and similar agents upon the former may, at no distant date, be resolved into their ordinary chemical action upon albuminous compounds. But, however this may be, it is perfectly certain that, if the main effects produced by alcohol upon the higher organisms can be deduced from its action upon simple protoplasm, this affords a much better explanation than if the effects were deduced from the special action of alcohol upon the circulation or upon the nervous system. Starting from the fact that alcohol checks the movements of white blood-corpuscles, let us see what are the implications. If these movements are checked, it must be because the molecules of the protoplasm have assumed relatively fixed positions—are more near than before to a condition of equilibrium. If the molecules had become very fixed, the protoplasm would be solid; but, although this does not take place, it is clear that, if the molecules are relatively more fixed than before, the protoplasm will be correspondingly more solid. And, if the protoplasm is rendered in any degree more solid, this will retard the exchange of material which ends in growth, and the detachment of material which ends in multiplication. If, then, we carry these conceptions with us into the higher organisms, it is evident that alcohol will tend to check the growth and multiplication of protoplasm over the body, and to promote the comparatively fixed arrangement of material which constitutes structure. I do not mean to assert that alcohol tends to develop a higher degree of structure than the organism has already attained to; but it tends to fix and consolidate the structure as it exists at the time. Briefly expressed, then, the

effect of alcohol upon the higher organisms is to check growth and to consolidate structure.

Before, however, applying this hypothesis to the explanation of the various phenomena of the action of alcohol, we must glance rapidly at the relation which subsists between the structure and growth of a healthy organism. It is in this direction that we shall find, in my opinion, the key to the solution of the whole question. Every student of biology knows that, in living beings, aggregation cannot proceed to any great extent without a corresponding formation of structure. But, although structure is necessary to growth, it is equally true that, if the structure become too rigid and fixed, growth is checked. During the development of the individual, the forces which end in growth are very active; the structure is yielding and plastic, and becomes readily adapted to the new changes which growth necessitates; hence aggregation proceeds. But, as the individual is approaching maturity, the structure is becoming more and more fixed and unyielding; hence further aggregation is arrested. And the subsequent history of the individual from the adult condition to old age teaches the same lesson with regard to the relation subsisting between structure and growth; the structure is becoming year by year more consolidated, and the powers of growth year by year less active.

But, if it be true that excess of structure checks growth, it is no less true that excessive activity of growth breaks down structure. This truth is exemplified by such tissues as pus and cancer, which possess great activity of growth, but which not only are not possessed of any real structure themselves, but which also produce the disappearance of large portions of the structure of the body remote from the first locality in which these tissues are formed. And what is the condition we have in acute disease? There is a very rapid growth of protoplasm or bioplasm all over the body. Dr. Beale was the first, so far as I know, to make this observation; and it is one of the most interesting and instructive observations made in recent years; nor do I think that it has yet received the attention it deserves. As a confirmation of this observation, I injected strong liquor ammoniæ into the thigh of a frog, and examined four days afterwards the circulation of the mesentery. The blood-vessels were crowded with white blood-corpuscles, which could be seen sprouting in large numbers from the walls of the vessels. I am under the mark if I say that there were four times as many white blood-corpuscles under the field of the microscope in the mesentery of this frog, as there were in the mesentery of a healthy frog. If it be considered that the mesentery has no special relations with the thigh, to make us believe that these corpuscles accumulated in this locality more than they did in various other parts of the body, it will become apparent that such a multiplication of the actively growing cells of the body could only take place by the breaking down of part of its structure. If the semi-fluid substance which constitutes protoplasm had so much increased, the semi-solid substance which constitutes intercellular substance, and which represents structure, must have decreased in almost a corresponding degree. And this is one of the main sources of the increased temperature in acute disease. This is not the place to elaborate a theory of fever; but I may mention two statements usually made with regard to the sources of animal heat, which, although correct in the main, yet require careful limitation. It is said that the source of animal heat is a process of oxidation. It is perfectly true that, on its ultimate analysis, animal heat depends upon oxidation; but the quantity and distribution of the heat of an animal at a particular time may be in great measure independent of oxidation. After death from some diseases, the temperature rises and maintains itself for several hours some degrees beyond the highest fever-heat, and yet oxidation and mechanical action have almost entirely ceased. The other statement is, that the growth of plants is a process by which force is made potential, and that of animals a process by which it is rendered active. Passing over the fact that circumstances are known with regard to vegetable growth which indicate that a small amount of force is set free, we may notice the obverse fact, that a considerable amount of force must be rendered latent during the development of an animal. Force must be expended in producing organisation, and this force must be potential in the organised tissue. A considerable mass of indirect evidence might be adduced to show that organisation entails expenditure over and above that of the actions of organised tissues. I can only, however, mention one or two considerations which tend to show this. It is difficult to adduce proof that forces are expended in organising the statical tissues, such as bone and tendon; but it is evident that they must have been expended in the development of the dynamical tissues, such as nerve and muscle, and the tissues which carry on active nutrition and secretion. If an individual perform at a certain time an action unconsciously and with little effort, which at a previous time cost care and thought and labour, it is because the nerve-current passes through well defined channels, without spreading

laterally and disturbing others, and thus brings into play certain groups of muscles without others not engaged in the action being affected. And this only takes place because the molecules of the tissues concerned in producing the action have become arranged into a more definite and coherent order than they possessed previously. In assuming this order, force must have been expended; and these molecules can no more fall into a less definite and more incoherent order without giving out force, than can a brick fall from a wall to the ground without giving out heat-vibrations. There is no reason to believe that, when organised tissue becomes less organised, this is necessarily and in all cases an oxidation-process. Breaking down of structure is, in my opinion, the source of the excess of temperature in acute disease; and it is in great measure independent of oxidation. But I must now return to the action of alcohol upon the organism.

I have already said that alcohol not only tends to check growth, but that it must also tend by the same action to consolidate structure. Suppose that alcohol is given to a young animal in relatively large and continued doses, if this theory be correct, it ought to check the animal's growth and to fix prematurely its structure; and this is found to be the case. When dog-fanciers wish to produce a small pet dog, I am told that a certain amount of gin is given daily to the animal from its birth; and this proceeding is effectual in producing a dog much smaller than the parents from which it is derived, and also smaller than the other dogs of the same litter that have not been treated with gin. I was once told by a medical man that he kept a prematurely born child alive the first three weeks of its life upon nothing but whisky toddy. The child is now seven years of age, and a puny little idiot; but whether this is an effect of the whisky toddy or not, I will not venture to decide. I have, however, seen other instances of dwarfing effects upon individuals, which, I strongly suspect, were caused by the too copious imbibition of alcohol when children. There are other children, however, who are much benefited by a certain amount of alcohol, principally in the shape of wine. These are the children of parents who have a tubercular tendency. In such children, the powers of growth are very active; but the structure is deficient. A very slight irritation causes the epithelial surfaces to proliferate; and amongst their internal tissues there is a relatively large amount of that loose little organised tissue called adenoid; and these are indications of an unstable condition of the structure of the body. If such a child have a slight surface-irritation, the neighbouring glands swell; and subsequently the child becomes pale and thin, but grows rapidly in height. He is said to be growing beyond his strength. A moderate amount of alcohol will tend to check this growth and to consolidate the structure, and will, of course, be advantageous. I think it was Dr. Wilks who first drew special attention to the beneficial effects of a moderate allowance of wine in such cases. The beneficial effect of alcohol in the treatment of acute disease is readily explicable upon this theory. When the excessive growth of the protoplasm is checked, a further breaking down of structure is prevented. The potential force of the organised tissue is not converted into actual heat-vibrations, and consequently the temperature will fall.

The effects produced by abuse of alcohol as an article of diet are also explicable upon this hypothesis. The diseases to which habitual drinkers are liable may briefly be summed up as premature decay of all the powers of life, fatty degeneration, rigidity of arteries from calcification, and consequent diseases of the circulation. All of these are examples of excessive consolidation of structure along with deficient powers of growth, or the results which follow from such a condition.

I can only allude in very brief terms to the special influence which alcohol has upon the nervous system. It depends, in all probability, upon its action upon protoplasm in general, combined with its degree of diffusibility. But what of the stimulant effect of alcohol? The stimulant action is partly delusive, partly real. In so far as it is real, it must depend upon a certain amount of nervous energy being set free. I have already said that, during the development of structure, a certain amount of force is rendered latent; but this is not the case with the consolidation of structure which alcohol produces. In the former instance, the organic material is probably raised to a higher isomeric form; while in the latter it is equally probable that it falls into a lower. If the protoplasm, after the addition of alcohol, become in any degree more solid, without becoming more complex in chemical constitution, this must be, in the language of Mr. Herbert Spencer, an integration of matter; and there must be a concomitant dissipation of motion. When, therefore, alcohol acts upon the soft nervous tissue, it renders it slightly more solid, similar to the action it has upon other protoplasm; and along with this action there must be a concomitant quantity of nervous energy set free. It is this diffused effect which goes by the name of the stimulant action of the drug.

The degree of diffusibility of alcohol will help us to explain several

of its special effects. Its degree of diffusibility will enable it to come in contact with nervous tissue sooner than the vegeto-alkalies, and not so soon as the anæsthetics; while in its action it holds an intermediate position between these agents. The degree of diffusibility also explains why alcohol affects the higher brain-centres first. The delicate structure of these centres, which contain comparatively little dense tissue, is soon permeated by the drug; and hence the intellect and moral nature suffer first. But I must refer the reader to the able remarks made by Mr. Herbert Spencer on this point in the appendix to the first volume of the second edition of his *Psychology*.

THE GERM-THEORY OF DISEASE APPLIED TO THE EXPLANATION OF THE PHENOMENA OF IDIOPATHIC FEVER.*

By T. J. MACLAGAN, M.D., Dundee.

IDIOPATHIC fever occurs in its most typical and frequent form in the common epidemic diseases of this country. These diseases are contagious, and are due to the entrance into the system, from without, of the poison which gives rise to them.

That contagion is particulate may be accepted as proved. That it is organised is equally certain. The facts of infection, and the fact that the contagium-particles are reproduced to an enormous extent within the system, leave no room for doubt on that point. Being organised, it must be animal or vegetable.

The study of the nature and mode of action of contagion is an old one. Hitherto the subject has been looked at chiefly from an etiological point of view, and much valuable knowledge has thereby been obtained regarding both the nature of contagion and the causation of disease. It seems to me that the subject may also be studied with advantage from the pathological side, and that a consideration of the results likely to follow the propagation in the system of millions of minute organisms may throw some light on the mode of production of those phenomena which are common to the contagious fevers. A careful study of the question from this point of view has led me to the conclusion, that there is not a little fallacy in the modern views of the causation of idiopathic fever, and that the phenomena which constitute that condition are not so much the result of deranged action of the tissues, as they are the necessary consequence of the propagation in the system of minute animal organisms.

An organism which is too minute for ocular examination has its place in nature defined by its action on its environment. The action of an animal organism on its environment consists in the consumption of oxygen, nitrogen, and water, and the giving off of carbonic acid. It shall now be my endeavour to show that the propagation in the system of such an organism is competent to the production of all the phenomena of idiopathic fever. The essential phenomena of this condition are:—
1. Wasting of the tissues, especially the nitrogenous. 2. Increased consumption of water. 3. Preternatural heat. 4. Increased frequency of the cardiac action. 5. Increased frequency of respiration.

It is not my intention to criticise the views at present held as to the mode of production of these phenomena; I wish only to explain my own belief that each of them is a necessary result of the mere propagation in the system of an animal organism.

1. *Wasting of the Nitrogenous Tissues.* This must be due to one of two causes—diminished nutrition, or increased disintegration. In fever, it is believed to be due to the latter cause; and on this belief is founded the generally accepted theory of Virchow. That there is increased metamorphosis of the tissues is unquestionable (as will be explained afterwards), but that this increase is not adequate to the production of all the phenomena of fever is equally certain. The chief agency in the loss of bulk which takes place in fever I believe to be diminished nutrition, a defective supply of the materials necessary to the formation of tissue. How is this produced? The one cause to which, directly or indirectly, are to be ascribed all the phenomena of idiopathic fever, is the contagium. This we believe to be an animal organism; as such, it consumes nitrogen. Whence does it get it? Let us trace the nitrogen from its entrance into, to its exit from, the body; note the various changes through which it goes, and see at what point it would most readily be appropriated by the contagium-particles. The nitrogen is taken with the food, and first appears in the circulation in the form of what Voit calls circulating or store albumen; in this form it passes to the tissues, which, in the performance of their usual nutritive action,

lay hold of the nitrogen thus conveyed to them, and incorporate it into their substance; the nitrogen thus passes into the form of what Voit has called fixed or organ-albumen; in this form it remains so long as required, and then again passes into the circulation as circulating albumen, in which state it is conveyed to the liver and other glands, where it is transformed into urea, and, as such, is eliminated by the kidneys. Now, at what point in this changing course is the contagium most likely to lay hold of the nitrogen? Clearly at that at which it would most readily be given up to it. There are four conditions in which the nitrogen has entered into such definite combinations that it is not likely to quit them at the call of the contagium; (a) when it exists in the form of what I shall call constructive circulating albumen; (b) when it is fixed in the tissues; (c) when it is in the form of retrogressive circulating albumen; (d) and when it has been formed into urea. There are three points at which it is in a transition state, passing from one combination to another, and is in no sense fixed; (a) when passing from the circulating to the organ albumen; (b) when passing back from this form to that of retrogressive albumen; and (c) when it is being transformed into urea. It is at one of these three points, when the nitrogen is in a transition state and is free to enter into a new combination, that it is most likely to be appropriated by the contagium. At which of the three does such appropriation take place? So far as the facilities for obtaining the nitrogen are concerned, there is not much to be said in favour of any one of them; the nitrogen is equally unstable in all. Much, it seems to me, must depend on the actual condition in which the nitrogen is presented to the contagium. It is evident that the state of the nitrogen, as it passes from the constructive to the organ albumen, must be very different from that in which it passes back from the organ albumen to the circulation; and, also, from that in which it passes from the condition of retrogressive store albumen to the form of urea. In the first case, it presents itself in a form suitable for the formation of tissue; in the two others, it is unfit for such a purpose, and is destined only for excretion. The only time, then, at which the nitrogen presents itself in the system in a form at once unstable and fit for forming tissue, is when it is undergoing the transition which results in the formation of organ albumen from the constructive store albumen. Now, it needs no elaborate argument to show that the action which results in the formation of the protoplasm of the contagium-particles, bears a much closer analogy to those constructive changes which result in the formation of the tissues, than it does to the retrograde changes which accompany their disintegration and result in the formation of urea. The formation of the tissues, and the formation of the protoplasm of the contagium particles are both constructive steps; both result in the formation of animal matter; and it is but reasonable to suppose that the only source whence the tissues can get the nitrogen which they require in a suitable form, is also the most likely source of that which the contagium-particles require for the formation of their protoplasm. For these reasons, I believe that it is when the constructive store albumen is undergoing the changes necessary to the formation from it of the organ albumen, that the nitrogen is appropriated by the contagium-particles. Such appropriation is the main cause of the wasting of the nitrogenous tissues. They waste because they are deprived of the nitrogen necessary to their formation. But here an apparent difficulty presents itself. Observation has shown that the amount of nitrogen eliminated from the system bears a direct relation to the quantity consumed, and is little, if at all, influenced by any other agency. Now, if the tissues are deprived of nitrogen by the contagium-particles in the manner indicated, how comes it that the amount of urea eliminated is, as a rule, much above the normal standard? It happens thus. The contagium-particles pervade the whole body; they take their nitrogen from the constructive albumen at the moment at which it is being yielded up to the tissues; it is in the tissues, therefore, that their protoplasm is formed. Now, the action which leads to the formation of this is identical with that which results in the formation of the normal tissues, and produces exactly the same effect as would be produced by a corresponding increase in the normal demands of these tissues. The effect of the propagation of the contagium-particles in the tissues, therefore, is the same as that which would result from excessive tissue-action. But tissue-action consists of a retrograde as well as a constructive change; these actions go on simultaneously, and neither can be said to precede the other, any more than the passage of a saline fluid through a membrane precedes the passage of an albuminous fluid situate on the other side. The moment at which the constructive albumen is undergoing the change which normally results in the formation of organ-albumen, is that at which its nitrogen is taken up by the contagium-particles. The simultaneous action by which the worn-out organ-albumen is transformed into retrogressive is equally far advanced. The contagium-particles step in to deprive the tissues of much of what they require for the form-

* Read before the Medical Section at the Annual Meeting of the British Medical Association in London, August 1873.

ation of organ-albumen; no such agency, however, intervenes to prevent the completion of the contemporaneous action which results in the formation of retrogressive albumen. This action, therefore, continues as usual. The constructive changes result in the formation of contagium as well as of tissue; the retrogressive result only in the formation of retrogressive store-albumen, from which the urea is formed. With the blood circulating so rapidly as it does in fever, there must, therefore, be increased formation of retrogressive albumen, and consequent increased formation of urea.

2. *Increased Consumption of Water.*—That the enormous quantity of water taken into the system during the course of fever is not retained as water is certain; that it is not eliminated is equally sure. The dry skin, the scanty urine, and the constipated bowels sufficiently show that. What, then, becomes of it? The system requires no such quantity, and is incapable of utilising it. The only abnormal agency of which we know is the contagium. Can it give rise to this excessive demand for water? It can. In virtue of the properties common to all organisms, contagium-particles require water for their growth and propagation. Their demands for this lead to the consumption of an enormous quantity in the system. They take up that which the tissues require for their own use, and continue to consume the water as soon as it enters into the circulation. It is this consumption of water by the contagium-particles which leads to the thirst, dry skin, parched tongue, scanty urine, and diminished gastric and intestinal secretions which are more or less common to all fevers.

3. *Preternatural Heat.*—For an explanation of this, the most striking and characteristic phenomenon of idiopathic fever, we turn again to the contagium. This is a minute animal organism which is reproduced to an enormous extent in the system, and which in its formation consumes oxygen, nitrogen, and water, and gives off carbonic acid in the same way as all animals do. Now, there is no reason why the changes which such consumption and elimination imply should not, in the case of the contagium-particles, be accompanied by the same evolution of heat which, we know, results from a like action in other animal structures. Admitting this (and I see no reason on which we can refuse to do so), it follows that much of the preternatural heat of idiopathic fever is due to the propagation of the contagium. There is a great increase in the amount of oxygen, nitrogen, and water consumed, and in the quantity of carbonic acid formed; and, so far as the heat-producing effect of these changes is concerned, it is quite immaterial whether they take place during the formation of the tissues and excreta, or during the formation of the protoplasm of the contagium particles. In the combination of these two causes—that is to say, in the continuance to a greater or less extent of the normal tissue-changes, and in the superaddition to these of those which necessarily accompany the growth and propagation of the contagium—we have the true and sufficient cause of the high temperature of fever.

4. *Increased Frequency of the Cardiac Action.*—The object of the heart's action is to send to the various tissues and organs of the body the blood requisite to enable each to perform its function aright. But the heart is not the sole motive power: the tissues themselves are possessed of a native force, in the exercise of which they draw towards them the nutriment which they require. We accordingly find that any local excitement to the process of nutrition produces an increased and more rapid flow of blood to the excited organ. Supposing such excitement to exist all over the body at the same time, there would necessarily result an increased rapidity of the general circulation. This is what occurs in idiopathic fever. The propagation of the contagium in the tissues leads to an increased demand for blood, just in the same way as excessive tissue-action would lead to a similar result. The wants of the tissues and of the contagium-particles are the same. By the propagation of the latter in the former, the general demand for nutriment is increased, and yet the amount supplied to the tissues is much below what they require; the oxygen, nitrogen, and water are seized hold of by the contagium-particles—and these are the very materials that the tissues call for. This action of the contagium, and the efforts of the tissues to get for themselves the nourishment which they require necessarily lead to an increased *vis a fronte*, and increased supply of that fluid whose duty it is to furnish the necessary material. The result is everywhere an increased demand for blood, and consequent acceleration of its flow through the capillaries. This, of course, leads to increased flow through the veins, and necessarily to increased frequency of the heart's action. The ultimate cause of the accelerated cardiac action is, therefore, the propagation of the contagium-particles.

5. *Increased Frequency of Respiration.*—This may partly be due to acceleration of the blood-flow; but there is another and more potent agency at work. There are two views as to the mode of production of the respiratory movements: one is, that these are due to the stimulating action of carbonic acid on the extremities of the vagus, or on the me-

dulla oblongata; the other is, that the exciting cause is deficiency of oxygen. The observations of Pflüger and others support the latter view, and tend to show that the depth and frequency of the respirations increase in proportion as the supply of oxygen is diminished, whilst they become more and more feeble as the supply of that gas is increased, until, if it rise above a certain quantity, they cease altogether. Whichever view we adopt, whether we regard deficiency of oxygen, or excess of carbonic acid, or the combination of these two conditions, as the cause of the increased frequency of the respiratory act in idiopathic fever, it is evident that we have, in the reproduction of the contagium particles, a sufficient reason for its existence. As animal organisms, these particles consume oxygen and give off carbonic acid, thereby necessarily producing a condition of the blood which directly tends to increased force and frequency of breathing—the abnormal increase bearing a direct relation to the extent to which the contagium is produced.

Such is the theory which I venture to advance as to the causation of the essential phenomena of idiopathic fever. Did time permit, I would explain by it also the less constant symptoms which are observed in the course of febrile ailments. Meantime, I would simply give expression to my conviction that the typhoid symptoms, the head-symptoms, the convulsions, and, in short, all the symptoms that are usually attributed to the retention in the blood of excretory products, are really due to defective supply of nutrient material to the various organs, and especially to the nervous centres; they are all of anæmic rather than of uræmic origin.

A single word as to the bearing of this theory on treatment. Water *ad libitum*, fresh air, and good ventilation; as much beef tea and milk as the patient can digest; such is the treatment which clinical experience has taught to be the most successful. My theory establishes for this treatment a sound pathological basis. Once the contagium gains admission to a susceptible system, nothing will prevent its appropriating the elements necessary for its growth. Our endeavour must be to supply enough oxygen, nitrogen, and water to enable the tissues to carry on till the contagium is exhausted; therefore, water, well-ventilated rooms, and easily digested nitrogenous food, constitute the armamentarium by which the physician must combat the evil effects resulting from the propagation of the contagium in the system. "The fever must be fed," and oxygen, nitrogen, and water supplied, if possible, in such quantities that, whilst the imperative demands of the contagium-particles are met, enough may still be left to enable the tissues to carry on till the crisis comes.

THERAPEUTIC MEMORANDA.

SYPHILITIC ALOPECIA.

THAT form of syphilitic alopecia which is independent of any eruption affecting the scalp, which accompanies the so-called secondary syphilides, and which is characterised simply by an extensive loss of hair, so that the greater portion of the scalp is denuded absolutely of hair, and not the scalp only, but also the eyebrows and eyelids (of eyelashes) as well, is often a persistent affection, and in my experience is only—very tardily, indeed—remediable by general (mercurial) treatment. I refer to the condition described above, as distinguished from the syphilitic alopecia, resulting commonly (in tertiary syphilis) from the limited and "discrete" loss of hair resulting from the formation of cicatrices consequent on (tertiary) syphilitic ulceration of the scalp. This kind of alopecia, which has by some eminent French writers been assumed to be identical with *linea decalvans* (*la teigne pelade*), but which is to be distinguished from any, even the most, "diffused" forms of the latter disease by its vague want of definite limitation of margin, is, as I have found, readily (within a month or so) curable by the following topical remedies.

For the scalp: Hydrargyri iodidi rubri gr. v; attar. rosæ ℥ij; olei amygdalæ ℥x; unguenti simplici 3j.

For the eyelids (where the skin is more tender), three grains of the mercurial iodide are used. The prescription is otherwise the same as before.

For the eyelids, which are more tender still, five grains of the yellow oxide of mercury, made by the recent method, are substituted for the iodide. The prescription is otherwise as above.

The French writers referred to regard secondary syphilis as merely a predisposing cause of *tinea decalvans*. I, however, regard the "secondary" syphilitic alopecia as a distinct disease.

BALMANNO SQUIRE, M.B.

2, Weymouth Street, Portland Place, W.

FORTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

PROCEEDINGS OF SECTIONS.

SECTION A.—MEDICINE.

DISCUSSION ON ANÆSTHETICS.

The Induction of Sleep during Surgical Operations. By J. T. CLOVER, Esq.—Mr. Clover thought that the conflicting statements made about anæsthetics arose from small doses and short inhalation of one agent being compared with larger doses and more prolonged inhalation of another. The difficulty of ascertaining what proportion of a vapour entered the blood was very great. The maximum proportion of vapour which could possibly enter the blood could be limited by limiting the proportion of vapour in the air; but we could not insure that this proportion would enter, or what would be the exact amount. The blood never absorbed the maximum amount of vapour, except when the most effective respiration, the slowest circulation, and muscular exertion with closed glottis, concurred. In tranquil breathing, the vapour did not reach the distant pulmonary cells; and the blood passing through them diluted the blood which had passed through cells that had received the vapour. In forced rapid breathing, every air-cell received the vapour. In a normal state of circulation, the blood passed through the lungs too rapidly to take up all the vapour which it would absorb; but, when the circulation was slower or arrested for a second or two, time was allowed for absorption. Again, when the glottis was closed, and muscular efforts were made, the vapour was pressed into the blood, just as carbonic acid was forced into water in making soda-water. Mr. Clover urged the importance of attending to these conditions, especially in giving chloroform. The pulse should be kept under observation as long as the patient was inhaling; and if it became weak, or if the breathing became very deep and rapid, the chloroform should be withdrawn or diluted with more air. He had never found it necessary to seize the tongue and draw it out with forceps, but advised that the instrument should be kept ready in case of need. When the chin was raised and removed as far as it could be from the sternum the obstruction ceased. Vomiting occurred not oftener than once in seven cases of chloroform administration; and it occurred more frequently after ether. No food should be taken for four or five hours before inhaling; but one or two teaspoonsfuls of brandy without water might be given, if required at any time. Mr. Clover mentioned various methods of giving chloroform and ether; preferring for the former an apparatus which limited the amount of chloroform to thirty-four minims in 1,000 inches of air; and for the latter, his double current ether-inhaler, described and illustrated in the BRITISH MEDICAL JOURNAL for March 15th. He had not found the bichloride of methylene so uniform in its effects as chloroform, and attributed this to the compound nature of the body, shown by its boiling point rising from 120 degs. to 145 degs. He thought that it usually contained more chloroform than could be safely used in the free manner in which ether might be given. He had used nitrous oxide in 7,000 cases. It was well suited for operations lasting not more than three minutes, which left no great pain afterwards; but not for long operations. The effect could be prolonged, even in operations in the mouth, by giving it through the nose, or by making the gas pass through ether as soon as anæsthesia began to occur, and continuing the inhalation another minute.

Ether as an Anæsthetic. By JOHN MORGAN, F.R.C.S.I. (Dublin).—Mr. Morgan commenced his paper by commenting briefly on the recent trial in Dublin, arising out of a death following the administration of chloroform. He said that it appeared to be the unanimous conclusion of the medical evidence that the possibility of death through idiosyncrasy gave considerable reason for alarm, and should stimulate inquiries as to the safest anæsthetic. There could be little doubt that ether was the safest, as was shown by the statistics collected by Dr. Andrews of Chicago and Dr. Richardson of London, which gave, for ether, 1 death in 23,204; for chloroform, 1 in 2,873; for a mixture of chloroform and ether, 1 in 5,588; for bichloride of methylene, 1 in 5,000. He differed from Mr. Clover as to the advantage of allowing free ingress of air, believing that the free admission of air, whether designedly as in Mr. Clover's apparatus, or undesignedly, as in giving ether by a sponge or towel, was one of the chief detractions in the administration of this

anæsthetic. He had found by experience that the less air was admitted, the more successful would be the production of insensibility. For this purpose, he had arranged an inhaler made on the principle of not admitting air, and allowing, at the same time, the utmost diffusion of the vapour. The instrument was furnished with an India-rubber diaphragm, which allowed expansion and contraction during expiration and inspiration. It might be said that the patient breathed the carbonic acid formed during respiration, and would soon suffer from carbonisation of the blood. It might, however, be doubted if carbonic acid was freely formed when the patient was using ether. Breathing could be kept up for a much longer time through an inhaler charged with ether vapour than when air only was present. This was a simple but practical test which any one could apply. Whether during the use of etherisation the evolution of carbonic was reduced to a minimum, or whether the ether vapour rendered the patient more or less insensible to any carbonic acid formed, was a question on which he had been favoured with some important observations by Professor Galloway. In employing Mr. Morgan's ether-inhaler, Mr. Galloway found that little or no carbonic acid could be formed during the inhalation, either by the oxidation of the carbonaceous matter in the venous blood or by the oxidation of some of the ether. Under ordinary circumstances, the blood ceased to be arterialed when the respiration was stopped; but during ether-inhalation respiration continued, and yet the blood (even taking the most extreme view) could only be very slightly arterialed during the first few inspirations. In a chemical point of view, the advantages were clearly in favour of ether; because, after the removal of the inhaler, when the patient again breathed air only, no oxidation of chloroform would take place, and therefore the residuum must be got rid of by other means; but the ether-residuum would not only be removed by other processes, but also by oxidation. Mr. Morgan had endeavoured to test the question of the formation of carbonic acid during etherisation, by having a tube, connected with an exit-valve from the mouthpiece, passing through lime-water. After a very much longer time than would occur, and did occur, with the same patient under ordinary circumstances, the lime-water became but slightly milky, perhaps from the air already in the chest and in the inhaler at the commencement of the process. The blood that flowed during operations conducted under ether, seemed to be always of a bright tint, unlike the dark hue seen at times with chloroform. However, whether carbonic acid was formed or not, was a matter of small importance in comparison with the attainment of the object of being the greatest safety with the most perfect anæsthetic. It had been said that with etherisation struggling is more active than with chloroform. Mr. Morgan said that it may be so when air is admitted, and the action of ether-vapour disconcerted by its admixture, but not when ether is given without the admixture of air. Sickness of stomach is not so frequent with ether as with chloroform under like circumstances, and if care be taken that the stomach is empty. At the Dublin Eye Infirmary, no food whatever is given from the previous evening, and always with the best result; there is practically never any sickness. Regarding the giving of stimulants, Mr. Morgan said that the conventional practice of giving brandy and egg in the morning before inhalation is the worst preparation for ether, which, acting as a stimulant in itself, does not require another. No stimulant should be given before operation, nor after it, except in very severe cases. One of the benefits of ether-inhalation is the absence of the depression which frequently follows the use of chloroform. Ether can be well administered while the patient is in the semi-sitting posture, which is specially directed to be avoided in chloroformisation. The ether should be of 720 specific gravity. That made by M'Farlane of Edinburgh (methylated), Mr. Morgan had found to answer very well. Two or three ounces suffice for a patient, and two or three patients can be etherised from the same quantity, the cost being only two or three pence each. By the use of an inhaler, the diffusion of the vapour to the bystanders is avoided, and the risk of taking fire reduced to a minimum, while the irritation of the skin and the formation of ice by the use of the cone or sponge are got rid of. As additional precautions, Mr. Morgan suggested that the head and chest should be well raised, especially in stout and elderly persons, or those of apoplectic and badly circulating habit. In all cases, after the first effect of the ether has been established, the mouthpiece should be removed, and a few inhalations allowed; then it should be reapplied, and so on according to discretion. The patient should be completely under control. Mr. Morgan had kept a patient for an hour and three-quarters completely insensible, and apparently in a deep and happy sleep, during a protracted operation. When stertor is heard, the mouthpiece is to be taken away for a time. Usually patients become florid, but sometimes dusky. Mr. Morgan had not seen any cases of alarm in such circumstances, but he had always been more cautious; and as etherisation has been already produced when this appears, there is no necessity for its further active administration. He said that he usually

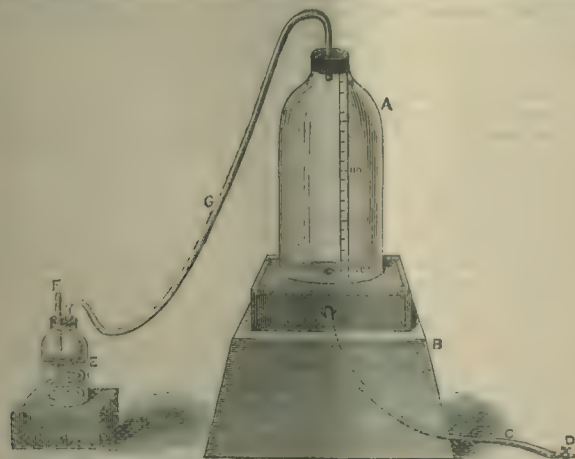
gives the patient the mouthpiece to hold for themselves. A few encouraging words, and the taking away of the mouthpiece when any inconvenience at first is felt, will quiet any alarm; and, after ten or twelve inhalations, the mouthpiece may be firmly applied. If the hands be used by the patient to push away the mouthpiece, they must be held down. The *suaviter in modo*, followed by firmness, will succeed in most cases, without holding down by main force. It is important to observe silence. Mr. Morgan had seen patients insensible in half a minute; it is therefore desirable to have everything ready for operation. He did not believe it necessary to have the patient thoroughly overwhelmed. He had seen them, when semi-etherised, look at what was doing; yet afterwards they have declared that they knew nothing whatever about it, and that they had felt no pain.

A New Ether-Inhaler. By G. EVERITT NORTON, Esq.—A new ether-inhaler was exhibited by Mr. Norton, the principle of which was the combination of air with ether, the proportion being about 60 per cent. of ether in the vapour inhaled. Mr. Norton had used this inhaler during the present year both in hospital and private practice with very satisfactory results; and from his notes of cases, he found the average time required to bring a patient under the influence of ether is three or four minutes—the amount used being two ounces in the first quarter of an hour, and one ounce afterwards; so that, in an operation lasting half-an-hour, three ounces would be used. Sickness was the exception to the rule.

Dr. JACOB (Dublin) said he trusted that the observations which he might make on this subject might be considered to come with some authority, inasmuch as he believed he had had a wider experience of the administration of ether by Mr. Morgan's method than anyone else, except Mr. Morgan himself. Within the past year he had made use of this means of anaesthesia in every case which had been operated upon in the Dublin Eye Infirmary, and in private practice, in which insensibility of the patient appeared at all desirable. The circumstances of these patients had been of every conceivable variety; they varied in age between 2 and 87 years; in health, between perfect robustness and alarming prostration; and, in the nature of the operations, from extirpation of a melanotic tumour of the orbit down to the removal of a simple chalazion. The relative merits of ether and other anaesthetics were now in debate as regarded—firstly, their safety to the life of the patient, and, secondly, their eligibility on the grounds of convenience. He held that these two considerations ought not to be evenly balanced in the consideration of the Section, but that the element of danger to life ought to occupy a paramount importance in their minds; and he would say that, in his opinion, nothing but the gravest inconveniences, such as might materially interfere with the success of the operation, ought to be allowed to weigh against the adoption of the anaesthetic, if experience should prove its use to be devoid of danger. As regarded this—the first consideration—he (Dr. Jacob) would epitomise his statement by saying that, in the experience which he had had, he had never seen a single case at any age, or under any circumstances, in which the slightest apparent cause for alarm, or even uneasiness, could be said to exist. He was well aware, from considerable experience of chloroform administration, that this could hardly be said of any ten consecutive cases of the administration of that agent; yet he did not hesitate to repeat that he had never seen even an embarrassment suggestive of danger to life follow upon the administration of ether by Mr. Morgan's method. On the contrary, patients who were submitted to its action under a condition of weakness, nervousness, or even physical defect, such as would inspire the most serious apprehension as regards the administration of chloroform, passed speedily into a calm, healthy repose, with every threatening cardiac or thoracic symptom mitigated. In two of his (Dr. Jacob's) cases, the beneficial action of ether had been verified by subsequent events. He had extracted two cataracts from an old man of 78, under the most favourable circumstances of anaesthesia, and, two months after his discharge from the infirmary, that patient had fallen down dead in the street from heart-disease; and another patient, who had taken the ether without the slightest alarming symptom, had, a few weeks afterwards in another hospital, been removed from the table without operation, in consequence of the supervention of the most alarming signs of cardiac paralysis from the use of chloroform. As regarded the alleged inconveniences of ether administration, he would ask the Section to give their earnest attention to what Mr. Morgan had said. He (Dr. Jacob) had heard, and was quite prepared to hear, that ether-inhalation was highly objectionable; that it was slow in its action; that it gave rise to violent delirium, great facial congestion, and embarrassing sickness of stomach during and after inhalation. He was well aware that the admixture of ether-vapour with a large volume of air—in fact, as it had been usually given, on a handkerchief, or a cone, or with Skinner's inhaler—was quite open to strong objection in these respects. He was conscious that gentlemen who had written and spoken their

unfavourable experiences of the agent, had spoken truthfully; and he thought the unanimity of their opinion must be fatal to the general use of diluted ether-vapour. But he (Dr. Jacob) altogether protested against the ether-vapour as given by Mr. Morgan's method—or any other method which would exclude the entry of air—being condemned on such evidence; and he trusted that the Section would not fail to recollect that all that they had heard or might hear said against ether was said of diluted vapour, and not of the undiluted inhalant. He could certainly say, as far as his experience went, that nothing could be more unjust and erroneous than such testimony, if it were applied to ether given by Mr. Morgan's apparatus; and he could furthermore positively aver that, if the undiluted ether-vapour were given rapidly and firmly to a patient whose stomach was empty, sickness or embarrassing excitement was extremely rare. His observation satisfied him not only of this, but of the fact that, if, by any misadventure, the air were admitted, all these embarrassing symptoms would be developed. Out of the whole number of cases, about 167 in which he had seen used Mr. Morgan's inhaler, there was violent excitement in six, and in four of these cases it was found that, by a disarrangement of the apparatus, the air had been admitted in large quantity. In short, he would venture to assure the Section that, if they could divest their minds of the unwillingness to give the ether-vapour pure, or with as little dilution as circumstances would permit, they would be speedily convinced that all the *désagréments* with which they were familiar would disappear, and they would be enabled to ensure a beautifully calm condition of anaesthesia, unattended with the distressing fidgetiness of which, in administering chloroform, he ventured to believe, every one of them was conscious.—Dr. SIBSON said that, although the question of anaesthetics did not now occupy his attention, yet, as he had worked at this point many years ago, he felt a deep interest in all that related to it; and he was glad to see that the inhalation-mask, which he invented in 1847, and which was adopted with acknowledgment by Dr. Snow, served as the face-piece for each of the ingenious and evidently efficient ether-inhalers that had just been shown to the Section. Dr. Sibson had himself invented an ether-inhaler in 1847, which worked well; it consisted of a spiral chamber, into which the ether was poured, and through which the inspired air impregnated with ether was drawn, the whole being lodged in an outer chamber. This apparatus and the inhaling mask were figured and described in the *Medical Gazette* for 1847. The important difference in the two classes of ether-inhalers that had been shown and explained to the Section by their respective contrivers, was illustrated by the instrument that admitted a current of fresh air during the whole process of inhalation, shown by Mr. Clover, and the instrument exhibited by Mr. Norton, which did not admit the entrance of any fresh air during inhalation. The question, then, apparently before them was, should the ether-vapour be inhaled pure and simple, or with an admixture of air? He need scarcely say that, if this were the question, the process without air would be the combined inhalation of ether and carbonic acid gas, or a combination, in the effects produced, of anaesthesia and asphyxia. But the question was not exactly thus, for Mr. Morgan's "no air" apparatus started with a certain amount of air in the instrument, the quantity of which had not been stated by its author and inventor. His process, then, was not a combination in its effects of pure etherisation and pure asphyxia, but a combination in its effects of pure anaesthesia and partial asphyxia. He would beg leave to invite the Section to keep the discussion as much as possible to the important question of ether-inhalation. With regard to Mr. Clover, he felt it due to that gentleman to say that he rendered the Chloroform Committee of the Royal Medical and Chirurgical Society essential service in the course of their inquiries, and that he then again and again showed his singular ingenuity in at once inventing any instrument that might be required—the same ingenuity that he had displayed in the invention of the instrument before the Section. He had named his old friend Dr. Snow, and he would gladly be allowed to pay a tribute to his memory. He was one of the most thoughtful, ingenious, inventive, and original observers in our profession, and the great importance of his labours in the question of anaesthesia, and in other questions not less important, has only of late years been fully recognised.—Dr. PROTHEROE SMITH mentioned his inhaler, exhibited at the Royal Medical and Chirurgical Society twenty-seven years since, constructed on the principle of a hookah. It effectually furnished fresh air highly charged with the vapour of the anaesthetic; of this, in comparison with the ordinary mode of administration, it saved seven-eighths—a drachm to an ounce. He had constantly employed it without a single failure or unfavourable result, an immunity which seemed to be peculiar to obstetric practice. With his inhaler, one saw and heard each inspiration of the anaesthetic, in consequence of the gurgling sound produced; so that the practitioner, having determined the number of inspirations necessary on the recurrence of the pains of labour, could, during the first

stages, entrust the instrument to a nurse whilst he wrote or read. In this way he had, in one case of a primipara, in great pain from a pelvic abscess complicating her labour, administered chloroform for two days and a night in succession, interrupting it only occasionally for a few minutes to give food. In reference to the plan which had been advocated, of respiring repeatedly ether-vapour in a short sack, without the admixture of atmospheric air or oxygen, if such were indeed feasible, one might live as well under water as above it. He advocated the employment of tetrachloride of carbon.—Mr. PRIDGIN TEALE (Leeds) said that, during the last twelve months, ether had been used as a substitute for chloroform in a large proportion of the cases in the Leeds Infirmary. It was used especially, and by preference, in the major and prolonged operations, such as ovariectomy, and in persons of feeble circulation and exhausted constitution, under the impression that it was attended with less risk than chloroform. The impression was confirmed by the fact that there was in such cases less anxiety than when chloroform was used. Ether had been given both by a large sponge, with a considerable amount of oxygen, and by Mr. Morgan's inhaler, in which little or no oxygen was admitted. Mr. Teale had not made accurate observations with a view to a comparison of the two methods; but the following were his general impressions. 1. There is less struggling when Mr. Morgan's inhaler is used than with the sponge; but there is at times considerable struggling. 2. There appears to be in anaesthesia by ether a considerable amount of asphyxia, as evidenced by blueness of the countenance, and by dark colour of the arterial blood. 3. One serious objection to the use of ether is this, that occasionally, after a patient returns to his ward, he is violent and excited, shouting and struggling. This state is usually prevented or allayed by the hypodermic injection of one-eighth or one-sixth of a grain of morphia. The black colour of the blood which has frequently been observed, not merely at the beginning, but at the later stages of an operation, and some time after administration of the ether, longer after than would be explained by mere asphyxia. 4. Anaesthesia is more rapidly induced by ether than by chloroform. 5. Much less ether is consumed in using Morgan's inhaler, than in using a sponge.—Dr. NORRIS (Birmingham) said that he had for some time past been engaged in a series of experiments upon animals, having for their object the determination of the relative value and safety of the anaesthetics in common use. He had sought to obtain, in the first place, an accurate notion as to the killing power or toxic energy of these several substances. For the purposes of his experiments, he had selected an animal of small size and considerable vigour, the common brown rat; and, as far as possible, he had chosen specimens of the same weight and size. The following is a sketch and description of the apparatus employed in these investigations.



- A. A glass vessel, the capacity of which is 220 ounces; perforated at the bottom to allow the insertion of the syphon tube (C). The mouth is fitted with an India-rubber stopper, through the centre of which is passed a glass tube, to be connected, when required for use, with the tube G. The mouth of the vessel is sufficiently large to allow the insertion of a full-grown rat.
- B. A stand made of wood, on which is placed another smaller one; in the side and top of the latter, holes are made through which the syphon-tube passes.
- C. An India-rubber tube, connected with the bottom of the vessel A, which acts as a syphon. When the vessel A is filled with water, and the tube G connected with the glass tube in the India-rubber stopper, the water is allowed to run off by the tap, D. The air rushes down (F) the pipe connected with the perforated coil into the vessel (E) containing the anaesthetic liquid, causing the vapour to pass through the tube G into the vessel A. When the chamber is full of vapour the stopper is taken out, the animal inserted, and the stopper quickly replaced.
- D. A small tap to allow the water to be gradually drawn off.

- E. A small glass vessel containing the anaesthetic liquid. It is fitted with an India-rubber stopper, into which is fixed a small glass tube connected with the tube G, also the tube F connected with the finely perforated coil.
- F. A metal tube, having a very finely perforated coil at the bottom. The coil is bound tightly with rolls of very fine muslin, in order to divide the air into minute areas. When the water is drawn off from the vessel A, the air rushes down the tube F, escaping through the perforated coil into the liquid. The coil must be entirely immersed in the liquid. The air, saturated with the anaesthetic, then passes through the tube G into the vessel A.
- G. An India-rubber tube connecting the vessels A and E, through which the vapour is conveyed from E to A.

As a preliminary experiment, it was ascertained that a full grown rat could live in this chamber, filled with common air, without inconvenience, for a long time, viz., about three hours. This possible source of error being eliminated, it was next sought to ascertain, as a standard of comparison, how long one of these animals would live deprived of oxygen by a means which allowed the diffusion of carbonic acid gas, and consequently prevented its accumulation in the lungs. This was accomplished by substituting pure hydrogen gas for common air. It was found that a strong rat would live in hydrogen for nine minutes. If now the apparatus were filled with common air which had been made to pass in finely divided streams through pure sulphuric ether, a vigorous rat inserted into the chamber rapidly become insensible, and the average time at which the respiration ceased did not exceed five minutes. The heart continued to beat for about a minute subsequently. If, instead of sulphuric ether, the chamber were filled with air which had been made to traverse chloroform, the animal fell over on to its side almost immediately, and both the respiration and heart's action ceased on an average in ninety seconds. On repeating the same experiment with bichloride of methylene, it was found that the behaviour of the animal was much the same, but that the respiration ceased in twenty seconds. In another rat, immersed in pure nitrous oxide, the respiration and cardiac action ceased in twenty-five seconds. In the course of these researches another curious fact came out. Instead of common air, the chamber was filled with pure oxygen which had been made to traverse sulphuric ether. The rat in this case soon fell over on to its side, was insensible to pain, with breathing rather jerky and alternating from quick to slow, but the respiration did not cease for eight and a-half minutes. The same experiment was repeated with chloroform and oxygen; and, in opposition to all expectation, the rat fell on its side, and the respiration and heart's action ceased in the brief period of thirty seconds. The same experiment was repeated with bichloride of methylene and oxygen; the result being that respiration was arrested at the end of forty-five seconds, but in twenty seconds was resumed and continued for forty seconds more. All these anaesthetics, then, when used in the most concentrated state practicable, were seen to be nearly as rapidly fatal in their action as carbonic acid gas. The following table showed the time in which death occurred with the several substances.

	min. sec.
Pure hydrogen gas	9 0
Common air saturated with sulphuric ether	5 0
" " " " chloroform	1 30
" " " " bichloride of methylene ...	0 20
Pure nitrous oxide gas	0 25
Oxygen gas saturated with sulphuric ether	8 30
" " " " chloroform	0 25
" " " " bichloride of methylene.....	1 45
Pure carbonic acid gas	0 8

Simple deprivation of oxygen destroyed life in nine minutes, as seen in the hydrogen experiment. Common air saturated with ether was nearly twice as fatal as simple deprivation of oxygen. Common air saturated with chloroform was six times as fatal as deprivation of oxygen. Common air saturated with bichloride of methylene was twenty-seven times as fatal. Pure nitrous oxide gas was 21.6 times as fatal. Oxygen saturated with ether amounted to nearly the same thing as entire deprivation of oxygen. The fatality of bichloride of methylene seemed also to be decreased by oxygen; while, in the case of chloroform, the fatal action appeared to be intensified by the presence of this agent. In all cases cardiac action had completely ceased with the exception of occasional contractions of the irrepressible right auricle, and in no case was the heart's action restored by artificial respiration. Galvanisation of the nervous masses produced no effect; but the general muscular system was frequently found irritable. With ether, the muscular tissue of the heart was often found to contract when galvanised, but in the case of chloroform and bichloride of methylene the paralysis of the heart appeared complete.—Dr. MARKHEIM (Paris) said that Dr. Norris's remarks had cut away much which he had intended to say. Practically, he thought that elaborate instruments were not required by surgeons for the administration of anaesthetics, a piece of lint or charpie being sufficient, provided

that an intelligent and experienced person watched the pulse. It was not necessary to administer the massive doses of the French, except in occasional instances, as in reducing dislocations. Dr. Demarquay and he had used, to some extent, tetrachloride of carbon during the Commune, and it appeared to them that the period of excitation was shorter than with chloroform anaesthesia, and the quantity of anaesthetic used less.—Mr. PADLEY (Swansea) remarked on the importance of keeping the room quiet while the patient was being anaesthetised.—Mr. JOSEPH ALLEN (Norwich) stated that he had been unfortunate enough some years ago to lose a case under chloroform; consequently he always gave chloroform with a certain amount of dread. He believed that it killed *per se*, and that any, the strongest even, might die under its influence. It was imperative, therefore, to listen to the claims of ether, and to give it a fair trial. But at the outset there was this difficulty: those who advocated the administration of ether were divided into two classes—those who insisted on the admixture of atmospheric air and those who excluded it. In all the cases which he (Mr. Allen) had seen, air had been carefully excluded even where suffocation seemed imminent, and all these had done well. The solution of this question, he believed, was to be arrived at by a careful examination and analysis of the symptoms of the *post mortem* appearances, and of the causes of death in all the fatal cases.—Dr. WYMAN (America) said that ether was used almost entirely and very freely in his country, and that the experience of the profession had conclusively proved the vastly greater advantages of ether over chloroform, in safety at least.—Mr. CLOVER, in reply to Mr. Morgan, said that he had not made any chemical examination of the atmosphere left in his inhaler after being used. Carbonic acid existed in the blood and in the air-passages, for the escape of which the apparatus had no provision. Moreover, Mr. Morgan admitted that the said atmosphere caused slight milkiness with lime water. Of course, Mr. Morgan did not mean that he gave ether-vapour without any air. His instrument contained more than 200 inches of air to begin with. He could only fill it with pure ether-vapour by keeping up the temperature to that of boiling ether. Admitting that the formation of carbonic acid was diminished in proportion to the degree of etherisation, there was a wide difference between the plan which allowed the escape of that which was already formed, and one which did not. In giving nitrous oxide, if no arrangement were made for the escape of carbonic acid, the recovery would usually be attended with headache. Diminution of the supply of free oxygen was an element in all forms of administering anaesthetics. With every sort of inhaler, some portion of the expired air was breathed again. There was no danger in the temporary withdrawal of free oxygen. Mr. Clover gave nitrous oxide with this view as a preparation for inhaling ether. His fear was, that ether might be given of sufficient strength to paralyse the heart. This was less likely to happen with Mr. Morgan's instrument than when it was given upon a warmed sponge or towel. The dusky of the blood mentioned as having been observed for some time after inhaling ether might be the result of the entrance of saliva or other fluid into the trachea. He had found this to happen chiefly in cases where the ether had been given of unusual strength. With respect to Dr. Norris's experiments, he thought them less conclusive than those performed by the committee of the Royal Medical and Chirurgical Society, when the precaution of inserting a tube in the trachea was taken, with the view of avoiding the differences arising from obstruction in the throat, voluntary or involuntary. He thought that pure ether-vapour was more fatal than Dr. Norris supposed.—Mr. MORGAN observed that Mr. Clover had made the statement as to the formation of carbonic acid before he had heard his remark, or of his testing in this way; evidently, therefore, his statement was based more on theoretical than on practical and direct experimental grounds. He (Mr. Morgan) believed that the air already in the chest and apparatus would sufficiently explain the source of the milkiness in the lime-water in the rough experiment he had made. For his own part, so long as the result was satisfactory, and the greatest safety was attained, it did not cause him much concern even if it were proved absolutely, not theoretically, that carbonic acid was formed.

Laryngeal Phthisis. By PROSSER JAMES, M.D.—The object of the author was, by specimens and coloured drawings, to correct some prevailing errors respecting this disease, and to show that it is not necessarily so rapidly fatal as commonly asserted. Cases in which the larynx is not affected until after considerable progress has been made in the disease in the lungs are very unfavourable. The author admitted the existence of primary laryngeal phthisis, occurring when the lungs were not perceptibly affected. He had met with such cases. Extreme anaemia of the laryngeal membrane had in many cases been found to precede consumption. It was not, of course, an infallible sign, but it was not to be neglected. A more important symptom was the existence

of polypoid excrescence at the posterior commissure, which might resemble closely those seen in syphilis. Such growths might be simple; but in many cases of consumption this was the first symptom, and it was of graver import if there were any cachexia. Inflammation of the arytenoids was common, especially in secondary phthisis. The same condition might occur in catarrh. Hence some caution was to be observed respecting it. Swelling and thickening of the epiglottis was sometimes the most prominent symptom. Local swellings and thickenings of other parts were equally common through a large part of the progress of laryngeal phthisis. The false cords were particularly prone to take on diseased action. These swellings were to be distinguished from those of simple inflammation. The parts lost their transparency, and were the seat of deposit of a greyish or yellow matter. Ulceration was the next stage. In tubercular swellings or excrescences, erosion soon appeared, generally about the little yellow points that were seen. The true vocal cords were also liable to ulceration. Perichondritis with necrosis might occur. Among general symptoms cough and expectoration were slight or absent in pure laryngeal phthisis, but dyspnoea and dysphagia were almost always present. Most authors declared that laryngeal phthisis was necessarily and rapidly fatal. The author of the paper asserts that this form of consumption might be arrested; and most of the drawings were intended to prove this. The most fatal cases were those in which the laryngeal disease was secondary to pulmonary consumption. The later it appeared in these cases, the more rapid was its course. Among the cases arrested, was one in which the lungs were also affected. The patient was a singer, and when first brought under the author's care had softening at the apex of one lung. On laryngoscopic examination, the epiglottis was seen to be thickened and its edge serrated by ulceration. The arytenoids were swollen. There was an ulcer on the left vocal cord. After several weeks of treatment, the disease was completely arrested, and the patient resumed public singing. Each case must be treated according to circumstances. Excessive topical interference was most dangerous. Inhalations and the use of atomised fluids or sprays were the safest and best applications.

NOTES ON BOOKS.

On Elephantiasis Græcorum (True Leprosy). By ROBERT LIVEING, M.D., Physician to the Middlesex Hospital, etc. Longmans. 1873.—Leprosy is a disease which has always attracted more attention than mere practical considerations—in England at least—would seem to warrant. The frequent reference to it in ancient literature interests the historian and antiquarian; its wide, yet apparently capricious, distribution interests the geographer and ethnologist; whilst bad nomenclature and puzzling synonyms so obscured the subject as to render it for a long time a favourite with *savans* of an argumentative turn. This little book is based upon the Goulstonian lectures delivered by Dr. Robert Liveing at the College of Physicians in the spring of this year, and we can conscientiously recommend it to all who want a clear, concise, and pleasantly written account of the present state of our knowledge of leprosy and its allied diseases.

Essays on Diseases of Children. By WILLIAM DAY, M.D., F.R.C.S., Physician to the Samaritan Free Hospital for Women and Children. Churchill. 1873.—One scarcely knows by what standard to judge a book of this kind; the essays are neither systematic accounts of diseases, nor are they exactly clinical lectures. Judged as papers read before a medical society, and intended to raise a discussion, they are good; but they do not show to equal advantage in their present "essay" dress. The subjects best adapted for such treatment seem to us to be the explanation or elaboration of points which, though important, are but slightly noticed in systematic treatises. No one would be likely to go to Dr. Day's book for an account of croup; but his chapter on the Causes and Treatment of Headache in Children is interesting and instructive. We must protest against Dr. Day's proposal to revive the happily almost obsolete term "infantile remittent fever." The diseases which were commonly confounded under this name were commencing tuberculosis and typhoid fever, together with any other cases which, through ignorance or carelessness, the practitioner could not diagnose, especially subacute pleurisy. Dr. Day admits that he has no belief in infantile remittent fever as a separate and distinct disease, and that the term itself is vague and ill-defined; but he would apply it to mild cases of typhoid, because it is alarming to the friends to be told the true nature of the disease. But it must be remembered that, even in these mild cases, dangerous complications sometimes occur, and that the use of the euphuism would probably be an excuse for dangerous laxity in treatment, especially on the part of the friends.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 4TH, 1873.

A FEW WORDS TO STUDENTS.

THOSE who intend to enter this session on the study of medicine have by this time for the most part selected, or have had selected for them, the schools which they are to attend, and the diplomas and degrees at which they are to aim. We will only counsel them to aim high, and to bear in mind the advice of Major Pendennis to his nephew; interpreting it in the best sense. It is as easy for a gentleman to keep good company as bad in the world of science, as well as in the world of fashion. There are few men, indeed, who are not capable of taking the most esteemed degrees with as much ease as those which are least esteemed, if the resolution to do so be adopted by them and acted upon from the first. It is the first step which is all important. If a lad of moderate abilities resolve to achieve for himself the most respectable professional titles, he has only to set himself steadily to work from the first. It is a very great mistake to suppose that the best degrees belong only to the men of the most eminent ability, or that the upper ranks of the profession are exclusively filled by men of unusual capacity. The average of ability is no doubt highest in the highest professional ranks; and, owing to the superior advantages of observation in extensive fields, and opportunities of seeing and necessity for studying difficult cases, the average of knowledge and skill is decidedly greater among the most highly placed practitioners. But an investigation of the intellectual claims of the class of hospital and consulting practitioners, will very soon convince the observer that the majority have won their way by steady application, by early and honest ambition to rise to a high standard of knowledge, and to an extended field of usefulness; and that, together with a few men of great capacity and many others of real ability, there are a great number possessing barely average natural genius, and of very mediocre intellectual calibre. It is so, indeed, in all professions; and, from this indubitable fact, the student must draw the old but always new inference, that his talisman of success will be to aim high, and to persevere. With moderate ability and fair health, any man can now command a fair measure of success in medicine, if he bring to his task sheer honesty of purpose and a manly determination to do every day his whole work, to leave nothing to chance, and to sacrifice nothing to appearances. The advice is homely; it is old; it is self-evident; yet we may feel perfectly sure that only a portion of those who read it will feel penetrated with its truth, will know within themselves that they have adopted it, and will make it the rule of their life. These will be happy, for they will deserve success, and cannot fail to realise as much of it as will reward a life's exertion. They cannot fail to become really what they wish to be thought, to rise to the capacity of doing well the noblest kind of work which can fall to a man's lot. A well-spent professional life can satisfy the aspirations of any intellect; and will furnish aliment for the tenderest and most lofty moral nature.

The school once chosen, and the rule of work adopted, the student may be advised to bethink him that he belongs to a new era of science, and sees before him the dawn of a higher art of medicine than we yet know. The application of exact methods and of instruments of precision to the investigation of the course and origin of disease, and the observation of the action of medicines, is only now beginning to have its due in-

fluence. Every man who enters upon the medical profession in this day, should feel himself in some sense an apostle of science as well as an apostle of humanity. Many centuries of observation without precise instruments, without accurate physical knowledge, without advanced chemical skill, have left medicine a formless chaos of doubt and uncertainties, swaying backward and forward, through excesses and reactions, in favour of and against bloodletting, mercury, purgation, tonics, alcoholic stimulation, and the like. There are very few drugs, if any, of which we know the action, more than very roughly and incompletely. There are very few diseases, if any, of which we even know the natural history completely. And there is perhaps not one of which we could say that it would be treated exactly in the same way by a dozen men, if they were all called separately to treat it at the same time and in the same patient. There is, therefore, much to be done; and to take his part in the work, and to be at all worthy of his functions as a healer of men, the student must learn to appreciate and to use all the resources which modern science places at his disposal. He must become an anatomist, a physiologist, a physicist, a chemist, and a skilled clinical observer. He must value above all things a sound and thorough familiarity with the means which are now in use of physical, chemical, and optical investigation of diseases; and he must learn to feel that, even when skilled in their use, he is practising an art which taxes all the faculties, and which the greatest men have found to impose a severe strain upon their industry, their intelligence, and their strength of purpose.

MEDICAL ANSWERS TO LAY CORRESPONDENTS.

OUR attention has been called by a correspondent to the column in the *English Mechanic* headed "Our Medical Column, edited by William H. Stone, M.A., M.B.Oxon, Fellow of the Royal College of Physicians, Senior Assistant Physician and Lecturer on Physics at St. Thomas's Hospital." In this column, Dr. Stone gives answers to a number of persons "anxious for a remedy for various ailments," and advice gratis generally on a great number of subjects. We confess to having perused it with great bewilderment and an astonishment bordering on incredulity. It seems to us hardly possible that a fellow of the College of Physicians and a hospital physician should at any time, or for a moment, regard any such column with other than feelings of pain and contempt. The abuses of indiscriminate advice gratis are tolerably well-known, and hardly need to be recapitulated. But, of all forms, this is surely the worst and most degrading; the most liable to abuse, the least capable of being useful, and one which subjects a physician who takes part in it to influences and imputations so painful, that it is with a feeling of extreme regret that we find the name of an estimable and well-informed physician, occupying a highly honourable position, connected with the practice. We had thought, indeed, that the whole proceeding was so manifestly wrong, so evidently disgraceful, and so palpably mischievous to all concerned, that it was not possible for a man of the gifts, capacity, and right feeling of the physician, to entertain the idea of doing anything else than helping to crush such a practice if brought under his notice. Practised as Dr. Stone practises it, the art of replying to anxious querists in the medical column is, indeed, robbed of many of its worst features. He prescribes little and in the vaguest manner; and, in reply to one querist, he says: "I do decline to answer, and still more to publish, nasty questions;" while he urges another to consult "his own medical attendant." To say this is, however, only to say that he attenuates the evils inherent in the practice to which he gives the weight of his assent, the influence of his name, and of the connexion, publicly announced, which he has with the Royal College of Physicians as one of its Fellows, and with St. Thomas's Hospital as one of its physicians. It may, however, very much be doubted whether, in making the proceeding somewhat less mischievous than it is apt to become in other hands, he succeeds in making it at all more respectable. The persons who thus write for advice for their maladies are led to expect a genuine article; and in diluting the advice with general observations, and recommending only "some simple preparation of iron," or

"a few experimental doses of quinine," a great deal of harm may be done to persons to whom it is desired to do a little good.

It would really seem to be repeating the most evident truism to say that, in giving advice gratis to the correspondents of a journal on the strength of their own account of their cases, without opportunities of personal examination, without the information derivable from well directed professional questions, a physician does much to bring his art and himself into contempt. It seems also palpable that no check of any sufficient character can thus be kept upon the worthiness of the claimants for gratuitous assistance. Nor does it make things much better, that, in the particular page forwarded to us (*English Mechanic*, Sept. 19th), Dr. Stone is repeatedly sitting in judgment on practitioners who have had the opportunity of carefully studying the cases of their patients, and deciding and publicly stating, upon the utterly insufficient data of their patients' short accounts of their own ailments and the treatment adopted, whether or not that treatment is judicious. Looking at the whole matter from the only point of view which we can discern, we feel bound to say—and we do so with pain—that Dr. Stone appears to us to be derogating most seriously from his duty as a physician, and to be giving his aid, sanction, and active assistance to a proceeding which calls for the very gravest and most crushing censure. He has the manliness to append his name to his work, and to head the column with his full style and titles; but in some sort this makes the matter worse, for it savours unavoidably of a very bad form of advertising, and it makes the College of which he is a Fellow an accomplice to his doings. It is, indeed, evident that the College must decide upon the question. It is, we apprehend, the first time that such a question has been brought before it; but it cannot fail to notice the matter in some form. It is, of course, open to Dr. Stone to state the view which he takes of the subject, and to explain wherein he differs from that which we have expressed. His whole character, career, and professional relations make it certain that he would not willingly enter upon a course which he believed to be a wrong one; yet that which he is doing in this case seems to be wrong beyond the power of setting right, degrading to his art, discreditable to his College, and injurious to the public. It is, indeed, so entirely without respectable precedent or apparent justification, that we must conclude, as we began, by saying that we are filled with astonishment and impressed with sincere regret to find him engaged in it, and altogether mystified when we attempt to speculate on the motives which could have induced him to enter upon, or the reasons by which he can consider himself justified in adopting, such a course of action.

ALBUMINOUS EXPECTORATION.

I.

A VERY lively and very long drawn out discussion on this subject has occupied a good deal of the time of some of the societies, and of the space of most of the medical journals, of France, since the beginning of the year. The debate appears to be drawing to a close; and we avail ourselves of a spirited summary by M. Labbé in the *Mouvement Médical*, to give our readers a review of what has been said and written on the matter.

A tout seigneur tout honneur. M. Terrillon, last March, defended an unusually good and interesting thesis on the *Albuminous Expectorations following Thoracentesis*. He is the cause of all the commotion; armed by twenty-one observations, of which six are unpublished, he started the debate. He did not wish, he said, in any way to attack the favourable position of thoracentesis; his aim was to draw attention to that phenomenon, which M. Pinault was the first to point out in his thesis in 1853, in which he sought to arrive at its rational explanation. In 1869, M. d'Espine communicated to the Société de Biologie two instances of abundant serous expectoration following thoracentesis. In 1872, M. Woillez, in his clinical treatise on acute affections of the respiratory organs, quoted observations of this kind (pp. 4, 8, *et seq.*). M. Marrotte, on May 22nd, and M. Béhier, on July 30th, com-

municated to the Academy of Medicine facts on the subject worthy of attention.

It will be well to examine *seriatim*, by the light of this discussion, the symptoms and kinds of expectoration which ensue after thoracentesis; the origin of the expectoration, its duration, the nature of the fluid, and its quantity; the mechanical and microscopical examination of the two fluids and the two deposits, one proceeding from thoracentesis, the other from expectoration; and the symptoms and complications. After this, the various hypotheses which have been adopted to explain this accident may well be considered.

The expectoration of albuminous fluid after thoracentesis, according to M. Terrillon, presents three different characters, according to the quantity expectorated, and the gravity or mildness of the symptoms. The mild form is characterised by slight dyspnoea, and by the expectoration of a fluid in which the presence of albumen is revealed by nitric acid, and which varies in quantity from a few up to 700 or 800 grammes, when it has attained a sufficient duration, which may vary in time from a few hours to about a day. The intense form bears the following characteristics: acute dyspnoea; abundant expectoration (1200, 1500, 2000 grammes, and even more); frequent cough, generally spasmodic, accompanied by fine subcrepitant râles. The duration of these symptoms varies from several hours to a whole day. In the third and most serious form, the patient, after twenty or five-and-twenty minutes of comparative quiet, is suddenly seized with acute, very intense, and most painful dyspnoea, with spasmodic cough, accompanied by a frequent spitting of froth, after which death supervenes, with all the symptoms of asphyxia caused by the accumulation of liquids and spumous matter throughout the respiratory system. M. Terrillon relates only two fatal cases out of the twenty-one which he has been able to bring together, to which MM. Béhier and Liouville have added the record of a third. The escape of this albuminous liquid generally takes place from ten minutes to one hour after thoracentesis. It is of a yellowish colour, more or less transparent according to the amount of expectoration; a persistent froth forms the upper layer, the middle layer being represented by the fluid, and the lower layer by a deposit of mucous products given off by the bronchi. It coagulates when treated with nitric acid.

The analysis made by M. Bergeret includes the daily examination of the two fluids, and the microscopic examination of the deposits of both. The pleural fluid evacuated by operation was, after filtration, amber coloured, alkaline, and poor in mucine. A hundred grammes treated by an alcoholic solution of carbolic and acetic acids (Méhu's reagent), gave 1.61 grammes of albumen after drying. The expectorated fluid, mixed with mucus, was, after filtration, clear, slightly tinged with red, viscous, alkaline; and when treated with acetic acid, gave a copious precipitate of mucine; 100 grammes, precipitated by Méhu's reagent, gave 1.42 grammes of dried albumen mixed with mucine. The microscopic examination of the deposit of the expectorated liquid showed epithelial cells in large quantity, together with pus-corpuscles and sometimes red blood-corpuscles. In the deposit of the liquid of thoracentesis, pus-corpuscles only, and very few red corpuscles, were seen.

The question arises, what are the possible relations between albuminous expectoration and the copiousness of the effusion? The cases reported by M. Terrillon show, in the first instance, the abundance of the liquid in the pleural cavity, of which the average was generally from two to two and a half quarts. The most minute care was always observed in the operations. As to the more or less grave complications which may have preceded the operation, it is easy to agree with M. Terrillon, that they could not possibly have had any direct influence on the accident under consideration. The syncopal condition, the cough, the striking of the lung against the cannula, the passage of air through the cannula, have all been given as predisposing causes, but very reasonable explanations have been opposed to such interpretations of the phenomena. The influence of the nature and age of the effusion on the production of the expectoration has been decisively

proved to be *nil*, since the majority of the cases (15 out of 20) were instances of acute pleurisy, in which thoracentesis was performed twenty or thirty days after the commencement of the disease. Nor can heart-disease be really considered as a predisposing cause; since it either did not exist or was not detected in the cases of pleurisy. One circumstance remains to which some importance might be attached; the rapidity with which the pleural liquid made its escape was noticeable in all the cases cited by M. Terrillon. We shall return to this point. The expectoration can certainly not be confounded with bronchorrhoea—its difference of character is quite clear, as shown by the reaction given by adding nitric acid.

We now arrive at the hypothesis by which this expectoration has been explained. *Auctores certant*; and we find ourselves in presence of four opinions, arranged by M. Terrillon in the following order: 1. Perforation by the trocar; 2. Spontaneous perforation; 3. Reabsorption of the liquid remaining after thoracentesis; 4. Transudation of the sero-albuminous liquid through the alveolar walls, in consequence of rapid pulmonary congestion.

M. Féréol attributes the albuminous expectoration to the *passage of the pleural liquid by the lung*. In order to explain the spontaneous perforation, he imagines a special change, characterised by destruction of the epithelium and the connective tissue of the pleura, a sort of membrane being thus formed, which would allow the filtration of the pleural liquid into the lung, and its expulsion by the bronchi, without allowing the air to pass. This theory has caused one of the first who denied spontaneous perforation, M. Dujardin-Beaumetz, to remark, "Then let us employ powerful suction, such as that of the aspiratory apparatus." It is as difficult to demonstrate the existence of this perforation without pneumothorax, as it is rare to meet with pleuro-bronchial perforation in the adult. All observers have seen and cited instances of spontaneous pulmonary perforation, without pneumothorax, in purulent pleurisy; but not at all, or very rarely, in serous pleurisy. M. Barthez has demonstrated that in children absence of pneumothorax is the rule.

M. Féréol says that, there having been a preparatory process, ulcerative or otherwise, a fit of coughing comes on, and perforation occurs in the struggle. M. Moutard-Martin asks how this perforation is accomplished? and M. Féréol's answer is, "By a violent effort directed from the bronchial tubes towards the pleura; by a forced distension of the lung, which is no longer supported by a sufficient compression of the effusion; the air then contained in the bronchial tubes would be driven towards the pleura." This perforation, however, should take place at the moment when the vacuum is produced; but albuminous expectoration shows itself at a more or less distant period after the operation. We might further cite, against spontaneous perforation, Boule's case from Béhier's lecture (*Union Médicale*, 175), where the patient underwent four successive thoracenteses, each followed by albuminous expectoration. It is in fact not possible to admit that four spontaneous perforations should have occurred in one subject, or that they should have been found in both lungs, the operation having been performed on both sides. We must therefore give up M. Féréol's very ingenious hypothesis, and the subtle explanations with which he supplements it.

THE Clinical Society commences its session on Friday, October 10th.

FOURTEEN deaths have already occurred at Wolverhampton since the commencement of the outbreak of typhoid fever.

ACCORDING to French papers, M. Nélaton has left 7,000,000 *francs*, or £280,000. He had private means, and amassed a considerable sum of money by his profession.

THE Pathological Society of London commences its session on Tuesday, October 21st, at 8 P.M., in the rooms of the Royal Medical and Chirurgical Society, Berners Street.

DR. EDWARD MACKEY is a candidate for the physicianship of the Queen's Hospital, Birmingham, rendered vacant by the resignation of Dr. Fleming.

WE are glad to hear that Dr. Braxton Hicks has recovered, and has resumed his duties. Mr. Erichsen's health, which was seriously endangered by a dissection-wound, as in the case of Dr. Hicks, is, we are pleased to know, now completely restored.

THE Temperance Hospital in Gower Street, London, will be opened this evening (Friday) at 7 P.M. by Samuel Bowly, Esq. The medical staff, it is stated, consists of a house-surgeon, two visiting physicians, and one visiting surgeon.

A NEW HOSPITAL.

ON Saturday, the Archbishop of Canterbury opened a hospital at Croydon, which has cost over £10,000, and is capable of meeting more than the ordinary requirements of the constituency, now numbering over sixty thousand persons. The building is of approved construction, excellently and salubriously situated. The large sum needed to defray the entire cost has not yet been raised; but the subscriptions so far are very liberal; and about £300 were subscribed at the opening of the hospital, after an eloquent appeal by the archbishop.

TYPHOID FEVER IN MARYLEBONE.

A REPORT on the outbreak of typhoid fever in Marylebone from the use of the milk of the Dairy Reform Company, was presented to the Vestry on September 25th by Dr. Whitmore, medical officer of health for the district. The report is drawn up in a concise and comprehensive manner; but, as the details have already appeared very fully in our pages, we need not recapitulate them. He says that to the letter which he addressed to his professional brethren through the medium of the medical journals, and to the circulars which he also sent to every medical man in the parish, he received upwards of two hundred answers. Of these, fifty-seven gave information of the disease existing in families resident in St. Marylebone and the neighbouring parishes of St. George's, Hanover Square, and Paddington. To this must be added many other cases communicated to him by Dr. Murchison, which bring the estimated number of families in which the disease occurred to about ninety, and the number of persons attacked to about three hundred and twenty. These figures exclude all doubtful cases, and are, he is satisfied, considerably less than the actual number. The largest number of these cases occurred in Marylebone, and the smallest in the parish of Paddington. He details the means which were energetically carried out in his parish to prevent the spread of the fever. The report has been printed, and will be taken into consideration at a future meeting of the Marylebone Vestry.

THE CONVICT PRISON, PORTSMOUTH.

DR. DAVID NICOLSON has been appointed successor to Dr. Wilson as Medical Officer to the Portsmouth Convict Prison. Dr. Nicolson has contributed several able and valuable papers, several of which have appeared in the JOURNAL, to the literature of prison statistics and criminal psychology, subjects which receive but too little attention in this country. Dr. Nicolson's rapid promotion is a well deserved tribute of the authorities to his services.

ADULTERATION.

DR. WHITMORE, analyst for Marylebone, has presented a report, in which he states that he had analysed articles of food and drink sold in the parish, comprising nine samples of bread, seven of flour, one of brandy, four of milk, two of black tea, six of ground coffee, one of pickled onions, one of port wine, and five of mustard—in all, sixty samples. With regard to the bread, two samples appeared to be genuine, five contained alum in very small quantities, and two in considerable quantities; and in these last two cases the vendors were prosecuted and fined. Of the seven samples of flour, two only contained traces of alumina. The brandy was genuine and excellent in quality; it was sent by a gentleman who said he "always felt ill after drinking it." Of the three samples of milk, two were genuine, and one adulterated with about 28 per cent. of water; and in this case the vendor

was prosecuted and fined. The two samples of cocoa were sold as prepared, and not as genuine cocoa; both contained cane-sugar and starch in considerable quantities. All the samples of black and white pepper appeared to be genuine; some were more coarsely ground than others and appeared to contain a large quantity of husks, but no foreign substance could be detected. The twelve samples of tea varied very considerably both in quality and appearance; in some, which were purchased for 1s. and 1s. 2d. per lb., they appeared to be mixtures of broken leaves, stalks, and dust; the infusions of these samples were by no means agreeable either to the taste or smell, yet they appeared to be free from adulteration. One sample, which to appearance was good tea and free from stalks and other tea-refuse, was found to contain at least 17 per cent. of iron filings, together with some small portion of sand, and in this case a summons had been taken out against the vendor. Of the six samples of coffee, four were sold as genuine coffee and were found to be so; the other two samples were labelled as mixtures of coffee and chicory, and Dr. Whitmore is of opinion that the permission to sell a mixture of coffee and chicory should be qualified by requiring the vendor to state the exact proportion of the chicory added to the coffee. In the samples examined the chicory was very largely in excess, but the price charged was not very much less than that paid for genuine coffee, although chicory may be bought for one-third of the price. The pickled onions were labelled as having been "prepared with the very best malt vinegar;" but the vinegar was very largely diluted, and a very considerable quantity of common salt had been added. The port wine was evidently a made-up wine. It was very acid, but it did not contain either logwood or alum. Of the five samples of mustard, one only approximated to genuine; the other four were adulterated with wheat flour and turmeric. As these samples were sold without any qualification, but simply as "mustard," it was intended to take out summonses against the vendors of them. Since the Adulteration of Food Act has been in force the quality of many articles of food and drink sold in the parish has become improved, especially the milk and bread.

REST IN PULMONARY CONSUMPTION.

DR. BERKART has recently instituted a novel treatment of pulmonary consumption. He thinks that rest, which plays a most important rôle in the treatment of surgical diseases, must also be of signal service in that of parenchymatous inflammation of the lungs. The respiratory movements of, and the contact of the atmosphere with, the inflamed portions of the lung, cannot, he thinks, but exert an injurious influence on the progress of the disease. Dr. Berkart maintains portions of the lungs at rest by means of strapping and bandages. He is sanguine, from the results which he has hitherto obtained, that this mode of treatment may be of valuable assistance in coping with such a protean malady.

THE NEWCASTLE DISPENSARY.

THE Resident Medical Officer, Mr. H. E. Armstrong, has furnished an interesting and comprehensive annual report of the Newcastle Dispensary, in which useful diagrams of the principal zymotic diseases are given, showing the relative monthly proportions of each in the four districts included in the work of the Dispensary. The returns presented in the report verify those given by the Registrar-General, which show the health of the town during the annual report for 1872-73 to have been most unsatisfactory. Zymotic diseases absorb more than one-seventh of the cases treated, and one-fifth of the recorded deaths. From the tables given, the prevalence and fatality of scarlatina are manifest. Diarrhoea has been extremely severe. The death-rate of the town in general appears to have been high, being, at the date of the report, 40 per 1,000 living, the highest in the kingdom.

THE CHOLERA IN EUROPE.

THE latest reports on the cholera in Europe indicate a decrease in the number of cases and of deaths. In Berlin, from September 23rd to 25th, there were 25 new cases and 10 deaths. In the other towns of Germany where the disease has been prevalent, it has either dis-

appeared or is in course of disappearance. In Vienna, the daily numbers of cases from September 16th to 23rd were, 41, 42, 43, 42, 28, 48, and 29. The cases are also milder; the death-rate has fallen to 40 per cent. In Pesth, there were 61 deaths from cholera during the week from September 6th to 13th; the number for the month of August having been 955.—In Paris, from September 16th to 22nd, there were 103 deaths—55 in the city, and 48 in hospitals.—In Roumania, from September 11th to 18th, 558 new cases occurred. The total number of cases during the week was 882, of which 256 died, 364 recovered, and 262 remained under treatment.—The *Times* correspondent in Naples writes that the registered cases of cholera up to Saturday amounted to 175. The deaths were something more than half. On September 17th, there were 18 cases of cholera and 15 deaths; on the 18th, 22 cases and 9 deaths; and on the 19th, 10 cases and 7 deaths. The number is not large, considering that the population is upwards of 400,000 persons. By order of the Prefect, all fairs and popular *fêtes* are prohibited in Naples; and the Prefect of Rome has prohibited the pilgrimage to the shrine of the Madonna della Mentarilla, which is performed on the 27th, 28th, and 29th of September. The existing epidemic does not present any very alarming features, and there is no panic. Indeed, throughout Italy, cholera has assumed a very mild form.

CHOLERA AT LIVERPOOL.

LIVERPOOL has had two narrow escapes from a cholera epidemic. A ship from Havre managed, apparently through the inefficiency of the sanitary regulations, to gain admission into the port of Liverpool with cholera on board. Three deaths took place on the day of its arrival, and the bodies were at once buried at sea. No further case has since occurred amongst the crew, who, we are informed by Dr. Trench, the medical officer of health, were all healthy on Tuesday. The vessel has been carefully disinfected, and it is visited daily by a medical man. It lies in the quarantine ground on the river. A second vessel gained admission into dock with cholera on board. On the morning of its arrival, one of the crew presented himself at the Southern Hospital, was removed to the Toxteth Park Workhouse, and died on the following day.

TYPHOID FEVER AT RISLEY.

MR. ROBERT STEDMAN, Medical Officer of Health for the Bedford District, gives a melancholy picture of the sanitary state of Risley, where cases of typhoid fever are at present not un plentiful. Some of the cottages "are amply supplied with every element for the production of typhoid". He found one cesspool running over and discharging its contents into a ditch; in close proximity to which, again, was the usual polluted well. This propinquity of cesspools and the drinking-water wells appears to be quite a feature of the village. At present, strange to say, there are only four centres of infection. A scarcely less unfavourable report is given by Mr. Stedman of the sanitary condition of Harrold. It is evident that the medical officer of health for the Bedford District has plenty of work before him. We are glad to learn that none of the cases which have recently occurred at Risley have proved fatal.

DEATH OF DR. CZERMAK.

DR. CZERMAK, Professor of Physiology in Leipzig, died on September 16th of diabetes, at the early age of 45. His name is familiar in connexion with the laryngoscope, which, though he was not actually its inventor, he improved and rendered capable of introduction into ordinary use. Dr. Czermak was a native of Prague, where, after graduating at Vienna, he was in 1851 appointed assistant in the Physiological Institute. This post he held four years; and, after filling the office of professor of physiology first in Cracow and afterwards in Pesth, he returned to Prague as director of the Institute. In 1865, he accepted an invitation to become professor of physiology in Jena, and in 1869 was appointed to a similar chair in the University of Leipzig.

DEATHS IN ENGLAND.

AN official document has been issued showing the average annual proportion of deaths from specified causes at specified ages in England generally, and in each registration division and registration district, during the decennial period 1861-70. The return embraces a mass of figures of interest to the statistician. The deaths in the ten years numbered 4,791,500 in the aggregate. The deaths are calculated per 100,000 living of each class referred to. In 1871, the population in England and Wales was 22,712,266. In London, the deaths from all ages and from all causes were per 100,000 living of each class, 2,431; from fever, "typhus," 89; diarrhoea, dysentery, and cholera, 129; scarlatina, 114; diphtheria, 18.

SUCCESSFUL REMOVAL OF THE SPLEEN.

IN the *Raccoglitore Medico*, Dr. Sorsino gives an account of a case in which, on June 20th, Dr. Attilio Urbinato of Cesino removed a hypertrophied and mobile spleen. The incision was made in the middle line, and prolonged above the umbilicus, being at least seven inches in length. The operation was performed without much difficulty. After tying three small cutaneous arteries, opening the peritoneum, and drawing aside some loops of intestine, the spleen was seen, free from all abnormal adhesions, and of enormous size. At the inferior part was seen the gastro-splenic epiploon, which was adherent; and the vessels here were extremely dilated. At the upper part was seen the lower portion of the pancreas. The epiploon was detached, and the vessels tied. The ligatures, seven in number, were left inside without further precaution. The few adhesions of the pancreas were overcome without difficulty, simply by means of the finger. The largest vessels, and the connective tissue which surrounded them, were secured by a metallic loop and hempen ligature. The "toilette" of the abdominal cavity was made with great care. The patient lost but little blood. The ligatures of the vessels tied were passed out between the sutures, of which there were five deep and five superficial. The spleen weighed 2½ pounds. The operation lasted an hour; the patient bore the chloroform well, and subsequently appeared to be progressing favourably, but died of peritonitis three days after the operation.

CHOLERA AT BANGKOK.

THE following extract from a private letter from Bangkok is published in the *North China Daily News*. Cholera is raging here. There is a prison about two hundred yards from my house, exactly one-tenth of the prisoners in which have died, and about one-third have been dead or are sick. In the next garden to this the gardeners have been decimated in a fortnight. In our garden there have been but few cases, and these have been reported to me at once and have been happily cured by laudanum, chlorodyne, and brandy, in the first stage, and camphor-water and acetate of lead as a second resort. The panic has been wonderful. For one or two days at the worst time, the place seemed almost a city of the dead. Save the boats of foreigners, one saw no craft moving in the usually busy river. The people seemed to have fled to their inner rooms, and one felt almost alone.

CHARGE OF CONSPIRACY.

A VERY painful case, which has recently been repeatedly before the Westminster Police Court, was brought this week to a satisfactory issue. We refer to the charge made against Dr. James Edgecome, of conspiring with two persons named Tuckfield, man and wife, to defraud the Metropolitan Railway Company of £2,000, which sum was claimed as damages by Tuckfield on account of injuries alleged to have been received in a railway accident. When the case was last considered, Mr. Montagu Williams, the counsel for the prosecution, said that, looking to all the circumstances, he felt that he could not carry on the case of conspiracy further. The charge against Dr. Edgecome, and also against Mr. John Webb, Tuckfield's attorney, was therefore withdrawn. The magistrate, Mr. Woolrych, said that, after what had been heard, he was bound to acquit the gentlemen charged of

all complicity in anything like a conspiracy or fraud with the Tuckfields. The medical gentleman employed by the company was proved to have agreed that the symptoms and injuries were those of a railway accident; and the company had offered to compensate the defendant Tuckfield. We think it right to state that Dr. Edgecome is personally much esteemed by many professional men well able to appreciate his character; and that they have been at pains to assure us, during the progress of the case, of their conviction that he is incapable of doing anything unbecoming his professional character. The present inquiry has necessarily been to him a source of the utmost pain and of protracted suffering. We can but congratulate him that, so far as he is personally concerned, his character has been entirely cleared; and we trust that he will not in any way suffer from the infliction of a most unpleasant trial, from which he has emerged blameless.

THE BRITISH ASSOCIATION.

THE income of the British Association for the Advancement of Science is largely derived from the payments made by the resident population of the towns at which the annual meeting is held, for the privilege of attending the meetings, hearing the addresses delivered, and taking part in the public entertainments. The following is a return of the income derived from payments at each of the annual meetings of late years: 1868 (Norwich), 2,004, £2,042; 1869 (Exeter), 1856, £1,931; 1870 (Liverpool), 2,878, £3,096; 1871 (Edinburgh), 2,463, £2,575; 1872 (Brighton), 2,533, £2,649; 1873 (Bradford), 1,983, £2,102.

ADMINISTERING A LOVE POTION.

THE *Madras Times* says that the practice of procuring drugs, and having them administered with the view of engaging the affections of hard-hearted swains, seems not to have fallen into desuetude in the remote mofussil. A young widow, residing in a village in the Kistna district, lately resorted to an old witch, and obtained from her a pill, which she took means to have introduced into the food of a young man upon whom she had cast eyes. The result of taking this pill, which was found, on chemical examination, to be composed of Indian hemp and datura, was, as might have been expected, to make the unfortunate young man and his father, who also partook of the food, very unwell; and, as a consequence, the woman was brought before the Sessions Court on the charge of causing hurt. As, however, it was evident that she had really had no other intention than to gain the man's love, and had the poison administered in ignorance, she was merely sentenced to simple imprisonment for a short period.

THE BRADFORD MEDICO-CHIRURGICAL SOCIETY.

THE President, Dr. J. H. Bell, and members of this Society entertained at dinner, on September 20th, a number of the distinguished medical members of the British Association at the Victoria Hotel. Amongst the company were Professor Williamson, Dr. Carpenter, Professors Allman, Balfour, Rutherford, and Struthers, Dr. Lauder Brunton, Dr. Crichton Browne, Dr. Binz (of Bonn), and other medical and lay men, including Bishop Ryan, Dr. George Harley, and Sir Duncan Gibb.

RAILWAY INJURIES IN 1872.

A PARLIAMENTARY return has been issued of all accidents which have been reported to the Board of Trade by the several railway companies in the United Kingdom, as having occurred on their lines during the year ended December 31st, 1872. The return is the first which has been prepared for an entire period of twelve months under the Regulation of Railways Act, 1871. The total number of persons killed during the year, according to this return, was 1,145, and 3,038 were injured. The total number of passengers killed was 127: 24 "from causes beyond their own control," and 103 "from their own misconduct or want of caution." The total number of passengers injured was 1,462, of whom 1,247 received their injuries from causes beyond their own control, and 215 from their own misconduct or want of caution. The number of railway servants returned as killed under the former head is 64, and under the latter 568; the injured in these two classes

were 376 and 1,019 respectively. Seventy persons were killed and 23 injured while passing over railways at level crossings. Under the head of "trespassers and suicides," 258 are reported as killed and 107 injured; and "miscellaneous," not included in any of the preceding classes, 386 killed and 181 injured. A list is also given of the number of accidents unattended with loss of life or personal injury. It extends over thirty-two pages of the Blue-book, but no summary is appended. It appears from one of the tables in the book that the total number of passengers killed on railways from causes beyond their own control from 1862 to 1872 was 271. In an introductory note it is stated that these returns are made by the companies themselves, and "the great discrepancies between the numbers of accidents returned by the various companies lead to a doubt whether they all make the return with equal care and completeness."

A COSMOPOLITAN VIEW OF A GOOD DINNER.

In proposing the health of the guests at the dinner during the recent meeting of the International Medical Congress in Vienna, Professor Hebra said that nothing in the world gave better evidence of the necessity of common co-operation among nations than a good dinner. For, he said, Russian caviar and Belgian oysters, Norwegian anchovies and Rhine salmon, commence the courses, and lay a good foundation with the powerful support of English roast beef and mutton chops. After them come the capon from Styria, the pheasant from the Bohemian preserves, guinea fowl from Croatia, venison from the Austrian mountains, followed by Italian fruit, Swiss cheese, Indian coffee, and Dutch liqueurs. As intercellular fluid, Spain and Hungary supply sherry and Tokay, Germany Rudesheimer and Johannisberger, France Bordeaux and Champagne; and, finally, Havana and Turkey furnish the delicious weed. Thus *cuique suum* finds its application, and, in this struggle for existence, men of all countries and zones are guided by the same principles. In this, he said, is found the basis of an universal brotherhood, a point of union for the most heterogeneous appearances; and here also lies the solution of the question of nationalities—a question which should be solved at a medical rather than at a political international congress, and by the clanging of glasses much more than by the thunder of cannon.

MILK AND WATER.

MR. PARTRIDGE's fines at the Lambeth Police Court for adulterating milk with water appear to exert the desired effect. Mr. Marsden, the vestry clerk, who attended on Friday in last week to prosecute in several summonses taken out against milk-vendors, stated that, since the imposition by the court of heavy penalties for the offence, there had been a great improvement in the milk sold in Camberwell. As a result of the activity of the sanitary officers, the dairymen of the metropolis have held a public meeting, at which they passed a resolution to raise the price of milk, "in consequence of the increased price of cattle," and for other similar reasons. One dairyman at the meeting was, however, bold enough to admit that they sometimes made "a mistake and put a drop of water in the milk," but observed that, as such a "mistake" rendered them liable to a penalty of £20, he thought they ought to raise the price of the milk.

SANITARY STATE OF NORTHAMPTONSHIRE.

MR. HAVILAND has presented his first report to the sanitary delegates for this county. Since his appointment, of 352 parishes and townships, the local sanitary inspectors had visited 336; they had also inspected about 14,000 houses and streets, and had reported 3,745 causes of nuisance. These nuisances were of all kinds, and many of them had been remedied or were being removed. Sixty-seven referred to overcrowding in cottages, lace-making schools, and workshops. A dozen people were frequently huddled into a single sleeping-room, having each a space of from 75 to 120 feet only. He believed overcrowding to be one of the principal social causes which made pulmonary consumption prevalent in many districts. He knew there were local causes, both climatic and geographical, operating in the valley of

the Nene; but an extended experience had taught him there were also powerful social conditions co-operating with them, which were to be found in the overcrowded bedroom, lace-school, and factory. Since his appointment, there had been several important epidemics; but, having been taken in hand at once, their spread had been arrested. Upwards of one hundred cases of fever had been reported to him, most of which were to be traced to water-contamination, sewage-gases, and other local causes of insufficient sanitary arrangements. More than one hundred and twenty polluted wells had been detected, the water of seventeen of which he had condemned as unfit for use.

SANITARY PROGRESS.

Nature states that an anonymous donor has placed a large sum in the hands of the Committee of the Birmingham and Midland Institute, for the foundation of a Lectureship on the Laws of Health, and also for a prize fund in connection with the class. Dr. Corfield has accepted the post for this year, and will deliver an inaugural lecture in the Town Hall, Birmingham, on Thursday, October 9th, at 8 P.M., on Sanitary Progress. The course will begin on Tuesday, October 14th, at 8 P.M., and be continued on succeeding Tuesdays until some time in April. It is intended more especially for the working classes, and both men and women will be admitted.

A FEVER VILLAGE IN HERTFORDSHIRE.

DR. OGLE, the medical officer of health to the Hertford rural sanitary authority, reports that, although the village of Hertford Heath is now free from infectious disease, fever and diarrhoea have been common. There is a sewer running down the main street of the village, which receives the foul water from the greater part of the houses; and this sewer, after leaving the main street, becomes an open ditch, which, after receiving a tributary sewer from the houses near the school, discharges itself into a pond. In some of the wells the water is so foul to the eye, mouth, and nose, that it is not used at all for drinking purposes.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE annual meeting of the Northumberland and Durham Medical Society was held on the evening of September 29th, in the library of the Newcastle Infirmary. Dr. Philipson, President, occupied the chair. The following is a list of officers appointed for the ensuing year. *President*, Dr. Philipson; *Vice-Presidents*, Drs. Burnup, L. Armstrong, Peart, and Mr. Broadbent; *Honorary Secretary*, Mr. Henry E. Armstrong; *Committee*, Drs. Denham, Humble, Arnison, B. Bramwell, and Page, Messrs. C. Carr, Hawthorn, Russell, and Redmond.

THE ASHANTEE WAR.

AMONGST the last things embarked on board the *Bonny* on Saturday were fifty cases of jams, jellies, and preserved fruits for the hospitals; and a large quantity of medical comforts, as well as medicine, sent out with the expedition, shows that the authorities are not unmindful of the sick. The supply of ice is ensured by the consignment of a ton of freezing salt, delivered in barrels, by a patent ice company in London. The foul condition of the water on the Gold Coast will be in some measure counteracted, not only by the liberal issue of large filters, but by supplying the troops with small and portable ones. Two hundred "pocket filters" are sent out in the *Bonny*, simply cakes of charcoal, scarcely so large as ordinary drinking-flasks, and each provided with a tube. The little filter being put into the water, a man may draw the liquid more or less pure through the tube. Fifty charcoal filters have been sent, and as many more are to follow. These filters, which are enclosed in wicker coverings, cost about £1 a piece. The pocket filters are usually sold at from 5s. to 10s. They were supplied to the whole of the soldiers of the Abyssinian expedition, and a similar filter was extensively used by the French soldiers in the late war. The Director-General of the Army Medical Department has under his consideration a proposal to increase the value of the China barrows or hand-carts, many of which have already been sent on to the Gold Coast, by utilising a certain number of them for the benefit of the officers and soldiers

engaged in this expedition. The proposal is that a covered tank should be inserted in these barrows, capable of holding about thirty gallons of water, in each of which should be fixed one of Atkins and Co.'s patent charcoal cistern-filters, with a self-closing bilcock, that no water could be wasted. These barrows are 3 feet 10 inches long, 1 foot 1½ inches wide, and 10½ inches deep; the tank would be made to fit the barrow, and it would be 13½ inches deep. The tank is to have a fastened cover with man-hole to put the water in, with proper fastener to prevent waste. The weight of each China barrow fitted with tank and filter complete, and filled with water, would be about 3¼ cwt., which two men could draw with ease. This proposal, if carried out, would be something similar to Atkins's patent camp-filter, constructed for Her Majesty's Indian Government, only much smaller, as the former is drawn by two oxen or horses. It will tend in a great measure to diminish the loss of life among our soldiers employed on the Gold Coast. By this method the soldiers on the march or halt will always make sure of pure water for drinking or cooking purposes.

DEATH OF DR. THURNAM.

DR. THURNAM, the Medical Superintendent of the Wilts County Lunatic Asylum, died suddenly on September 24th. He had filled his office since the opening of the institution in 1851. On the day of his death he was apprised of the escape of a patient, and soon afterwards he was found lying in one of the rooms dying. At the inquest on the body, the jury found that death was owing to sanguineous apoplexy. For some time previously he had suffered from ill-health, and the occurrence reported to him seems to have occasioned considerable mental anxiety. He was the author of essays on the *Statistics of Insanity* and on *Aneurism of the Heart*. Contributed a paper on Spontaneous and Varicose Aneurism of the Aorta to the *Medico-Chirurgical Transactions*. He was also the joint author of *Crania Britannica and Ancient British and Gaulish Skulls*.

SERIOUS ACCIDENT AT THE WESTERN GENERAL DISPENSARY.

THE completion of the New Dispensary buildings in Marylebone Road has been inaugurated by an unfortunate explosion of gas in one of the waiting-rooms, by which the resident dispenser and assistant received considerable injury to the head, and a painter was seriously hurt by being blown off a wall on to the rails of the Metropolitan Railway, a distance of thirty feet.

CONSULTING DRUGGISTS.

THE question of the admission of women to pharmaceutical employment is discussed in the *North British Mail* by a chemist, upon the ground raised by a late President of the Pharmaceutical Society—viz., their relative fitness for the confidences of the counter. Mr. Sandford thought that objections might arise on that score. "P." is of opinion that there is an "aspect in which female assistance is much called for and would be highly useful to us. Like all of my brethren who are sufficiently qualified and interested in our art, I daily give medical and surgical advice. I am in daily request for the ailments chiefly of infants, school-girls, and elderly parties; but the delicacy of the female mind minimises my employment in these cases. Can you doubt, sir, of how much assistance female tact would and might be to me and others? You must remember that I do not alone advise over the counter, but, like as many of my brethren as possible, I have fitted up an elegant and convenient consulting and tooth-drawing room. On the lowest calculation I can make, a female assistant would be a clear £200 a year to me. I keep all the first-class prescriptions which pass through my hands; and so they are quite at the service of my customers, regular or casual, as well as those which my own therapeutic experience and practice has put at my disposal. I keep them in stock, just as I do wine. I am also consulted a good deal on sanitary questions, particularly in connexion with private house property. Here, again, if I had a female assistant, I could develop my views through her to female house-owners or hirers in a highly satisfying manner.

At present, I do, but at the expense of a good deal of embarrassment. It is difficult to give a practical demonstration of the earth-closet system to females, as my readers may easily, though, unlike myself, not pronouncing *ex cathedra*, understand." The whole matter is of quite secondary interest, and would have for us none at all, but for the manner of discussion and the grounds on which it is discussed. This letter gives an altogether delightful view of counter-practice in North Britain. It is evidently authentic and written in good faith, and it appears prominently and as a matter of course in the columns of a leading Scotch paper. If medical practice be indeed as extensively carried on by unqualified and unauthorised persons as this letter indicates, it is time that order should be taken in the matter, and that so gross an abuse should be arrested. Who signs the death-certificates for this gentleman, if his patients should unhappily die? Who is the coroner of the district? and how does "P." escape prosecution?

SCOTLAND.

SMALL-POX continues to prevail in Greenock. The plans for the permanent small-pox hospital have been sanctioned.

AT the annual meeting of the Forfar Infirmary held this week, a Committee was appointed with the view to secure accommodation for convalescent patients.

THE ABERDEEN UNIVERSITY BUILDINGS.

IN consequence of the large and increasing number of entries in the medical school of Aberdeen, the anatomy class room became much too small. A new theatre is now being built, which will afford the desired accommodation. It will cost £1,100. The money has been put on the estimates and voted last session of Parliament.

IRELAND.

WE regret extremely to state, from most reliable information, that the health of Dr. Robert W. Smith is at present extremely precarious.

THE late Alexander Findlater, Esq., of Monkston, County Dublin, has bequeathed the sum of £4,500, which will be divided among the various hospitals in Dublin.

DR. BARKER's death having caused a vacancy in the Chair of Chemistry in the Royal College of Surgeons, an election will be held by the Council of the College this month. Drs. Cameron, Davy, and Reynolds are in the field as candidates.

BY the death of Dr. Barker, the Professorship of Experimental Physics in the Royal College of Science for Ireland has become vacant. The chair is in the gift of the Committee of Council on Education. It is of the value of £200 *per annum*, besides a share in the students' fees.

THE Portumna Board of Guardians have increased the salary of Mr. James Pelly, Medical Officer for the Eyre Court Dispensary District, from £100 to £120 *per annum*; and that of Mr. William H. Blackton, Medical Officer for the Drummin Division of the Portumna and Drummin Dispensary District from £33:6:8 to £40 *per annum*.

SANITARY LECTURES.

DR. CHARLES A. CAMERON will deliver a course of twelve lectures on Sanitary Science in the Dublin Exhibition, commencing on October 7th. These lectures will embrace the various subjects of air, water, disinfection, food, diet, ventilation, the skin and hair, exercise, stimulants, etc. Last year, a similar course of lectures was delivered by Dr. Cameron, which attracted large audiences, and there is little doubt but that on this occasion the opportunity of gaining information of a valuable character at a merely nominal price of admission will be largely taken advantage of by the citizens of Dublin.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS,

On OCTOBER 1st, 1873.

THE MIDDLESEX HOSPITAL.

THE Introductory Address was delivered by Mr. HENRY MORRIS, Senior Assistant-Surgeon and Lecturer on Anatomy.

After a few words of welcome to the students, the lecturer described the nature of the studies requisite for the profession of medicine. The subject to be studied was the same as that of the divine, the lawyer, and the politician; and, though each one of these workers was primarily engaged with different parts of that subject matter, yet there was no distinct boundary for the one or for the other. The divine was most concerned with man's moral nature, and his relation to the Deity; the lawyer with man's acts and rights in his relation to his fellow-man; the politician with man's relations as a member of the community, and to the government; while the doctor had to do with man's body and mind, in so far as they departed, or were prone to depart, from health. All worked separately, and sometimes ought to work conjointly. There was this difference between the divine and doctor on the one hand, and the lawyer and the politician on the other: with the two latter, the good of man collectively was the end to be secured; and the good of the individual was sought, secondarily, through the general good. With the former two, the welfare of every individual was the first consideration; but they secondarily worked also for the good of all. There was a marked difference in the public recognition of the secondary duties of these two professions. While those of the divine were, as they deserved to be, fully acknowledged; while the clergy had direct representation in the upper house of the legislature, and numerous posts of honour and emolument for those entrusted with the State functions of their profession; the secondary, but still most important, duties of the doctor were, for the most part, either ignored by or unknown to our rulers, and the State functions of medicine got but trifling honour and scanty remuneration. This, no doubt, was partly accounted for by the fact that, in ancient times, exclusive attention was given to politics, morals, and law; and, in more Christian times and countries, to these subjects and to theology.

The lecturer now enumerated the several subjects, a knowledge of which was necessary for the scientific and enlightened study of medicine, surgery, and midwifery, and for the safe and intelligent practice of the profession; and drew special attention to two off-shoots from the great tree of medicine. The provinces of the lawyer, politician, and doctor sometimes quite encroached on one another; and hence there was a branch of law medicine—medical jurisprudence; and another of state medicine—the science of public health. A knowledge of the former, though but rarely demanded, was absolutely requisite, because the committal of any error therein would be very damaging to reputation. State medicine or public health was one of the very corner-stones of the social safety of mankind. But it was far from taking that position which even any tyro in political science would give it, if he were modelling out a perfect political society. "For years the profession has been considering the question, how to preserve health by preventing disease, and many of its leading members have devoted much time and labour to its solution. More than twenty years ago, one of the consulting physicians of this hospital (well-known for his contributions to our knowledge of specific fevers), on a similar occasion to this, completely refuted the reproach with which medical men are sometimes ignorantly taunted, viz., that they live by disease, and therefore naturally cannot be expected to bestir themselves in its prevention; as though medical men had ever refused to check the distribution of a justly suspected cause of epidemic poison, until they were compensated for the pecuniary loss which would accrue to them. There are many highly informed men who possess both the knowledge and the will to bestir themselves (however suicidal their efforts to the selfish interests of their profession), to make our nation a more healthy and vigorous one than it is; but the truth is, and sooner or later it must be acted upon, that this knowledge is technical and minute, and cannot be suddenly implanted, at the instance of the Local Government Board, in the minds of men not specially trained for it. It is not to be wondered at that diseases which ought never to arise, or at least to spread, do nevertheless

less flourish amongst us while the present unsatisfactory system exists. We see at home the medical officers of district schools, and the medical health-officers, subject to the opinions of lay inspectors, who are unacquainted with the fundamental principles of sanitary science. We hear from abroad that, in an African settlement, where the drainage and water-supply are recklessly neglected, and in which small-pox and fever are rampant, not only is the sanitary inspector not a medical man, but the administrator is a military man, who first erected an arrangement for accumulating stinking refuse of all kinds under the nostrils of the residents, and then complains that he finds doctors the very bane of his existence, and that, as long as he holds the reins, he will have matters his own way." The kind of education best suited for those destined to recruit the ranks of medicine was next discussed. After stating that education meant much more than the study of books and the lessons of teachers, and quoting Locke to show that its purpose is as much to form the character as to train the intellectual faculties, the lecturer expressed his opinion that all candidates for a profession, or for any calling which opened up social or intellectual distinction, should be made to pass through a course of study, and a test which was general, without being diffuse, and accurate, without being special. To permit the unguided following of the mind, would be to establish a system for the cultivation of specialties. A mixed classical and mathematical education was humanising and refining; it occupied a most useful place in our national life, and narrowness of mind and fanaticism were too often associated with the want of it. As a method of mental training, the classics were considered by many authorities on education to have a greater power than any other; and certainly, so far as the lecturer was aware, no one had ever attempted to prove that, in this respect, any other system was superior. It was a happy day for medicine when this kind of education was insisted on as the portal to the profession.

Referring to the *dogmatici* and *empirici* described by Celsus, the lecturer quoted the following aphorism from the *Novum Organum* upon the errors of these two schools. "Qui tractaverunt scientias aut Empirici aut Dogmatici fuerunt; empirici, formicæ more, congerunt tantum et utuntur; rationales aranearum more, telas ex se conficiunt; apis vero ratio media est, quæ materiam ex floribus horti et agri elicit, sed tamen eam propriâ facultate vertit et digerit." "In this clever metaphor, we have both a beacon as to what we must avoid, and a guide as to what to follow. We must neither do as the ants, which only lay up, and then use their store; nor as the spiders, which spin all out of themselves; but as the bee, which takes the middle course, and, after gathering from abroad, digests and elaborates by its own faculty all that it has gathered. We must avoid the mistakes of the *doctrinaires* and of the self-styled 'practical men'; we must avoid both false theory and blind empiricism. We must neither base our practice on *a priori* notions, nor neglect to draw inferences from experience. We must purify our minds from all preconceived ideas and traditional prejudices, and then observe facts with acuteness and accuracy, and interpret them with wisdom. For this, we must be both theoretical and practical. Theory, properly so called, is but a short-hand note to register a principle, without which we could make but little progress. A theory—not a hypothesis or a guess—when once framed, enables us to go on with our investigations without burdening our minds with the details of the particular instances whence it was drawn.

"Understand clearly, however, that yours is a practical, not a speculative science. Perhaps it is more correct to call it a scientific art. At any rate, medicine, like most of the sciences subsidiary to it, is a science of pure observation. It is a thinking exploration of man in health and in disease. It is a scientific study of facts through the faculty of observation. It is because of the constant demand upon this faculty in medical men, that each medical student ought to ask himself, 'How ought I to observe? What are the methods of observing?' "As with our modes of observing, so with the facts; they may be of the simplest or of the most complicated character. Many are so obscure and so inaccessible, that even with highly educated organs, and these assisted by the most approved apparatus, we find it difficult—nay, too often impossible—to introduce light and order into the chaos which defies us. And this difficulty is the greater, because of the nature of the phenomena. This is such, that we cannot employ a third method of observation much more precise and certain than the others I have mentioned; I mean observation under experiment. It is true that science often makes up for this deficiency in our methods; still experimentation itself is, for the most part, quite unavailable in our investigation of cause and effect....We cannot study the normal, let alone the abnormal, processes of digestion, nutrition, and circulation, without reference to the moral and mental laws by which they are often influenced.

'All served, all serving, nothing stands alone;
The chain holds on, and where it ends—unknown.'

"Nor can we separately examine the different organs composing man's

body without destroying the very thing it is our aim to preserve—the perfection of the whole and of each part of that body—because in

*Following life, in creatures we dissect,
We lose it in the moment we detect.*

The lecturer then proceeded to show how the two methods of pure observation—the unassisted and the assisted—might be either unintentional or intentional, or, as Herschel described them, “passive” or “active”. He pointed out the necessity of attention, and commented on the mutual relations of the various forms of observation. He then pointed out some sources of danger. “In the exercise of intentional observation, there are three dangers to avoid: first, the non-observation of things or parts of things we ought to observe—*i. e.*, their oversight; secondly, the observation of things to the point, but in an imperfect manner; and thirdly, the observation of things not to the point. The first you will escape by patience and sustained attention; the second, by care and thoroughness; and the third, by ascertaining what is and what is not relevant to the subject in hand, and directing your thoughts to what is important. But there is a fourth trap into which the ignorant and unwary are apt to fall—*viz.*, the mistaking inference for observation. It is impossible to deny that in observing, and still more in description, inference is intimately blended with facts; but for all that, when we make an assertion, we ought to know how much of it is observation and how much inference from observation. This error depends upon the want of good mental development; so that the best way for us to avoid this fallacy is to bring to our profession minds as highly cultivated as possible. And here we have, I think, a strong argument in favour of early training being, as I have advocated, accurate in mode, rather than useful in purpose. Let us teach youths first how to know, and knowledge itself will readily be gained by them afterwards.”

The importance of holding hospital resident appointments was insisted on as the surest and best way of becoming practically acquainted with medical and surgical cases, of gaining an insight into the discipline and management of a large medical institution, and of giving the holder of these offices self-reliance, based on conscious knowledge. The lecturer then offered some advice to those who would shortly leave the medical school and enter on the responsibilities of practice. “Never forget to uphold the honour and dignity of your profession. You will not succeed in this by boasting and self-assertion; but by an unobtrusive, yet confirmed consciousness of the respects due from you and others to it.”...“Endeavour in your professional capacity to raise the intellectual and sink the emotional side of your nature as much as possible. I do not mean that you are not to exercise sympathy and charity, which are two great weapons in the armoury of medicine. But these are not true emotions; sympathy is the idea of pain in others, irrespective of pleasure or pain in ourselves, and it involves both the intellect and the will; while real true charity is the intellectual recognition of the misery and want of others, combined with the exercise of the will for their removal.”...“Do not imagine that when your studies at a medical school have ceased, you will cease to be students in your profession. Medicine is the last calling in which you can thus console yourselves. Science, like time, is always moving on, and medical science must be no exception to the general progress.”...“Therefore work, not only to earn your living, but to keep yourselves abreast with what is going on in your profession. Throughout life, work is happiness disguised, and cessation from work is only pleasurable when it comes as rest and at intervals. But do not strive after the vain reputation of a ‘busy man,’ for that is to tire yourselves and vex those about you. Neither be too ambitious in your work, for circumstances are not so arranged that all can snatch the laurels and the bays; the majority have to be content with the elms and yews, and some even with the cypress. But be real and honest workers, and you will assuredly have your reward by proving yourselves benefactors in your generation. Nor must you allow your work either to harden your sensibilities or lead you into infidelity, as it is falsely stated by some to surely do. The true study of medicine ought to refine your feelings; and, by showing you the limits of man’s power over life and death, should increase your admiration and reverence of the great first cause. But do not confine your thoughts and occupations to your profession. The best and chiefest of your powers must, of course, be devoted to it... But there is much in literature, in art, in other sciences besides your own, and in the recreations of society, that is worthy of your attention. In these are to be found the pleasures and embellishments of refined life, and you will have more zeal and interest in your work if you indulge your leisure in some such tastes. But, while employing your faculties in the acquisition of various kinds of knowledge, remember here ought to be something within you which can direct and purify our knowledge, *viz.*, wisdom. It has been truly said that knowledge but a mass of unprofitable materials until smoothed and squared and

fitted to its place by wisdom. Therefore, let us seek wisdom, that it may teach us not to fashion our knowledge into an ornament or a means to fortune only, but into a rich storehouse for the glory of the Creator and the relief of man’s estate.”

KING’S COLLEGE.

THE Introductory Lecture was delivered by Dr. EDGAR SHEPPARD, Professor of Psychological Medicine.

Dr. Sheppard began by welcoming the students to a College which had furnished many of the metropolitan schools of medicine with able teachers, and would, he doubted not, continue the same career of usefulness and distinction. He should assume that they had chosen the medical profession because they believed it to be a high and noble one. He would not follow the common and legitimate course of giving a sketch of the allied sciences as bearing upon medicine, inasmuch as this had recently been done within these walls by distinguished brain-workers, two of whom were members of their professorial staff, at the most remarkable gathering of physicians and surgeons which had ever taken place in Europe. He would urge upon them the necessity of carefully studying those addresses, from which they would learn, among other things, that the investigations which were incessantly being carried on as to the causal phenomena of disease, were leading to the conclusion that many existing maladies would ere long have neither a local habitation nor a name. Meanwhile he would speak in a somewhat loose and desultory manner of what he should venture to term the socio-political aspect of the profession. They must remember, after all, that it was in the drawing-room and the bed-room that they would learn the wear and tear of the thing, when brought into contact with my lord’s prejudices and my lady’s narrow and conventional thinkings. They must study not only medicine, but society—its varied character and phases. They must learn to adapt themselves, in the largest sense, to those with whom their avocation would bring them into contact. He could not help saying, in the presence of their respected Principal, that a large measure of the success which attended the career of a great and good bishop recently lost to the church of which Dr. Barry was a dignitary and they were lay members, arose from this faculty of adaptiveness, manifested in a form of unusual grace and attraction.

Having further illustrated this subject, the lecturer proceeded to say that there was a certain critical attitude assumed by the lay element towards the three learned professions, at which they had no right to complain, for it exercised a wholesome corrective influence in scaring the empirical and pretentious. At the same time, in other ways it acted prejudicially, and with results unfavourable to the progress of science. It was a mistake to make any profession common and unclean by spattering outsiders with a superficial knowledge of it. But this was done too frequently. Books about “domestic medicine”, “advice to mothers”, and such-like, might be pregnant with kindly wisdom; but they did not bring forth fruit worthy of cultivation, or such as they would like to see growing upon their ideal tree of knowledge. It was this sort of thing, he feared, which had led to a recent experience which had no parallel in history, and had forced into opposition the liberal and time-honoured university of a northern capital. Heretofore it had been thought right to eliminate, during the educational processes to which all of us were subjected, everything that savoured of the masculine and ungentle from the sex to which they had not the privilege to belong, and everything that was effeminate from the sex to which had been given lordly pre-eminence; but matters were undergoing a change. By fingers more delicate than theirs or his were now handled the test-tube and the scalpel. They who once thought it their highest privilege to “mind the house and bear children”, had given themselves up to “quantitative analysis” and “minute cellular anatomy”. The teachings of Fresenius and Virchow were superseding the injunctions of St. Peter and St. Paul. He trusted he should not be thought illiberal, for he had no desire to check the legitimate ambition of women. It was only its unnatural development that he sought to stifle; and so in that College he protested against

*“Prudes for proctors, dowagers for deans,
And sweet girl-graduates in their golden hair.”*

Having alluded to the importance of contemplating woman in a different aspect—as we used to know her, and should like to know her again—and of ensuring her good opinion, since much of the success of a medical man depended upon it, the lecturer spoke of the modern doctrine of evolution, which placed beyond a doubt the fact that “our mental and bodily structure is the direct outcome of that of preceding generations.” This question had immense practical issues, and merited

the most careful study. "The morality of clean blood" (as Professor Tyndall expressed it) could not possibly be overlooked without involving the most serious consequences. Men must not allow their feelings to get the better of their physiological instincts, but set the example to all about them by healthy alliances for social enjoyment and perpetuation of their kind. The responsibility of those who knowingly, and in the face of well established laws, transmitted to posterity the recognised abnormalities which constituted disease, was absolutely enormous.

The chief object of medicine in these days was rather to prevent than to cure disease. But, said the practical man—who is hungry, and under the ignoble necessity of labouring for the meat which perisheth—what profiteth my study and my acquisition of therapeutic lore, if there be left to me no field for its exercise? Sanitary science is eating up disease—the goose which lays the golden eggs. What availeth the slaughter of the historic bird? Moreover, is it not more clear that remedial agents (so-called) are less resorted to than formerly, and that our ablest physicians doubted the efficacy of drugs on which they once complacently relied? In fact, it was as common as it was wise to give our patients frequent doses of disguised nothing. Nevertheless, the young and hungry Æsculapius might console himself with the fact that never was the profession doing so much; never did it stand so high; never were its members so highly cultivated and so united; never did they reap so rich a pecuniary harvest as at the present moment. They would not forget the testimony which had recently been borne to them by the First Minister of the Crown in the hall of Lincoln's Inn. Nor was it far to seek for a reason why the profession was so growing in public estimation. Its standard of education had been gradually and persistently raised, and "the healing on its wings" promised and proclaimed by their science was now of the largest and most comprehensive type. The lecturer then alluded to the aid which they derived in their warfare with disease and death from "the trained and gentle Nightingales of the sick-room;" he spoke of ventilation, warmth and rest, and the Turkish bath as being more effective weapons than (with few exceptions) could be drawn from the huge armoury of the pharmacopoeia. And yet, as there was a fashion in everything, there was a fashion even in the administration of drugs. Every one knew the extent to which opium was formerly used in the treatment of delirium tremens and insanity. The value of this narcotic had been completely dwarfed by the giant hydrate of chloral. It was only fair to state, however, that the latter remedy was frequently resorted to very unnecessarily; that ladies kept it in their medicine-chests, and that coroners had been under the painful necessity of sitting upon it. In fact, chloral was as much a pharmaceutical fashion as were golden hair-dyes and chignons a pseudo-aesthetic fashion in the geographical district known to us as Belgravia. Nor was this fashion confined to drugs; it extended to systems. He remembered the time when—

"Each doctor took such pains

To draw the blood from almost bloodless veins",

that pallor met one in nearly every adult face, the only exception being in the cheeks of my lady-dowagers (as Thackeray expresses it), which, like the sun, were wont to grow redder towards their setting. But a different order of things succeeded. A great physician, whose name and memory would ever be revered in that College, stop-cocked the life-blood of the whole nation. Dr. Todd threw down the lancet and took up alcohol. He taught that our duty was to *renew* life, and not to weaken it. The alcoholic beverages were taken up warmly, in more senses than one, by both the sexes, in every ailment, and blood-letting became unknown, save as a historic fact. One extreme, as commonly happened, was succeeded by another. We had now sobered into the healthy mean, which admitted that cases occasionally occur in which life is saved by the lancet, while not unfrequently alcoholic stimulants are essential to the preservation of life. He would further illustrate this system of passing from one extreme to another by a reference to the specialty to which he had allied himself. Formerly, as they well knew, the insane were subjected to almost unlimited restraint and seclusion, and their treatment was characterised by great harshness and brutality. The non-restraint practice then came to the fore, and was pushed to an extent which involved the not infrequent occurrence of serious homicidal and suicidal casualties, which might otherwise have been prevented. All of large experience in this matter now admitted that occasional restraint, by fastening the hands to the body, was not only justified in exceptional cases, but imperiously demanded for the safety of the patient himself. And it was beyond a doubt that seclusion was as necessary for an over-excited brain as the withdrawal of light for an inflamed eye.

Dr. Sheppard then urged the students to embrace all the advantages offered to them by King's College, and promised them, on behalf of the professorial staff, all the assistance which they were capable of affording. Their work should be steady, and free from spasmodic impulses.

Travel did so much in the way of improving men—so much that could not be described, but was always appreciated—that he would strongly recommend it to them at the close of their collegiate career, and before they buckled on the professional harness. Then they would be furnished with ampler materials for thought, "be prepared to form riper judgments, and to adjust themselves to action with greater wisdom."

"This, then, having been accomplished (the lecturer concluded), the real work begins—the practical application of all that you have taken so many years to acquire. But the wise, the earnest, the intelligent will not cease to acquire, and will ever consider themselves to be in a state of pupillage. In a busy and active professional life they will day by day garner fresh treasures into their storehouse. 'The more knowledge we get,' said a Bishop Jackson of an earlier time, 'the greater capacity we leave unsatisfied.'" There was one more matter to which he would speak; for, though to him it had always been specially noticeable, he was not aware that he had ever heard it alluded to or illustrated. "The difficulties of a start in the medical profession are greater than in that of law or Divinity; and this by reason of its complex and inexact nature, as also by the issues which it involves. 'It seems to me,' says a quaint Dutch writer, 'that the first fire of an Æsculapius must be of a deadly nature, when his later and calmer zeal may still prove so dangerous.' A young lawyer may make his first will without much anxiety or doubt; a young clergyman preaches his first sermon, and though, of course, he may be nervous, he cannot do much harm, and he may do some good. At all events, he will create sympathy. But there will be no sympathy for the medical man if he poke out a man's eye, even after the most approved fashion and with the very best intentions.

"Even the best educated and most skilful of young practitioners must feel the tremendous responsibility of his first case of typhoid fever in an influential household; or his first case of strangulated hernia, at the hospital to which, after much rivalry, he has just been elected; or his first unnatural presentation in midwifery, among the croaking gossips who swarm round their sisters in the agonies of abnormal parturition. There is always some one to think and say that wrong has been done in a fatal case; and even those who think that right has been done may be reluctant to say so. And, more than this, our doubts and difficulties extend, in some measure, over our whole subsequent career. There are few men—it is doubtful if there can be any men—even of large judgment and experience, to whom the occasion must not arise for self-scrutiny and examination, as to whether their conduct of such and such a case has been all that it ought to have been.

"I think there are only two things," said Coleridge, 'which can justify a surgeon in performing the Cæsarean operation; first, that he should possess infallible knowledge of his art; and, secondly, that he should be infallibly certain that he himself is infallible.' What wisdom in the satire! which of us is infallible? which of us ever will be? No one, until shall have come to him that 'inevitable' which it is our daily mission to postpone. No one, until he shall have 'gotten the key of all mysteries which never is let down into the world, and begun the real life which errs and stumbles never more.'"

GUY'S HOSPITAL.

THE Introductory Lecture was delivered by Mr. JAMES HINTON, Aural Surgeon to the Hospital.

Referring to the resignation of his post by Dr. Owen Rees, the lecturer remarked that, among the names of which Guy's Hospital was proud, there was none which could be looked back upon with a deeper satisfaction, or which by universal consent was more closely identified with all that was most profound and helpful in the application of chemistry to pathology and practice. He then proceeded to comment on and illustrate the connection between medicine and other sciences and branches of life, even those which were apparently the most remote. The mind and its workings were also a most important field of study for the physician, for he must be able to separate what is mental and what bodily in the ailments that come before him. The student of life has for his study inevitably the whole realm of nature. "The tales of our ancestors tell us of a cup offered to Thor to drink. It seemed but a fair goblet—a few gallons, enough perchance to drown a man—such as he had often quaffed, and he took it laughingly. But for all his drinking, the cup became no emptier—it was the sea he drank. And to you also, gentlemen, is offered a cup—a fair sized cup, just the knowledge of the human frame, a fair goblet for a thirsty soul. But drain it; drink your fill; exhaust your power; you will find it full as ever. It is the ocean you are drinking."

The lecturer thought that all that seemed distinctive of life would become included under physical laws; not that life would be resolved into physics, but rather physics would be revealed as life. Wherever

the relations of force were seen in a complete form, we tended to recognise life. Perhaps the organic world might be regarded as an organ put forth by nature, having as its office the storing up of force, and its liberation for ulterior ends. This storing up of force and its liberation was of constant occurrence throughout all nature, but in the organic world it was called nutrition and function. This relation of force ran also through the intellectual and moral life. The identity of the raising of a weight with the nutrition of a muscle, and of the fall with its contraction, was recognised, as there was an equally obvious parallel in the process of the mind—in the toilsome raising of the weight of false hypothesis and its sudden downfall.

The studies of the physician placed him in a position which gave him a special advantage for every other study. Like an heir just come of age, the physician of the present day was distracted with the wealth of his inheritance. To the whole world of nature and of man, the human body was the key unlocking all its treasures. The physician stood at the centre and saw all roads clear and straight to him, because he held in his hand a map of every land. His eye was fixed on the pattern to which all things conformed; into the very substance of his thought had grown, by long and loving search, the laws which sped the progress of the human soul, and breathed into the dust of earth the breath of life. The study of life must afford the best suggestions, and the surest tests to every branch of human activity. This was illustrated in respect to society by one of the failures of medicine in the past—the excess to which blood-letting had been carried. The reason of the error was to be found in the apparent success which attended it. It was because that treatment did quiet the pulse, relieve pain, ease the breathing, cool the skin, and remove the patient from a condition of intense distress and obvious danger to one of manifest relief, that men, unsurpassed in intelligence and zeal for good, persevered long in methods which thwarted their own aim. There was another living frame on which men also aspired to act the physician's part, the frame of the social organism. And it was not obvious how much our errors might teach men here. How strongly they tended to succumb to the very illusion which deluded, and took no account of the living frame. Finally, it was pointed out in how close a relation the physician stood to the moral life of man. The lecturer then concluded with a contrast of the aims of men, and the means by which they were arrived at, having special reference to the immediate studies of his audience.

ST. MARY'S HOSPITAL.

DR. SHEPHERD, Assistant-Physician to the Hospital, delivered the Introductory Address.

He said that the medical profession is one from which ease of body is most certainly absent. It demands continual personal discomfort. Even beyond the time when we may expect some fair return for our labour, it uses us as slaves. In spite of this we love it, and our love for it is our greatest boast. After some remarks on the success of St. Mary's students during the past year, he stated that his particular subject for discussion that evening would be the relation of the medical man to society. "Addison, in the twenty-first number of the *Spectator*, writing of the crowds who throng to the three professions of Divinity, law, and medicine, interprets, I hope not quite fairly, a fact which he had noticed in his own time. He says: 'If...we look into the profession of physic, we shall find a most formidable body of men. The sight of them is enough to make a man serious, for we may lay it down as a maxim, that when a nation abounds in physicians, it grows thin of people.' I cannot think that this maxim, as so laid down, has much truth now-a-days; whatever truth it has, should become less with each succeeding year, as the real science of medicine makes more ground among ourselves, and through us, bears more upon those, whose advisers in all relating to their health, we are. Still we, of a late age, have no reason to plume ourselves. Seeing that Galen reminds us that Homer himself speaks of the dignity of this profession—

ἡγρὸς γὰρ ἀνὴρ πολλῶν ἀντάξις ἄλλων

—we are the rather bound to examine ourselves that we may not fall far below this ideal character." After remarking that we have happily given up long ago the rôle of "Æsculapius of old, that counterfeit god," as Burton (*Anatomy of Melancholy*) calls him, and that our curing depends upon our care, and the latter upon our knowledge of health and disease, he insisted that the type of our mind ought to react upon the mind of the people; our science ought to come home to the people. We are very much to blame if, both in its physical and moral aspect, the nation was not bettered by the existence in it of a well educated body of medical men. And the worth and force of our teaching will depend on the degree in which we take to heart the importance of this our relation to the outside world. He showed what had been done by the professors of medicine for the prevention of diseases—especially

epidemic ones—by teaching people to recognise and avoid the causes of them; and how in this way science had grown out of and conquered an ignorant *δαιμονία*. He held that our lesson is to landlords and builders even more strongly than to those who are the immediate sufferers from cholera and fever; and to all, even those in other respects highly educated, who live on in ignorance of, often in despite of, the conditions under which all life exists.

Another great lesson of which, if we but choose, we ought to be the best teachers, is that a mere belief in authority is not the best guide of human knowledge. Careful observation and patient experiment alone give us sure ground on which to tread, sure reasons on which to base a wider science. He quoted Hallam's statement that an undue respect for authority had interfered with the revival of medicine at the commencement of the sixteenth century. He sketched briefly the gradual growth of more certain knowledge, and urged that medical men, if they would be true teachers, must not be slaves to the idols of the den. He spoke of the almost necessary tendency of the present day to specialism, and of the necessity of a large general knowledge for the due and right understanding of any particular subject; and for this purpose he thought that if we read a little more and wrote a little less, our knowledge would be more thorough.

"And not only physically and intellectually, but morally also are we teachers. For we have to be guardians of the public morality in cases where our own morality in dealing with our patients is concerned. Perfect honesty is our sole safeguard against quackery." The lecturer quoted from the *Spectator's* paper on Quacks (No. 572) in reference to "that branch of pretenders to this art (*i.e.*, of medicine), who without either horse or pickleherring, lie snug in a garret and send down notice to the world of their extraordinary parts and abilities." He continued—"It is not only the herbalist and the bone-setter, but with shame be it said, it is now-a-days the well-educated specialist who sings with quite as lusty a voice as they—

"See here, see here, a doctor rare,
Who travels much at home;
Come take his pills—they cure all ills,
Past, present, and to come."

"The College of Physicians has, in its wisdom, thought fit lately to warn its members of this evil, and I conceive that it is the bounden duty of us who are members of that college to bear the warning with us."

Two other duties which form part of the medical man's relation to society—loyalty between members of the profession, and the necessity of providence for accident or disease—the lecturer approached with delicacy. In summing up these and other relations, he thought that the "geist" of medicine is not, as Mephistopheles describes it, easy to seize upon; and that the highest duty of medical men is to be, in more senses than Homer wrote it, "men worth many others."

Referring to the education of women for the medical profession, he urged that the experiment should be tried quietly, fairly, and completely. "That a woman can become a doctor and follow his vocation not only according to her lights, but with success, has been proved by one who passed happily not long ago through 'the great pain and peril of child-birth.' Others there are more noisily striving for her position. To shut our eyes to the apparent usurpation of work and duties, and even bodily exercise natural to the harder man, would seem to savour of a dangerous self-satisfaction. The question is a social one, and must be settled, as all social questions will settle themselves, by the result of experience and the public good."

With regard to the hypothesis of evolution, in which he expressed his firm belief, he was convinced that, the opposition to it based on scientific grounds being left out of the question, the aversion to it common in a very large number of minds was caused by insufficient knowledge of the evidence, coupled with the horror of which the Edinburgh Reviewer denies the existence, that nature is aggrandised at the expense of man. He combated the idea that the position of man was affected by modification of structure, or the supposed presence or absence of some process of brain-substance. He spoke of the absence of any perceptible differences in the earliest life and development of man and the lower animals; and of the horror felt by some people in the fact that our life in any portion of it should be like the life of any of the lowest organism.

In conclusion, he insisted upon the necessity that students should have some enthusiasm for their work; and that the lazy contentment with the deeds of an examination and indifference to higher standards of knowledge should give way to a full development of their faculties, and a due sense of their responsibility. "By these means only, as night and day press upon you with their recurring anxieties, their seemingly monotonous round of work, will you succeed in this profession; till, as we hope, in no long time after leaving us, your

"Prosperous labour fills
The lips of men with honest praise."

UNIVERSITY COLLEGE.

MR. ERICHSEN, Surgeon to the Hospital and Holme Professor of Clinical Surgery, delivered the Introductory Address. He began by remarking that in no department of science had the intellectual activity of the present age wrought a greater change in a comparatively short space of time than in that of medicine. He would restrict himself to the consideration of that department of medicine in the study and practice of which his life had been spent, and in the teaching of which he had been engaged in the college for nearly a quarter of a century.

There are, he said, two great schools of surgery in this country—the *practical* and the *philosophical*. These are not absolutely separated by a hard and fast line; but there is a tendency in the mind of every surgeon to gravitate more or less towards the practice of the art or towards the study of the science of surgery.

The *practical* school, rendered resplendent by the names of the Heys and of the Clines, of the Coopers and the Aston Keys, of the Listons, the Cramptons, and of Syme, ever has been the most popular in this country, for it is most in accordance with the practical genius of the British people, with their inborn and instinctive aptitude for mechanical pursuits and manipulative action; and it is most in unison with the primary objects of a practical calling. In tracing the progress of surgery as a practical art, and the causes that have led to the great development of its mechanical and manipulative departments, the lecturer asked his audience to devote a few minutes to the contemplation of what operative surgery was but one generation back, how it has since progressed, and then to consider not only the main causes that have led to that progress, but the course which it is at present tending to take.

Thirty-five years ago, the anatomical school of surgery had reached its acmé of development. The practical anatomists were necessarily the operating surgeons of the day. By them surgical anatomy was assiduously studied, and those operations which had for the basis of their successful performance a thorough knowledge of anatomy, such as the ligature of the larger arteries, the operation for strangulated hernia, and that of lithotomy, amputations, the removal of some tumours, and a few of the many operations of minor surgery, were often and doubtless skilfully practised. But, if one of those great men whose names we justly venerate as those of the giants of a past generation of surgeons were to revisit the scene of his former triumphs, he would find that in many cases he would have to learn his work afresh. Not only would this be the case in the nature and character of the operations themselves; it would be equally so when he witnessed the treatment of the wound by the use of carbolised catgut for ligatures, metallic wire for sutures, antiseptic muslin, guards and protectors for dressings, and skin-grafting for the promotion of cicatrisation.

Thirty-five years ago, manipulative surgery had fallen into an almost stagnant state. In the two greatest operations—those for stone and for aneurism—there had been no advance in one since Cheselden, nearly a century before, had successfully operated; or in the other since John Hunter, more than half a century previously, had linked his name inseparably with the operation for aneurism. But, whilst surgery slumbered in the south, it had for some years been endowed with an extreme degree of activity in the north, and it was rapidly becoming revolutionised and perfected in its art by the skill, the energy, and the teaching of a band of distinguished men—nearly cotemporaneous—who gave lustre to the great school of surgery which at that time flourished in the northern metropolis. To Lizars and to Liston, to Syme, and to the youngest, but not the least brilliant, of that bright constellation of northern stars, to William Fergusson, British surgery is undoubtedly indebted for much that is its peculiar glory and chief characteristic in its operative department. The great characteristics of this school of surgery were boldness in the conception, and rapidity, precision, and simplicity in the performance of operations.

In all these respects, Robert Liston, the then foremost member of that band of distinguished surgeons, was excelled by none. His influence was soon felt after his arrival in London, and his example is often unconsciously imitated in many an operating theatre at the present day. Cut off from the fulness of his matured experience and of his professional activity by a death as sudden as it was premature, Liston died too early for the full accomplishment of his fame, but not too soon for the fruition of his example.

Cotemporaneously almost with Liston's death, though preceding it by a few months, occurred that other great event which more than any other has tended to raise modern surgery in its manipulative department to the highest form of excellence. The introduction of anæsthesia not only enabled the surgeon to practise many operations which the forti-

tude of a patient would hardly have enabled him to endure, but it tended to popularise operative surgery in the profession, and made that the business of the many which had previously been the attribute of the few.

During the ten years which immediately succeeded the introduction of anæsthesia, surgery partook of the great advance which characterised all the natural and physical sciences. The zeal with which surgery had been studied led to the establishment of various distinct departments within the precincts of the art itself. The operation devised by the genius and perfected by the skill of Stromeyer, became the foundation on which the great department of orthopædic surgery was reared. Ophthalmic surgery became an art in itself rather than a branch of general surgery. Plastic surgery and the surgery of diseases peculiar to women had each their own special adepts, and conservative surgery had its limits widely extended. At this time, also, operations that had fallen into disuse were revived, and took an established place in surgery. Lithotomy came to be practised in the hospitals, and was slowly substituted there for lithotomy; ovariectomy was frequently practised and greatly improved; various other operations received new and vigorous impulse, and the art of surgery in its manipulative department was carried by the efforts of a number of active and zealous practitioners to a point of perfection very far in advance of what it had occupied but a very few years previously. The gain resulting from this advance has been permanently secured to surgery and to mankind. There is no retrogression in surgery. What our predecessors have done, we well know and can readily accomplish. In what we can do, our successors will not fail.

The art of surgery, like all other manipulative, plastic, or imitative arts, can only be carried to a certain point of excellence. That we have nearly, if not quite, reached the final limit, there can be little question. When we reflect that every large artery up to the aorta itself has been ligatured—that each of the six large articulations and many of the bones have been resected—that the amputation of each limb up to the shoulder and hip-joints is a matter of ordinary occurrence—that large tumours having the most intricate anatomical connexions have been removed from every surgical region in the body, from the base of the brain to the lowest organ of the pelvic cavity—we can scarcely believe that much remains for the daring of the boldest to devise, or the skill of the most dexterous to accomplish, in the extension of operative surgery. It has yet to be determined whether the extirpation of the kidney and of the spleen is more than a bold experiment on the power of endurance of the human frame. We can, then, scarcely hope to pass far beyond the line at which we have arrived in the direction of extreme precision and almost absolute certainty in the mechanical performance of the operations of surgery. At the same time, we may reasonably expect that the method of operating may from time to time be improved by the skill of individual operators, by the ingenuity of surgical mechanicians, or by the introduction of new agents hitherto but little known or little employed, such as electricity.

Whilst surgery has been making rapid strides in its purely operative department, there has been *pari passu* a corresponding tendency to limit the number and to lessen the severity of operations, and to substitute for the knife manipulations of a gentler character, by which the same effects were sought to be effected. It has now come to be considered as a truism that mere mechanical dexterity does not constitute true surgical skill, and that the perfection of surgery consists in producing the desired result by the smallest expenditure of force. We see illustrations of this tendency to lay aside the knife and to substitute milder methods of treatment—in the treatment of carbuncle, in the application of electricity and elastic tension in the treatment of deformities; in the substitution of escharotics for the knife and the gouge in the treatment of chronic caries; in the so-called "conservative surgery," which seeks the preservation of the limb by the sacrifice of the diseased part only. But the two most conspicuous illustrations of this tendency are in the treatment of aneurism and stone. In the treatment of aneurism, modern surgery has discarded the knife for the compressor; that instrument for the simple pressure of the finger or flexion of the limb; and, finally, it has been shown that the rapid deposition of dark clot is amply sufficient for the cure of the disease. Mr. Erichsen believed that, with regard to the treatment of aneurism, galvano-puncture, or the process by electrolysis, deserves the fullest attention on the part of the practical surgeon. Another conspicuous illustration of the tendency referred to, is the general adoption of lithotomy in all practicable cases for lithotomy. But even in this direction the tendency is to endeavour to prevent the formation of calculi, or, if once formed, to aid in their solution.

While modern operative surgery has attained to so high a pitch of perfection in all that relates to boldness of conception and to precision of execution, that we can scarcely hope to see any further progress in these directions, the case is widely different with the other great school

of surgery—the *scientific*. Here, truly, we are but as yet halting on the threshold.

The *Hunterian* or *scientific* school of surgery has been illustrated since the days of its great founder—John Hunter—by names that are amongst the most brilliant in the annals of British surgery. But this school could scarcely be considered as existing in a concrete and definite form until “surgical pathology” was consolidated into a system in the admirable lectures delivered nearly a quarter of a century ago at the Royal College of Surgeons by Sir James Paget, and which have never been surpassed for depth of philosophic research and comprehensiveness of scientific thought. Since that period surgical pathology has been regarded as a distinct department of medical science, and has advanced with a rapidity that has fully kept pace with pathological science in its more medical aspect.

We are too apt to speak of the “science of surgery” as a distinct and separate branch of the natural sciences as being something more definite than what in reality it is—merely a branch of general, biological, and pathological science—that portion of it which is specially connected with the *rationale* of surgical processes and operations. In many cases the science of surgery consists in the application of knowledge, derived from the cultivation of other and collateral departments of science, to purely surgical ends. We see this conspicuously illustrated in some of the more recent advances of surgical science and in its application to practice. Thus, by calling in the aid of physical science, electricity is beginning to play a part destined, doubtless, before long to be a great and most important one, in the diagnosis and treatment of various surgical ailments. The use of electricity in the diagnosis of the true nature and special cause of various kinds of deformity of the limbs and their treatment, by Duchenne (de Boulogne), is one of the happiest applications of physical science to a surgical end. The application of the same agent to the cure of aneurisms and *nævus* by electrolysis of the contained blood, or to the ablation of vascular parts without risk of hæmorrhage, by the galvanic *écraseur* are all instances of this application of a physical science to a purely surgical end.

It might be supposed that few, if any, applications of ordinary descriptive anatomy to surgery had escaped practitioners. But where is a more happy example of the application of an apparently dry and uninteresting anatomical fact to scientific surgery than in the study of the anatomy of the ilio-femoral ligament by Bigelow, and the complete revolution that this study has effected in our knowledge of the mechanism of the dislocations of the hip-joint and in their methods of reduction? A somewhat analogous application of a seemingly barren anatomical fact in surgery is to be found in Amussat's great operation of colotomy, being dependent on the anatomical relations of so obscure a structure as the arrangement of the mesocolon in the left lumbar region. Perhaps ophthalmology supplies the most copious and the most precise illustration of the combined application of physical and exact science to the elucidation of surgical phenomena. The idea of one of the greatest triumphs of modern surgical science was furnished to Lister by the study of the doctrines of Pasteur on the production of diseases in some of the lower tribes of animals by the development of organisms, which in their turn, when deposited on congenial media, were capable of producing fermentative and disorganising changes, and we owe the “antiseptic treatment” to the direct and happy application of these doctrines to the practice of surgery.

There is probably, however, no collateral branch of knowledge that has a closer and more direct bearing upon the advance of surgical science than has *hygiene*; and it is in this direction and in its application that we ought to look for some of the greatest improvements. Hygiene has a double relation to surgery: (1) in its application to the prevention of diseases and infirmities that render surgical interference necessary; and (2) in its influence on the results of such interference or operations.

That hygienic measures may even be influential in the prevention of congenital deformities and defects, there is every reason to hope. What is apparently more hopeless than cleft palate, so far as preventive hygiene is concerned. Yet, if we take the lesson taught by the Rev. Dr. Haughton from some of the lower animals, we may possibly by its application to the human female prevent the occurrence of that most distressing defect, and possibly other similar ones, as *spina bifida*, in her offspring. The lion-cubs born in the Dublin Zoological Gardens were uniformly affected with cleft palate. This was attributed to the nature of the food given, the lioness being fed with masses of meat attached to large and strong bones, which the animal was unable to crunch and devour. It was thus deprived of its due supply of phosphates. These were afforded to the lioness by giving her rabbits and other small animals, the bones of which she could readily devour. The result has been, that a litter of cubs has been born with normally developed palates.

But it is in its influence on the results of operations that the applica-

tion of hygiene to surgical science has been, and will be, attended by the most important consequences. We have carried the art of surgery to the highest degree of perfection of which, as an art, it is susceptible. But we have not succeeded in rendering operations proportionately less fatal. And here the surgeon has a wide field open before him in the future; and there is no direction in which it can be cultivated that promises a more fruitful harvest than in endeavouring to make the success of the result balance the skill in the performance of an operation. For it is useless to deny or to ignore the fact that the mortality following the greater operations has not only not diminished of late years, but has, there is reason to believe, in some cases actually increased. The present death-rate after lithotomy—even making allowance for the application of lithotomy to the more favourable cases—is quite as great as it was in the hands of Cheselden or of the great Norwich surgeons. Herniotomy is at least as fatal as it was in the hands of Hey and of Cooper; and the result of the ligation of the larger arteries has actually in some cases—as in that of the common iliac—become more unfavourable of late years.

The present rate of mortality after amputations of all limbs in the largest metropolitan hospitals of Great Britain is at least one in three; in those of Paris (Malgaigne and Trélat) and of Germany (Billroth), nearly one in two. In military practice, recent experience is equally unfavourable; but the influences at work during active war are so peculiar and so great that they remove these cases into a category of their own. But this fact is certain, and it is as melancholy, that, taking the average mortality after amputations of all four limbs in the largest hospitals, in the hands of men of the most consummate skill, the mortality calculated in large numbers varies from 35 to 50 per cent. In some amputations, as of the thigh and at the hip-joint for injury, the mortality rises to 60 and even 90 per cent. In fact, so constantly do these numbers come out in hospital and army returns, that surgeons have almost come to regard them as representing the necessary rate of mortality after amputation. But must hospital surgeons remain content in losing from one-third to one-half of *all* their amputation cases, and nine-tenths of some? Is this frightful death-rate the necessary result of the operations, or is it dependent on preventable causes? Surely here is ample scope for science to aid the operations of our art, and to supplement it where it ceases to be efficient.

That this may be done, Simpson has abundantly proved. Having collected a large and nearly equal mass of statistical returns of consecutive operations performed in large and in small hospitals, in country, mining, and private practice, he found that of 2,089 cases of amputations in large hospitals in this country, 855, or 1 in 2.4 had died; whilst of 2,098 in country and private practice the deaths were only 226, or at the rate of 1 in 9.2. It is quite possible that Simpson's figures may be only approximately correct. But the difference is so great between the result of amputation in and out of hospital that the material result cannot be affected—viz., that a mortality of 1 in 2.4, or, in other words, of more than 40 per cent., is not a necessary result of amputations; that it is greatly the result of the circumstances in which the patient is placed after the operation; and that it may be materially reduced, according to Simpson, by nearly three-fourths, so as to amount to less than 12 per cent., by an alteration of these circumstances. When we analyse these results more closely, some startling facts are elicited. Amputation through the forearm is not likely to prove fatal by any conditions dependent on or inherent in it, but can only become fatal by the intrusion of circumstances dependent on causes existing outside the operation. Of 377 cases occurring in private and country practice, only 2 died; whilst of 244 in hospitals, 40 died, being 1 in 188 against 1 in 6.

It is not only in amputations that hospitalism exercises its injurious influences. It is doubtless more or less so with all operations by which extensive wounds are inflicted, and in none more so than in that which we may consider with justice and with pride as one of the greatest glories of the modern school of British surgery, ovariectomy. This operation owes its origin and its establishment in practice entirely to the success that attended its performance in the hands of country and private practitioners. Almost all, if not all, the early successful cases were done on private patients. It was tried in the London hospitals, but so great was the mortality that there was the greatest danger of its falling entirely into disrepute and neglect. The operation was pronounced as unjustifiable, and the operators were stigmatised in opprobrious terms by two of the most eminent operating surgeons of that day—Lawrence and Liston. It was first practised successfully in London in private by Walne, Frederic Bird, and Lane. It has never taken its place as an operation practicable like others in large metropolitan hospitals. It has been proved that if ovariectomy be practised in a large hospital, and if the patient be placed in a general ward—or even if she be secluded in a private one, but exposed to hospital influences,—her chance of recovery is very small. The

mortality after ovariectomy in hospitals amounts to 76 per cent., whilst in private practice Spencer Wells at most has lost 24 per cent., or less than one-third of the hospital rate of mortality. And this amount of loss is, with increasing aptitude and experience, still on the decline; Keith, of Edinburgh has achieved the marvellously successful return of 27 deaths in 144 cases, or about 18 per cent.

That which holds good with amputations and ovariectomy must surely be equally applicable to other great operations; and if the rate of mortality after amputations is nearly four times, and that after ovariectomy more than three times, as great in large general hospitals as it is in small institutions and in private practice, a more or less correspondingly high rate of mortality may be supposed to attach itself to other of the great operations by which life is directly imperilled.

In conclusion, the lecturer said: Although I believe that we have nearly reached to something like final perfection in the mere art of manipulative surgery, let me beg of you to do your best to acquire dexterity and precision in its operation, and not to undervalue their importance. These qualities are easily attainable in early professional life; they can never be acquired later. It is the simple physical education of the eye and the hand that is required; like all physical exercises, it is of ready attainment in youth. But let me urge upon you most earnestly not to neglect the study of those sciences which, I have shown you, sublie even so practical a subject as surgery, and which are probably even of greater importance in their connexion with other departments of the profession. But, interesting and, indeed, captivating as most of them are, for their own sakes, use them only so far as they are subservient to the great object of the studies of at least ninety-nine out of every hundred of you—that of preparing you to become practitioners. And bear this in mind, that the foremost men in our profession have ever been, and still are, those who are the greatest practitioners of its art, and that there is no calling more interesting in its practice, and more independent and useful in its exercise, than that of medicine in its largest and highest sense.

CHARING CROSS HOSPITAL.

THE Introductory Address was delivered by Mr. EDWARD BELLAMY, F.R.C.S., Senior Assistant-Surgeon to the Hospital.

Mr. Bellamy commenced his address by welcoming the students, remarking that those just entering upon the profession were about to lay the foundation of that training which was to fit them to enter the ranks of an army of men whose lives are devoted to the welfare of others rather than of themselves. He announced the additions to the hospital staff of Dr. Bruce as Assistant-Physician, Dr. Sparks as Physician in charge of the Skin-Department, and Mr. Astley Bloxam as Assistant-Surgeon; and remarked that Charing Cross Hospital might congratulate itself on its financial condition. The movement known as Hospital Sunday will, no doubt, he said, when in working order, be, and indeed has already been, a great boon to the unendowed hospitals, by a judicious allotment of funds. The support of some special hospitals appeared to be rather an effort of misguided charity, and their maintenance a hindrance to the efficacy of the general hospitals, where the acknowledged leaders of British medicine and surgery daily treated every form of disease. Mr. Bellamy called attention to the shameful abuse of hospital charity by those who were in receipt of incomes, such as could enable them to pay for advice, and trusted that some legislation might prevent the present state of matters. He then went on to speak of the school, and of the new appointments made in it—Dr. James Cantlie having been elected Demonstrator of Anatomy, and of the additional teachers of Practical Surgery: Mr. Clarke giving special instruction in Surgical Appliances, Mr. Bloxam in Surgical Pathology, and Mr. Bellamy in Operative Surgery on the dead body, whilst Mr. A. H. Garrod had been appointed to the chair of Comparative Anatomy. The lecturer then proceeded to speak of the great value of early education, and said that, as it was impossible to overrate the advantages of a liberal education for the medical student, so was it equally impossible to withhold a natural preference for such young men as had availed themselves of it. The general tone of the profession had been of late years vastly improved, not only on account of the exacting and searching nature of the professional examinations, but also on account of the generality of the preliminary test examinations. After entering fully into the subject of the *locus standi* of the educated medical man, he said, "That it was an unwelcome reflection which might, however, enter one's mind, that the uneducated practitioner stood somewhat in the position of the artisan, who was called in when something wanted doing, but who, when it was done, was dismissed in much the same style." The subsequent development of the student's education depended partly on what he was taught, partly on how he was taught,

and partly on how he learned. The man who passed through his student-life with the only aim of passing an examination, and then letting his learning or application cease, generally retained this kind of idea throughout his professional life, and was readily recognised as the "hastily run up practitioner," who, besides being an uninteresting, was a very dangerous member of society. Mr. Bellamy referred to the benefit that the annual publication of the successes of failures and candidates presenting themselves for examination at the College of Surgeons would have as a stimulus to fresh exertions on the part of both teachers and taught. He next proceeded to review the several scientific subjects which would form their curriculum, and dwelt on that of anatomy and physiology at some length, alluding to the recent discoveries in the anatomy of the brain.

Mr. Bellamy urged upon the students the necessity of hard work in the wards. As he had advised them in the scientific course to live in the dissecting-room, so in their practical one he counselled them to live in the wards and *post mortem* theatre. Referring to the uselessness of "cram" in obtaining any insight into disease, he instanced a case of which he had been told, of difficulty experienced by a "show" prize man in medicine in recognising a simple case of measles. He then went on to explain the several branches of the profession, such as surgeons, physicians, obstetricians, and general practitioners, and observed that circumstances alone could direct them as to what branch of the healing art they should individually choose. Of the consultant, he said that it demanded a man's possession of an hospital appointment, and, having obtained it, that he bide his time till he got consultations. "Biding the time" implied a large outlay of what capital a man possesses, real or ideal, for the sake of keeping up appearances without any return for years, and obtaining consultations depended either upon singular ability, connection, or subtle tact in powers of ingratiation. He then spoke of how the lives of the generality of those he addressed would be spent, namely as general practitioners, and concluded by saying: "As such, you will be expected to have everything at your fingers' ends and be up to every emergency. No difficult case should daunt you. Thoroughly provisioned for your campaign through life by early culture, good examples, a thorough appreciation of the attributes of Christian gentlemen and a sound practical and workmanlike knowledge of your profession, you must leave no stone unturned, lest there lie beneath it some latent energy which is being directed against your powers of observation and detection of disease. You must fight your best and hardest, and nerve yourselves for your future attempts to grapple with death and to delay his certain triumph.

"But do not, gentlemen, consider that professional accomplishments are to be 'the be all and end all' of your attainments during these years of training, 'make use and fair advantage of your days,' and let it be said of each of you what Valentine said of his friend Sir Proteus—

"His years but young, but his experience old,
His head unmelld, but his judgment ripe;

He is complete in feature and in mind
With all good grace, to grace a gentleman."

(Two Gentlemen of Verona, Act ii, Scene 4.)

ST. THOMAS'S HOSPITAL.

THE Introductory Lecture was delivered by Dr. JOHN HARLEY, Lecturer on Physiology and Assistant-Physician to the Hospital.

In his introductory remarks, the lecturer observed that entrance to the medical profession at once relieved its followers of the temptations and chagrins which attended the pursuit of wealth. Titles ill become the man whose deep knowledge of life taught him to put no high estimate on artificial distinctions. An order of merit, to distinguish its possessor from the less industrious and less skilled of his *confrères*, was a different thing. Such an order, though tardily bestowed, would be a graceful compliment to a profession which had long served the state for altogether inadequate remuneration, which, at risks as great as those of the soldier on the battle-field, was engaged in freeing suffering humanity from disease, and whose members had done more for the advancement and enlightenment of the world than those of any other. In reference to his curriculum, the lecturer said that it was becoming every year more apparent that the majority of young men were not, as far as a practical knowledge of medicine and surgery was concerned, so well-educated now as were those who entered the profession twenty years ago, though in theoretical knowledge the former, no doubt, surpassed the latter. The cause of this decline of practical knowledge was stated to be the abolition of the apprenticeship system, its place being left almost empty. Most students now came to the medical schools fresh from school or college, and without a single stand-point to aid them in appreciating the work to which they were suddenly introduced. After the first examination, two years alone remained for the study of medicine and surgery. Very few spent the

whole of the two years as clinical clerk or dresser; but the majority of good men could spend only a year in holding these appointments, the rest of the time being occupied with a general and very desultory observation of the hospital practice. Another defect was, that the first impressions of the mode of dealing with patients was derived from hospital practice; for it would be unsuitable to carry the necessarily curt and official ways of hospital work into private practice. The apprenticeship system obviated these imperfections very completely. Drudge as the apprentice often might have been, a practical knowledge of minor surgery and the commoner diseases was forced upon him. He learnt drugs, their medicinal uses, action, and, to some extent, their chemical characters. He came in for a fair share of visiting and midwifery practice. Upon emergency, he was called upon to diagnose and treat a fracture or dislocation; and he assisted often as a capital operation occurred in his master's practice, and, being thus directly associated with a case, he took a daily interest in it. The lecturer considered it astounding that the vast teaching resources of the private surgeries of his country should have been practically ignored—resources which, if properly directed and employed, would confer a greater benefit on the profession and the public than the united efforts of all our medical schools could achieve. He would propose the adoption of a modified apprenticeship, and the addition of home-patients' departments to hospitals. By the former of these arrangements, the medical disciples would be articulated at the age of 16 to a medical practitioner for three years. He would be required to pass two preliminary examinations—the one in arts at the end of the first year of his articles; the other in chemistry, botany, and materia medica at the end of the third year; when he would devote himself to the study of anatomy, physiology, medicine, surgery, and midwifery during another three years. By the second arrangement, that portion of the city within a given radius of the hospital would be divided into districts, and each placed in charge of a member of the medical staff appointed for the purpose. Patients too ill to visit the hospital, and precluded from admission into its wards, would be visited at their homes by students during their last year of study, under the directions of the proper officers. In reference to lectures, Dr. Harley looked forward to the not very distant time when the lecturer should become the more useful demonstrator, and the student should be referred to his handbook for theoretical views and systematic arrangements. Something might be said in favour of lectures on Medicine, because fever, ague, and madness could not be isolated like a cancerous tumour or broken bone, and put before the student; but chemical experiment and botanical facts were completely within the reach of individual observation. The same was, in a measure, now true of physiology. The students were advised to look not to the laboratory only for practical physiology, but to the wards and prescribing rooms, where hosts of wonderful experiments were done by nature herself.

After commenting on the means of preventing disease, the lecturer spoke of the difficulty which attended the study of the action of medicines. While deprecating in strong terms the abuse of alcohol and narcotics, he observed, in reference to chloral hydrate, that the theory of its action was simple and intelligible; the drug was known in almost every family invaded by disease. Medical men prescribed it freely and indiscriminately, and not unseldom continuously. Patients thus accustomed to the use of the remedy supplied themselves and even their friends with it. When they would be oblivious, they took chloral hydrate, and sometimes they passed from oblivion to death. Medicine had thus been made again and again to reverse her intent. Laxness in prescribing narcotics, and continuing them for slight ailments until the too willing patient was wrecked in mind and body, was a terrible indiscretion. "At this moment there are hundreds of patients waiting the arrival of their medical attendants to inject another grain or two of morphia beneath the skin. Only four hours ago, they had a similar dose; four hours hence they will have another. They declare they cannot endure a rheumatic, neuralgic, or obscure hysterical pain, and they implore you to give them frequent and increasing doses of morphia, each of which carries them still further from real help, and eventually adds to their misery and degradation." Dr. Harley spoke of sketching and shorthand writing as of the utmost use to a medical man, who could delineate nature with a few touches of the pencil, and describe her moods by rapid intelligible signs, would want only one more faculty in order to know her, viz., observation. The students were advised and learn to apprehend simple facts, and fix them in their mind. Life, disease, and death were the facts with which they had to deal; each of these phenomena was a mosaic of facts, so perfectly fitted as to show no lines on the surface and scarce a clue beneath; and these had to be discovered and isolated. "Do not be discouraged that the labour seems so little fruitful. Each one of us can do no more, perhaps, than recognise and isolate one bare,

unconnected fact. But, like the fragment which is turned out of the dust-heap which marks the site of the ruined and forgotten city, your fact will, sometime in the distant future, be recognised as the link wanted to complete a discovery which may result in untold benefits to the human race. Never forget that this is the object of all your study now, of all the efforts of your maturer understanding and skill hereafter. Faithfully pursue that divine object, and thus shall you be daily laying up for yourselves treasures in heaven, where neither moth nor rust doth corrupt, and where thieves do not break through and steal."

THE LONDON HOSPITAL.

THE introductory lecture was delivered by Dr. Prosser James, Lecturer on Materia Medica and Therapeutics. The subject of the lecture was the Progress of Medicine and the Medical Sciences in the last quarter of a century. The lecturer asserted that these had kept pace with other sciences; and spoke of the share which the staff of the London Hospital had taken in the progress of medicine, referring to the observations of Dr. Herbert Davies, on the adaptations of the heart to its functions; of Dr. Hughlings Jackson, on aphasia; of Dr. Carpenter and Mr. Quekett, on the microscope; of Dr. Sutton, on the pathology of Bright's disease; of Dr. Fenwick, on degenerative changes in disease; of Dr. Andrew Clark on tubercle, etc. He spoke, also, of the share which London Hospital men had taken in the establishment in practice of the use of the clinical thermometer, the ophthalmoscope, and the laryngoscope. The lecturer then discussed the practical applications of our knowledge in materia medica and therapeutics, for which he claimed equal advantages and a high position. He understood materia medica, in its widest sense, to include whatever may be useful in the promotion of recovery, or whatever might prove a comfort to the patient, and he made therapeutics include the art of employing all such agencies. In illustration of the advances made in the last twenty years, he mentioned the more scientific application of cold baths; the discovery of electrolysis, which he was the first to use in goitre, and to apply within the larynx; and some new drugs, of which chloral hydrate was the most important. He finally exhorted the students to follow in the path of their predecessors; and congratulated them on the choice of a school in which science and practice went hand in hand.

WESTMINSTER HOSPITAL.

THE Introductory Address was delivered by Mr. George Cowell, Surgeon to the Hospital, and the Dean of the School. He quoted the words of Abernethy, "God help you, gentlemen! What will become of you all?" and explained that there was no need for anxiety in the present day, as to the prospect of all finding sufficient scope for the exercise of their profession. In welcoming the new students, and the past and present pupils of the hospital, the objects of introductory lectures were enumerated; and then followed a short sketch of the history of the hospital and school. The former was established in 1715, and was the first established by the voluntary contributions of the public. The lecturer then referred to some of the celebrities who have served the hospital during the hundred and fifty-nine years of its existence, alluded to the numerous changes that had been recently made in its school, and especially in regard to the clinical teaching of the hospital. Preliminary education was declared to be imperative in these days of the rapid growth of every branch of medical science. The strictures on the establishment of preliminary examination for the license to practise, made in the last Hunterian oration, were combated. No one would dream of teaching a man the art of fencing until he had been put through a course of gymnastics, to develop, to some extent, a precision and ease and rapidity of movement; and could it be wise to put a man to study a profession which required more than any other the facile use of the reasoning faculties, without first training those faculties by the gymnastics of preliminary education? The example of John Hunter was held up to show how perseverance could make up for any neglect in this previous training, and how

"Many strokes, though with a little axe,
Hew down and fell the hardest timbered oak."

The objects of a medical school, to classify the student's work, and to guide him in reasoning for himself, were explained. Cramming and grinding were condemned, and the lecturer asked, how much of this extract of science would be remembered six months after the examination had been passed? And how much self-reliance and independence was possessed by him who had so miserably wasted his time, so mistakenly neglected the opportunities which could never

return? Success, self-respect, confidence, all depended upon good honest work. Each man must get up his work for himself, and, to make it of any use to him, he must digest it and assimilate it himself. The student was then shown the best way of doing this, and great stress was laid upon case-taking at the bedside, as the best mode of training the faculty of observation. The special work of the first year's student was next considered; and dissecting shown to be his proper sphere of work. Visiting the wards during the anatomical period of study was referred to as a waste of time. The teaching of the scientific and practical subjects must be as widely separated as were the examinations; and the time was coming when the college of science would be distinct from the medical school, properly so-called. The rapid progress of physiology and pathology was compared with the slow growth of therapeutics, and the reason of this explained. The subject of inductive reasoning was considered, and its nature compared with that of the reasoning in a pure science, such as mathematics. The identity and harmony of relation between science and religion were then laid down, and the student was warned against taking for true science the speculations of scientific men; the theories of those who have allowed their imagination to carry their thoughts far beyond the conclusions their facts will warrant, into the unseen world of fancy. In conclusion, the lecturer said the medical profession was something more than a scientific and intellectual one; it called forth the best feelings of our nature. If medical men could not look forward to high honours and rewards, still no profession could look back upon a long life of usefulness, with greater pleasure or with a more perfect consciousness of having aided his fellow-man. "May each of us, gentlemen, during the last years of life, look back with pleasure on the good work and deeds of mercy we have been permitted to perform, and may we then, as now, say with Wordsworth:

"Oh! that our lives, which flee so fast,
In purity were such,
That not an image of the past
Should fear that pencil's touch!
Retirement then might hourly look
Upon a soothing scene;
Age steal to his allotted nook
Contented and serene,
With heart as calm as lakes that sleep
In frosty moonlight glistening;
Or mountain rivers, when they creep
Along a channel smooth and deep
To their own far-off murmurs listening."

THE SOCIAL FESTIVITIES OF OCTOBER 1ST.

THE opening day of the session was, as usual, not monopolised by the formal proceedings of introductory addresses and the official statements of the Deans. At most of the schools, social meetings of the past and present students took place. They all passed off successfully.

THE MIDDLESEX HOSPITAL.

The annual dinner of the Medical College took place in St. James's Hall Buildings, on Wednesday evening, after the introductory address by Mr. Morris. Dr. Greenhow, F.R.S., presided, and there was a large attendance of members of the staff, past and present students, and friends of the hospital. Major Walters and Major MacLeay responded to the toast of the "Army, Navy, and Reserve Forces"; Mr. Ross, the popular chairman of the weekly board, to that of "The Middlesex Hospital." The toast of the evening, "The Middlesex Hospital Medical College," was according to custom coupled with the name of Mr. De Morgan, and received with the usual enthusiasm. Mr. Rix and Mr. Arthur Tones responded to the toast of "The Past and Present Students." The toast of "The Chairman" was received with much applause, and was feelingly responded to. The toast of "The Lecturer of the Day" did not fail to call forth a warm response for it. During the evening, a musical programme, kindly organised by Mr. G. Anderson Critchett, and carried out most successfully by the "Middlesex Hospital Minstrels," added greatly to the pleasure of a very successful meeting. Mr. Critchett, Dr. C. Semple, Mr. Adams, Mr. Hailstone, the Rev. Mr. Walshe, chaplain to the hospital, and Mr. Gillespie were the performers.

WESTMINSTER HOSPITAL.

A *conversazione* was held in the Board Room of the Hospital after the introductory address.

ST. BARTHOLOMEW'S HOSPITAL.

At this hospital, the usual Annual Dinner of the medical staff and the past and present students of the hospital was held.

ST. GEORGE'S HOSPITAL.

The dinner of the old students of St. George's Hospital was held at Willis's Rooms, St. James's, on Wednesday evening. Dr. Acland of Oxford occupied the chair. There was a large attendance. After the usual loyal toasts, Dr. Barclay proposed that of "The Governors of St. George's Hospital," which was responded to by Mr. J. S. Shaw Stewart, the Treasurer. The toast of the evening, "The St. George's Hospital and Medical School," was proposed by the Chairman, and responded to by Dr. Wadham, Dean of the School. "The Health of Mr. Brudenell Carter, the Orator of the day," was then proposed, and responded to by that gentleman. The toast of "The Old Students and Visitors" was proposed by Dr. Barclay, and responded to by Mr. Wilson. The proceedings passed off with great success.

ST. MARY'S HOSPITAL.

After the delivery of the introductory address by Dr. Shepherd, the company adjourned to a *conversazione* in the Board Room of the Hospital, where refreshments were provided, and various objects of interest exhibited, such as improved microscopes, etc., by Messrs. Ross, with pathological and other microscopic specimens. The address was listened to by a large audience, and warmly applauded. Amongst the company present were Dr. T. King Chambers, Dr. Sibson, F.R.S., Dr. Handfield Jones, F.R.S., Mr. Spencer Smith, Dr. Norton, Dr. Langmore, Mr. W. B. Owen, and a large number of old and present pupils of the hospital.

THE LONDON HOSPITAL.

The Biennial Festival of the London Hospital was held in the Albion Tavern, on Wednesday evening; Dr. Herbert Davies, Senior Physician to the Hospital, in the chair.

ASSOCIATION INTELLIGENCE.

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting will be held at the Lion Hotel, Shrewsbury, on Monday, October 6th, at 1 P.M.; S. BETTON GWYNN, Esq., in the chair.

Dinner will be served at 3 P.M. for the convenience of the country members. Tickets, exclusive of wine, 7s. 6d. Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. Wright of Liverpool, will be provided as usual.

Gentlemen intending to read papers, etc., will oblige by communicating the titles of such, before the 29th instant, to

JUKES STYRAP, *Honorary Secretary.*

Shrewsbury, September 12th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will be held on Tuesday, October 7th, at the Half-Moon Hotel, Petworth, at 2.15 P.M.; HENRY BOXALL, Esq., of Wisborough Green, in the Chair.

The dinner will take place at 5 P.M.: charge, 5s., exclusive of wine. Worthing, Sept. 29th. W. J. HARRIS, *Hon. Sec.*

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting of this Branch will be held in the Museum, Shrewsbury, on Wednesday, October 8th, at two o'clock; DR. GREVILLE THURSFIELD, President-elect.

Papers will be read, etc.

The Dinner will take place at the George Hotel at four o'clock. Members may introduce friends.

SAMUEL WOOD, *Hon. Secretary.*

September 9th, 1873.

YORKSHIRE BRANCH.

THE autumnal meeting of this Branch will be held at the Church Institute, Wakefield, on Wednesday, October 15th, at 2.30 P.M. The members will dine together at the Bull Hotel at 8 P.M. Tickets (exclusive of wine), 6s. each.

Members intending to bring forward communications or join the dinner are requested to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary.*

York, September 30th, 1873.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

THE next meeting of this Society will be held on Thursday, October 16th, at 4.0 P.M., at Laker's Hotel, Redhill.

On the invitation of Dr. Grabham, the resident physician, an excursion will be made to the Earlswood Asylum.

The dinner will take place at 6.0 P.M., at Laker's Hotel, and Dr. Holman of Reigate will preside.

All members wishing to attend must give early notice to the Secretary, in order that a sufficient number of conveyances be provided.

HENRY T. LANCHESTER, M.D., *Hon. Sec.*

Croydon, October 1st, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at Penrith, on Wednesday, the 29th October. The President, Dr. TIFFIN of Wigton, will take the chair.

Gentlemen intending to read papers are requested to give immediate notice to the Secretary.

HENRY BARNES, M.D.

Carlisle, October 1st, 1873.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

ANATOMY AND PHYSIOLOGY.—Professor Humphry gives notice that the course of lectures on Practical Anatomy will commence on Wednesday, October 8th, at 9 A.M., and be continued daily. The course of lectures on Anatomy and Physiology will commence on Thursday, October 23rd, at 1 P.M., and be continued on Tuesdays, Thursdays, and Saturdays. The dissecting-room will be open from October 1st.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 25th, 1873.

Churchward, Albert, South Penge Park, Anerley.

Rendale, John, 47, Trinity Street, Borough.

The following gentlemen also on the same day passed their primary professional examination.

Golding, Reginald, St. Bartholomew's Hospital.

Hogg, Thomas B., Leeds School of Medicine.

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 26th and 27th of September, 1873, 108 candidates presented themselves; of whom 32 were rejected, and the following 76 passed, and received certificates of proficiency in general education; viz., in the First Class, in the order of merit.

1. W. A. Sykes.
2. C. F. Campe, A. E. Cracknell, B. J. Guillemard, and R. E. Inman.
3. J. L. A. Hope and W. Hugo.
4. W. J. Caut, D. Colquhoun, H. R. Dale, F. J. Driver, F. C. Gibbs, E. P. Hayward, W. J. Milles, and B. Riden.

In the Second Class, in alphabetical order.

R. W. Addams, A. Allen, N. Allsworth, W. W. Amsden, T. Baker, F. Bass, H. L. Bates, C. E. Beebe, A. S. Bradford, A. H. Bromilow, A. E. Clark, M. F. Cook, C. E. Cockedge, C. Couzens, E. Cureton, L. W. Davies, W. C. Falls, W. Fowler, F. Frank, W. T. Freeman, E. Griffiths, J. L. Hall, J. T. Hay, W. B. Hodgson, H. Hopper, G. Hussey, N. Kingsford, H. J. G. L. Leith, H. J. Liebshtein, M. E. Ling, A. P. Lungley, E. D. Maddick, C. Maunder, J. Montford, T. P. Morgan, H. B. Noble, G. E. Palmer, W. J. Parkinson, C. Plant, J. R. Purdue, F. T. L. Robertson, H. J. Scott, J. S. Scriven, F. J. Shaw, H. G. Statham, H. O. Stuart, E. Tatham, R. C. Thomas, T. F. Vaisey, C. J. Vlieland, E. C. Waller, M. Waite, A. S. R. Wainwright, E. C. Warren, T. F. Watts, J. M. Wheeler, P. H. White, W. R. White, F. Wiles, H. Wilson, and A. L. Wing.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ANDOVER UNION.—Medical Officer for the Fyfield District: £65 per annum, and fees. Applications, 14th inst., to Thomas Lamb, Clerk.

ARDEE UNION.—Medical Officer *pro tem.* for the Dunleer Dispensary District. Applications, 6th inst., to Peter Carroll, Honorary Secretary.

BARNBOY UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballinamore Dispensary District: £60 per annum and fees. Applications, 5th November, to James McGovern, Clerk of Union.

BETHLEM HOSPITAL.—Two resident Medical Students. Applications, 11th inst., to A. M. Jeaffreson, Clerk.

BRISTOL HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon: £100 per annum, furnished rooms, etc. Applications, 7th inst.

BRISTOL ROYAL INFIRMARY.—Surgeon; Assistant-Surgeon. Application, 9th instant.

BRISTON, STREATHAM, and HERNE HILL DISPENSARY.—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 6th inst., to Secretary, at Dispensary, Water Lane, Brixton.

BROMPTON HOSPITAL FOR CONSUMPTION, etc.—Two Resident Clinical Assistants. Applications, 6th inst.

BURY ST. EDMUNDS.—Public Analyst: £10 ros. per annum; ros. per analysis for the first fifty, and 5s. per analysis beyond. Applications, 20th inst., to W. Salmon, Town Clerk.

BURY ST. EDMUNDS URBAN SANITARY DISTRICT.—Medical Officer of Health: £52 ros. for one year.

CHELTEM URBAN SANITARY DISTRICT.—Medical Officer of Health: £500 per annum for three years. Applications, 11th inst., to E. T. Brydges.

CORK DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon: £60 per annum. Application, 8th inst., to Mr. Laver, Secretary.

DULVERTON RURAL and other Sanitary Districts combined.—Medical Officer of Health: £500 per annum. Applications, 11th inst., to Rev. W. H. Karslake, Meshaw, South Molton.

EAST LONDON HOSPITAL FOR CHILDREN.—Resident Medical Officer: £60 per annum, board, lodging, etc., Ratcliff Cross—Resident Medical Officer: £60 per annum, board, lodging, etc., and washing.

GLOUCESTER COUNTY LUNATIC ASYLUM.—Junior Assistant Medical Officer: £80 per annum, board, etc. Applications, 6th inst., to the Committee of Visitors.

GUEST HOSPITAL, Dudley.—Honorary Surgeon. Applications, 31st instant, to E. Poole, Secretary.

HALIFAX INFIRMARY.—House Surgeon: £80 per annum, increasing to £100, board, lodging, etc. Applications, 7th inst., to Dr. Alexander.

HAMADRYAD INFIRMARY SHIP, Cardiff.—Resident Assistant Medical Officer.

JOREHAUT (Assam) TEA COMPANY.—Surgeon: £300 per annum, rising to £400.

KANTURK UNION, co. Cork.—Apothecary for the Newmarket Dispensary: £50 per annum. Applications, 7th inst., to George Smith, Hon. Sec., The Cottage, Newmarket.

LONGFORD UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Drumlish Dispensary District: £700 per annum, and fees. Applications, 7th inst., to John Reynolds, Hon. Sec.

LOUTH DISPENSARY.—Physician.

MANCHESTER ROYAL EYE HOSPITAL.—Three additional Medical Officers. Applications, 15th inst., to P. Goldschmidt, Chairman of the Board.

MARTLEY RURAL SANITARY DISTRICT.—Medical Officer of Health: £100 per annum. Applications, 10th inst., to A. W. Knott, Clerk to the Authority.

NEWPORT UNION, co. Mayo.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballycroy Division of the Achill Dispensary District: £100 per annum and fees. Applications, 7th inst., to John Carr, Hon. Sec. Murelan Achill.

OUGHTERAD UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Lettermore Dispensary District: £110 per annum and fees. Applications, 13th inst., to H. Flanagan, Clerk of Union.

ROYAL CORNWALL INFIRMARY, Truro.—House-Surgeon, Secretary, and Dispenser: £120 per annum, and increase of £10 per annum for three years. Applications, 8th inst., to Robert Tweedy, Treasurer.

TURTON URBAN SANITARY DISTRICT.—Medical Officer of Health: £10 per annum. Applications, 29th inst., to Thomas Dawson, Clerk to Authority, Turton, near Bolton.

UNST, Shetland.—Parochial Medical Officer.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea.—House-Surgeon; Pathologist. Applications, 11th inst., to Capt. Scoones, Secretary.

WESTWARD UNION.—Medical Officer for the Morland District: £25 per ann., and fees.

WILTSHIRE LUNATIC ASYLUM, Devizes.—Medical Superintendent.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DE LA MOTTE, Peter W., Esq., appointed House Surgeon to the East Suffolk Hospital, Ipswich, *vice* *G. S. Elliston, Esq., resigned.

ELLISTON, G. S., Esq., appointed Medical Officer of Health for the Borough and Port of Ipswich.

PRESTON, William, M.B., C.M., appointed House-Surgeon to the Lancaster Infirmary and Dispensary, *vice* William Berry, Esq., resigned.

ASHENDEN, Charles, Esq., appointed Medical Officer of Health and Analyst for the Hastings Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charges for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

TAYLOR.—On September 27th, at Queen Street, Scarborough, the wife of John W. Taylor, M.D., of a daughter.

DEATH.

DYMOCK, Archibald, M.D., at Louth, aged 62, on September 17th.

CORONER'S INQUESTS.—There were 25,705 inquests held last year—18,046 males and 7,659 females. In the preceding year there were 25,898 inquests—17,916 males and 7,982 females.

TESTIMONIAL.—Dr. Oakley having been obliged by failing health to resign his office as one of the physicians to the Salop Infirmary and retire from practice, his brother professionals and friends considered it a fitting opportunity of paying him a well deserved compliment. A purse of £266:12:0 was the other day presented to him as a token of the esteem in which he was held, as well in his private as his public capacities.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

THURSDAY.—Hunterian Society, 8 P.M. Dr. Sutton, "Cases of Typhoid Fever."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. NOBLE and Mr. BRADLEY (Manchester).—The paper will be published shortly.

ARNOLD AND SON'S SPECIALITIES.

SIR,—I have read Mr. Greenslade's letter in to-day's JOURNAL, and I think I may conclude he regards the traversing hinges as an improvement. He objects, however, to my statement in the JOURNAL of the 20th, that the employment of such contrivance was "after my own suggestion"; and in order to give, as he considers, "sufficient proof" of my error, he refers your readers to his letter in the *Medical Times and Gazette* of July 12th, 1873—a week before I named a plan for approximately hinged side-splints with safety to the patient. I will now quote from the *Medical Times and Gazette* on this subject.

July 5th.—"As regards the hinged side-splints (a very old idea), I consider them objectionable rather than advantageous, as the space between them cannot be altered to suit the limb. With a very spare patient a large amount of padding would be required to make good the deficiency. If necessary, either of my side-splints can be removed without disturbing the limb." (H. Greenway.)

July 12th.—"This 'very old idea' was, I believe, first introduced by my brother-in-law, Mr. Walter, some twenty-five years ago, and my method is an improvement on this; and I beg to call Mr. Greenway's attention to the fact, that the 'space between the splints' can be altered to 'suit the size of the limb.'" (G. Greenslade.)

July 19th.—"The only error I may have committed is, in thinking the space between the hinged side-splints unalterable; and this error is pardonable, considering the point is not mentioned in the description of the apparatus in your issue of May 31st. I thought these side-splints were simply hinged to the back-splint, after the fashion of certain fracture-boxes of a former century. I now presume the hinges are made to traverse across the back-splint. With fixed hinges, the free edges of the side-splints could be made to lean towards each other when treating a small limb; but this would be objectionable, on account of the pressure which would be exerted on the limb from before backwards. However, as I have intimated in my former communication, I do not consider hinged side-splints possess any 'peculiar advantage' over unattached splints; and that, even supposing the employment of hinges to be advantageous, the idea is an old one." (H. Greenway.)

It will thus be seen that the "sufficient proof," in Mr. Greenslade's letter on July 12th, that the side-splints were connected to the back-splint by traversing hinges, is, "that the space between the splints can be altered to suit the size of the limb." He did not then say he had two plans, as we are now informed, for this purpose. In my letter on the following week (July 19th), it will also be seen I showed there was a right and a wrong way of doing this. Whilst attending the meeting of our Association in August, I visited the Annual Museum, and had the curiosity to call at Messrs. Arnold and Sons' stall, where I found exhibited "Mr. George Greenslade's Apparatus for Fractured Leg." I examined the appliance, and, with the exception of the traversing hinges, failed to detect a single point of novelty, so far as it would affect the treatment of a fractured leg. It is essentially a Salter's cradle, from which is suspended a metal fracture-case or folding-splint, by means similar to that employed in my limb-suspender. I asked the attendant (I think he was Mr. Arnold, jun.), How long his firm had placed traversing hinges on the back-piece? He replied, "Within the past fortnight." This would be after the publication of my letter in the *Medical Times and Gazette* of July 19th. I think,

Mr. Editor, you will agree with me, that what I had named by way of presumption I was then justified in regarding as "my own suggestion."

In reply to the remaining portion of Mr. Greenslade's letter in this day's JOURNAL, where he again advertises, I beg to remark, as regards the portability of my limb-suspender, I see no occasion to make any further improvement, as the framework is constructed to fold up in a sufficiently narrow compass. This is a matter of very secondary consideration. The chief point to be determined is, What apparatus affords the greatest comfort, and gives the best chance of success in the treatment of a fractured limb?

By way of conclusion, Mr. Greenslade says he shall not again write on this subject. On this resolve I make no comment, beyond saying that it meets with my hearty approval. I am, etc.,

HENRY GREENWAY.

Plymouth, September 27th, 1873.

SIR,—On reading Mr. George Greenslade's letter in the BRITISH MEDICAL JOURNAL of this day, respecting the traversing hinges on the back-splint, I was much surprised at his statement—that Messrs. Arnold and Sons have "for a very long time" made his apparatus in both forms (with fixed hinges and sliding hinges); for, when visiting the annual museum at King's College during our late meeting, I examined the splint in question at Arnold's stall, and was informed by the person in charge that the traversing hinges had been very lately added to the apparatus; that, in fact, they were only completed on the previous Saturday (August 2nd), and that the fracture-apparatus, with this addition, was then for the first time placed in the market. I think it my duty to send you this independent testimony.

I am, etc.,

JOHN G. DOIDGE.

Lifton, Devon, September 1873.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than Thursday, twelve o'clock.

SIR,—Kindly give me your opinion on the following points.—I am, etc., E.L.W.

1. Is it not usual for the surgeon of the week in hospitals to take charge of all accidents admitted during their week?

2. If an accident has happened a few days before admission, and has been under the care of a surgeon who considers it a case for hospital treatment, would not such be considered, on admission, as an accident, and come under the care of the surgeon of the week? and if, during the absence of the surgeon of the week, his coadjutor takes charge of the case, is it not his duty to resign it at once on the return of the surgeon of the week?

. It is usual for the surgeon of the week to take charge of all accidents admitted during the week. We think that the case referred to, though not admitted at once, came within the category of accidents, and as such belonged to the surgeon whose turn it was to receive cases.

SANITARY MEDICAL OFFICERS' REPORTS.

SIR,—In the official "Regulations as to Sanitary Authorities," it is stated in the fourteenth clause that "he (i.e., the medical officer) shall prepare an Annual Report, comprising tabular statements of the sickness and mortality within the district, classified according to diseases, ages, and localities," etc. Will any of your correspondents who are medical officers of health kindly inform me how the Local Government Board expect that a medical officer in a large rural district can obtain the information required? I am, etc.,

September 24th, 1873.

MEDICAL OFFICER OF HEALTH.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Christian World; The Bolton Daily Journal and District News; The Scotsman; The Ipswich Journal; The Manchester Guardian; The Aberdeen Daily Free Press; The Bath Express; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Bolton Chronicle, September 20th; The North Devon Herald, Sept. 25th; The Bolton Chronicle, Sept. 27th; The Merthyr Express, Sept. 27th; The Wolverhampton Chronicle, Sept. 24th; The South Durham and Cleveland Mercury, August 30th; Australian and New Zealand Gazette, September 27th; The Advertiser, September 27th; The Constitution, September 30th; The Bradford Chronicle, Sept. 22nd; The Darlington and Stockton Times, Sept. 27th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Nettle, Liskeard; Mr. W. Poole, London; Mr. F. W. Thurnam, Devizes; Mr. C. Ashenden, Hastings; Dr. Philipson, Newcastle-on-Tyne; Dr. Ross, Manchester; Mr. Gage Moore, Ipswich; Dr. Berry, Lancaster; Mr. T. F. Sanger, Alfreton; Dr. Weddell, Birmingham; Dr. John Harley, London; Dr. Lloyd Roberts, Manchester; Dr. Ferrier, Wakefield; Dr. Braxton Hicks, London; An Associate; Mr. J. W. Langmore, London; Dr. D. Noble, Manchester; Dr. De Valcourt, Cannes; Dr. Jacob, Dublin; Dr. Ball, Spalding; Our Birmingham Correspondent; Dr. Procter, York; Mr. H. G. Harper, London; Mr. J. S. Kettle, London; Mr. J. G. Doidge, Lifton; Dr. Morgan, Dublin; Dr. H. T. Lanchester, Croydon; Mr. Hensman, London; Mr. C. J. Mason, Surbiton Hill; Dr. J. H. Packard, Philadelphia; Mr. Wood, London; Mr. Sculthorpe, Lichfield; Our Dublin Correspondent; Dr. Radford, Manchester; Dr. Bradley, Manchester; A Member; Mr. Knott, Worcester; Dr. Harris, Worthing; Mr. Stedman, Bedford; Mr. Erichsen, London; Mr. John Woodman, Exeter; Mr. G. Cowell, London; Mr. J. R. Philpot, Poole; Mr. Scattergood, Leeds; Dr. MacLagan, Dundee; A Correspondent; Mr. H. Greenway, Plymouth; Dr. Trench, Liverpool; Dr. L. Armstrong, Newcastle-upon-Tyne; Mr. R. B. Carter, London; Dr. Prosser James, London; Dr. Rumsey, Cheltenham; Dr. Caton, Liverpool; Dr. Best, Louth; Mr. G. D. Brown, Ealing; Dr. Rutherford, London; The Secretaries of the Temperance Hospital, London; Mr. Trollope, St. Leonard's-on-Sea; Mr. Sidney Coupland, London; Mr. Elliston, Ipswich; Professor Longmore, Netley; Dr. Bryan, Northampton; Dr. E. W. S. Davis, Mountain Ash; Mr. Haviland, Northampton; Dr. J. W. Taylor, Scarborough; Mr. P. Gowlan, London; Dr. Barnes, Carlisle; Mr. S. Wood, Shrewsbury; Dr. Humphry, Cambridge; L. S. A.; Mrs. Dymock, Louth; Mr. J. W. Langmore, London; The Editor of *Nature*; Dr. Malins, Birmingham; Dr. Weir, Prestonpans; Dr. Clark, Clifton; etc.

A LECTURE

ON

TERTIARY SYPHILIS, OR SYPHILITIC CACHEXIA.

Delivered at St. Mary's Hospital, London.

By S. A. LANE, ESQ., F.R.C.S.,

Consulting-Surgeon to the Hospital, and to the Lock Hospital.

GENTLEMEN,—I have been requested by those entrusted with your education, my former much esteemed colleagues, to deliver a lecture to you on some subject that I might consider likely to prove of advantage to you, either in your present studies or in your future career. I propose to occupy the hour allotted to me by making some practical observations upon a branch of surgery which appears to me less understood, not only by the student, but by the profession generally, than almost any other I could name, and with regard to which many years of experience at the Lock Hospital warrant me in speaking with some degree of confidence. The subject to which I allude is what is termed Tertiary Syphilis, or Syphilitic Cachexia. In consultation with surgeons who have brought to me patients suffering from different forms of constitutional syphilis, and also at the College Pass Examinations both for the membership and fellowship, I have been much struck by the confused and unsettled state of opinion manifested, both as to diagnosis and treatment, in these affections. The difficulty does not appear to be in the recognition of the case under notice as one resulting from syphilis, but in deciding whether it should be classed with the group of secondary or of tertiary symptoms; and, when this is settled, to know whether iodine or mercury should be the remedy to be depended upon. The answers I obtain to my questions also would lead me to suppose that it was considered immaterial which of these two remedies should be administered, and that each was equally beneficial, or almost so, in either of these groups of symptoms; or that a combination or an alternation of the two remedies was the best mode of treatment in the majority of cases. Knowing as I do that, in tertiary syphilis, mercury is especially injurious, while the iodide of potassium will act like a charm in alleviating the symptoms; and again, that, in the secondary state of the disease, while the iodide of potassium will be of little or no use, mercury will prove to be our sheet-anchor; it seems to me so essential that clear and distinct notions should be had on these points, that I have determined, at the very commencement of this lecture, to place before you tables of each group of symptoms, still further explained by drawings taken from patients in the Lock Hospital suffering from these two classes of affections respectively.

TABLE I.—*Morbid changes observed in Secondary Syphilis.*

Affections of Skin.	Erythematous—Roseola; Papular—Lichen; Tubercular—Tubercles that may desquamate, ulcerate, or encrust; Scaly—Psoriasis, Lepa; Pustular—Ecthyma.
	Superficial white apthous-looking ulcers on the tonsils, soft palate and fauces; Superficial Ulcers on the sides of the tongue and angles of the mouth; Mucous Tubercle, or Condylomata, on semi-mucous surfaces; Deep excavated ulcers of tonsils.
Affections of Mucous and Semi-Mucous Membranes.	
Iritis; Muscular Pains; Arthritic Pains; Pains in bones; Perioritis; Nodes.	

The above table contains the principal affections of constitutional syphilis, termed secondary, in which the venereal poison still exists, and may therefore be communicated by cohabitation and transmitted to the offspring, and in which mercury is beneficial and iodine of but little or no service.

TABLE II.—*Pathological Conditions in Tertiary Syphilis, Syphilitic Cachexia, or Sequelæ of Syphilis.*

Inflammation of Fibrous Membranes.	Periostitis, resulting in nodes; Caries and necrosis of bone; Affecting fibrous tissues of joints—Arthritis; Fibrous tissues of testicle—Orchitis; Fibrous tissues of globe of eye—Scleritis.
Affections of Skin and Mucous Membranes.	Rupia; Cachectic ulcers of skin; Rapid ulceration and sloughing of the soft palate, fauces, pharynx and larynx; of the rectum, vagina, nymphae, and labia.

Deposits of fibro-plastic lymph, imperfectly organised.

Lardaceous and Waxy Deposits.

In the areolar tissue (subcutaneous or submucous tubercles); In muscular tissue, more frequently met with in the tongue, and occasionally in other muscles; Also met with as *post mortem* appearances in the liver, spleen, kidneys, lungs, and other viscera.

Occasionally found in the *post mortem* examination of the bodies of persons of dissipated habits.

In this table will be found enumerated the pathological changes which present themselves occasionally in patients who have passed through the primary and secondary stages of syphilis, and whose constitutions have become changed and deteriorated thereby, but who are no longer syphilitic; that is to say, they do not contaminate those with whom they cohabit, and their children will be free from syphilitic taint. The remedies required in these affections are especially iodine and sarsaparilla, and mercury is injurious.

I shall have time merely to point to these drawings. Firstly, in tertiary syphilis: here a well-marked case of rupia in progress; here the same, a month later, cured. In these three drawings from one patient, at different dates, are shown destruction of the soft palate, diseased bone of head, and cachectic ulcerations of face. The remaining drawings show the varying aspect, in different patients, of necrosis affecting the skull and face, and of extensive ulcerations on the limbs and other parts, some of them spreading at their edges while healing in the centre. All these cases would be benefited by iodine, and mercury would prove injurious. And now, in secondary syphilis, you will see represented the various cutaneous affections ranged according to their severity; here a drawing of roseola; then several of lichen; the next three of tubercle; and again, two or three of ecthyma. These two are of infantile syphilis, and this one of condyloma or mucous tubercle. In all these cases, the iodide of potassium would be of no use, and mercury would be most beneficial.

There are, of course, exceptions to these general rules, requiring a few words of explanation; for instance, periostitis and nodes are placed in both tables. How are they to be distinguished, so as to judge of the appropriate treatment? The history and duration of the disease combined with its associated symptoms, will readily determine to which category it belongs. A periostitis and nodes occurring in the first two or three months after the primary disease, and associated with unmistakable secondary affections of the skin or throat, may be considered secondary, and treated by mercury. A periostitis with nodes occurring at a much later date, several months, or even years, after the original disease, and accompanied by destructive ulcerations or sloughing of the throat, by rupia, by fibroplastic deposits in the tongue, or by any other well-marked tertiary symptom, will require the administration of iodine, and would be seriously aggravated by the exhibition of mercury. Again, iritis may occur in tertiary syphilis, but will generally have been preceded by or be associated with scleritis, and will be accompanied by other evidences of syphilitic cachexia. In such cases, iodide of potassium and sarsaparilla will be of more service than mercury; in other words, the constitutional state, and not the local symptoms, must guide the treatment.

The same may be said of tubercular and ecthymatous syphilitic eruptions, which, in exceptional cases, rapidly and extensively ulcerate. It will be found that they occur at a late period of the constitutional disease, and, in fact, indicate the supervention of syphilitic cachexia, and must be treated accordingly.

To account for this unsettled state of opinion in the profession, of which I have complained, it ought perhaps to be mentioned that authors—and they are many—differ considerably in their views on this particular branch of surgery. “Quot homines tot sententiae” well applies here. Before I proceed further in explaining these different views, let me beg of you to separate well in your minds the difference between well ascertained facts and all proposed theories. I need not tell you that facts will not alter, however differently they may be accounted for. Do not mistake me; I am not recommending you to discard theories altogether; they are unavoidable; they will present themselves, and they are both useful and important; but bear in mind that they are theories or conjectures, and vary as our knowledge advances, or according to the different views of individuals; whereas facts that are true facts remain always the same.

After the above caution, I may proceed to tell you that some pathologists object altogether to the division of the symptoms of constitutional syphilis into the groups of secondary and tertiary; holding that, both being consequent upon the primary infecting chancre, the term secondary should include both classes.

Dr. Wilks, who has published a very able paper on the subject of

syphilis in *Guy's Hospital Reports*, vol. ix, 1863, is also not satisfied with this division, and adopts by preference the terms syphilis and the sequelæ of syphilis. Under the former term, he would comprise all the primary and secondary symptoms, including, however, fibro-plastic deposits. Under the latter, he would include all the tertiary symptoms of other pathologists, with the exception, as just stated, of the fibro-plastic deposits. It will be observed that I differ but slightly in the classification from Dr. Wilks as shown in the tables, and, practically, in one particular only; viz., that whereas he classes the fibro-plastic deposits with the group of affections requiring the administration of mercury, I, on the contrary, arrange them with that which is especially benefited by the administration of iodine. Again, very many practitioners who admit the classification of the symptoms into secondary and tertiary have not, from what I have observed, quite made up their minds, as regards some of the results of syphilis, to which of these groups they should be considered to belong. There are, however, good practical grounds in my opinion, and in that of most surgeons, for the separation of certain well marked pathological changes into a distinct class under the name of tertiary syphilis, or under the still better term of syphilitic cachexia as adopted in the second table.

Now, let us consider what is the nature of this cachexia which we term tertiary syphilis. We know its antecedents and its objective signs, but, with regard to its true nature, I fear, in the present state of our knowledge, instead of answering in direct terms, we must be content to theorise.

Is it a dyscrasia of the blood? or are the solid tissues, which manifest the outward morbid changes observed, primarily at fault? My own opinion is in favour of the former view. I believe the morbid condition of the blood to be the original or primary cause of the altered nutrition of the tissues.

The pale and sallow complexion of the skin, this structure taking its colour as we know, to a great extent, from the blood, both in health and in disease, tends, combined with the universal influence of this cachexia on the constitution, to show that the blood must be in an altered condition. If this be admitted, there is but little difficulty in understanding that the several tissues of the body must, more or less, suffer deterioration, depending as they do upon the blood for their continual supply of healthy nourishment; and we can no longer be surprised at the destructive and ulcerative processes observed under this cachexia. But can we explain by the aid of chemistry or the microscope, or by any other means, which constituents of the blood are most in fault, and in what way? I fear not. This is a point that must be left for the rising generation to elucidate by the light of advancing science.

Syphilisation has taught us that the poison of syphilis, like that of variola and vaccinia, cannot be produced in any animal, or in the human being, to an indefinite extent: the power of reproducing this poison sooner or later becomes exhausted, when the individual is said to be syphilised. Surely, then, something must have been removed from the blood or tissues upon which the formation of the venereal poison depended, and without which it can no longer be formed, or the symptoms depending upon it be manifested. Liebig's theory of the action of the venereal and other poisons in the human system is well known. He compares it to the formation of yeast by fermentation in a saccharine solution to which gluten has been added. So long as any gluten remains in the solution, yeast can be formed; but its formation ceases when the gluten is exhausted, and can be renewed only by the addition of more gluten. Founded upon the above view of Liebig, and upon the information derived from syphilisation, the theory I venture to suggest is, that in certain individuals the venereal fermentation, if I may use the expression, or the formation of the venereal poison in its primary and secondary states, has completely exhausted the blood of one or more of its normal constituents, which may, perhaps, be reproduced, but not readily; and that this deteriorated blood constitutes the syphilitic cachexia, or tertiary syphilis—the morbid condition now under consideration. I will venture further to add to this theory the suggestion that possibly mercury may, besides its usual effects on the gums and salivary glands, prey upon the same unknown constituents of the blood, and thus prove beneficial by taking from the venereal poison that upon which it fed and flourished. This view of the action of mercury would well support the opinion held by many pathologists, that syphilitic cachexia is the result of the joint action of the venereal poison and of mercury on the system, and would satisfactorily explain why mercury should not only cease to be beneficial, but should prove to be injurious, in these cases. This theory is the best I can offer in the present state of our knowledge. However imperfect, it may serve to account for many of the phenomena observed in tertiary syphilis; for instance, the inability of patients suffering from this malady to transfer the poison of syphilis to others; also the extreme difficulty of inoculating such persons with the primary venereal poison; again, why in these cases

mercury should cease to be beneficial, and that restorative remedies, such as sarsaparilla, iodine, steel, and quinine, combined with good living and stimulants, should be found beneficial.

I shall now direct your attention to the treatment of syphilitic cachexia. In considering this part of our subject, it will be necessary to bear in mind what has been before mentioned, viz., that the venereal poison is no longer present in these patients, and that in them the power of transmitting the disease or of reproducing the poison no longer exists. The theory also which I have advanced, followed to its legitimate extent, would lead me to say that our endeavours should be directed to restore to the blood those normal constituents of which by the formation of the venereal poison and by the action of mercury on the system it had been deprived, and to bring the blood to its normal state, in which, unfortunately, after fresh inoculation, the individual would again be capable of generating this poison. Certainly, in a case of a syphilitic cachexia which I saw treated in the Lock Hospital by syphilisation, all inoculations failed to take until the health was considerably improved by generous diet and by the administration of the iodide of potassium.

It is to the absence of certain unknown constituents of the blood, you will remember, that I attribute the debilitated and asthenic condition of the sufferers, as well as the various symptoms they manifest. You will not be surprised to hear me say, then, that all evacuates, and especially preparations of mercury, all debilitating influences, all wear and tear of the system, such as over-exertion of mind or body in business or pleasure, should be avoided; and that, on the contrary, tonic, stimulant, and restorative measures, combined with good generous diet and judicious hygienic regulations, are the most likely means to prove beneficial. Such, in fact, are the principles upon which the treatment should be conducted whatever theory you may adopt, and whether that which I have advanced be right or wrong.

It must be confessed that the ordinary tonics, bark, and especially preparations of iron, are not to be depended upon, and must give place to special remedies employed empirically, such as iodine and sarsaparilla. Of the *modus operandi* of these medicines, we must confess our ignorance; but so valuable are they, that I shall occupy a few minutes in stating some facts which long practice has taught me concerning them. My experience of the salts of iodine would lead me to say that they are powerfully stimulant, and have even a tendency to produce inflammation. I could give you several instances of this. One will suffice. I attended a gentleman, in conjunction with the late Mr. Tyrrell, for a preternatural protrusion of the eyeball, unconnected with syphilis. There were no inflammatory symptoms present. We prescribed the iodide of potassium in three-grain doses. A violent inflammatory attack of the globe of the eye supervened. The remedy was omitted, and the ordinary antiphlogistic treatment soon restored the eye to its former condition. The patient attributed the inflammation to the medicine which we had prescribed; but, being assured by us that the remedy had nothing to do with the attack, he was persuaded to take it again. In twenty-four hours, a similar accession of inflammation took place. This was again treated, and again readily subsided. A third time, with great reluctance, he consented to take the iodine, with the understanding that he might leave it off immediately any inflammation showed itself. It occurred the following day. We were obliged to relinquish the iodine. Mercury was afterwards given with marked benefit, and no inflammatory symptoms subsequently occurred.

With regard to the large doses in which the iodide of potassium is occasionally prescribed in the present day, I may remark that many years ago, having heard that it was administered by French surgeons in two-drachm doses, I gave this quantity thrice daily to a patient in the Lock Hospital for three or four successive weeks, without noticing any more marked effects, beneficial or otherwise, than from the ordinary five- or ten-grain doses. Some caution, however, I am convinced, is necessary in administering this remedy in large doses, as the following case clearly shows. A gentleman had suffered for years from syphilitic cachexia, and especially from painful ulcerations, the most extensive I have met with, which spread at their edges while they healed in the centre. He depended for his comfort, and almost for his existence, on the iodide of potassium. He purchased it by the pound, and took it of his own accord for years in ninety-grain doses thrice daily, generally without inconvenience; but three separate times, at long intervals, I was called to see him for sudden attacks of illness. The first two attacks consisted of violent pains in the feet, which were excessively tender to the touch, and so like gout, except in the absence of redness, that I prescribed colchicum. The iodide of potassium was not suspected as the cause; but it was omitted; and on both these occasions the attack subsided in a few days. But the last attack, which occurred four years ago, was much more serious and alarming; there was not only pain, but paralysis of the lower extremities. He

could neither stand nor walk. The ninety-grain doses of the iodide were now suspected; and the treatment consisted in leaving off the iodide, and taking saline aperients. He recovered perfectly the use of his limbs in a week or ten days. He was advised never to exceed fifteen-grain doses for the future. He has adhered to this advice, and has had no attack since.

The efficacy of the iodide of potassium is admitted by all surgeons, but many think lightly of the powers of sarsaparilla in this disease. I am not sorry of the opportunity of expressing my decided opinion of its value in all the symptoms of syphilitic cachexia. I am old enough to remember the time before the introduction of the salts of iodine, when sarsaparilla was almost the sole remedy depended upon in the treatment of tertiary syphilis. During this period, I tested fully the powers of sarsaparilla, as compared with those of steel, bark, and other tonics, by treating cases in the Lock Hospital, under the same hygienic conditions, alternately by the latter remedies and by sarsaparilla, with the result of convincing myself that they possessed little or no efficacy, and that sarsaparilla was the most powerful remedy then known in tertiary syphilis. Indeed, most of the cases treated by bark or steel, or by both these medicines, remained nearly stationary until sarsaparilla was taken, when a rapid improvement set in. Pains in the bones disappeared in a week, and the other symptoms in succession; and in the majority of the cases the patients were apparently well after a six weeks' or two months' course of the medicine. In fact, the patients recovered as certainly and almost as quickly as they do now under the iodide of potassium. They were, of course, as liable to relapses, but not more so than now under the latter remedy. Yet I am frequently told by surgeons that they never give sarsaparilla, as they think it an useless remedy. The only fault I find with it is, that it is expensive, and not always well prepared.

After these general observations, and having laid down the principles upon which the treatment should be conducted, a few words will suffice to explain the details of the plan which I find of most advantage in syphilitic cachexia, whatever may be the existing symptoms of the complaint. It consists in the administration of iodide of potassium in from three- to ten-grain doses, taken in a third of a pint of the simple or compound decoction of sarsaparilla as a vehicle, alternating with a pill of two grains of quinine and three grains of confection of opium, also taken thrice daily. Exceptional cases may require the iodide to be increased to fifteen or twenty grains, and an additional dose of opium at night will often be found necessary. I have been disappointed, as I have before mentioned, with the preparations of steel or other tonics in these affections. Opium has appeared to me beneficial in two ways—firstly, by soothing pain and allaying irritability; and secondly, by moderating the amount of the several secretions, and thus preventing all unnecessary waste. I may mention here that these patients are very liable to occasional attacks of diarrhoea, by which their symptoms are invariably aggravated. Under these circumstances, larger doses of opium, and the ordinary astringent remedies depended upon for checking diarrhoea, may be required; and, in fact, any concurrent disturbance of the general health must be met by its appropriate treatment.

I need not here repeat what I have just stated as regards regimen, generous diet, abstaining from over-exertion, and proper hygienic regulations, which must be carefully attended to throughout the treatment, and even after the patient is apparently well; otherwise relapses are almost certain to occur. Indeed, under the most careful management they will recur; and it requires great confidence in the principles of treatment to refrain from altering the plan. Many surgeons are disposed to leave off the iodine, and to give mercury; and I have frequently had great difficulty in persuading both patients and surgeon that the accession of fresh symptoms constituted a reason the more for persevering with the iodine and increasing its dose.

The local treatment is of secondary importance, and I do not feel warranted in occupying your time with it; suffice it to say that, the general principles of surgery will sufficiently direct you.

I should like, before we separate, to relate to you one case of the destructive ravages of tertiary syphilis. I have selected it on account of its severity, and because it is so well illustrated by this wax model representing the destruction of the soft parts, and by the skull of the same patient, which shows the devastation effected by the disease on the bones of the palate, nostrils, and cranium, as well as by this large sequestrum of os frontis, os nasi, and part of the superior maxillary bone, which separated in one mass while the patient was in the hospital.

This unfortunate patient was a married woman, aged 38. She was admitted into the Lock Hospital in July 1856. Her statement was, that she had been married eighteen years, and had given birth, during the first seven years of her marriage, to three children, two of whom were living in good health, of the ages of sixteen and fourteen respect-

ively. Seven years after her marriage, she contracted disease from her husband. She was pregnant at the time, and gave birth to a diseased child, which died in a few months. From this period, eleven years before her admission into the hospital, she had suffered from repeated attacks of the secondary forms of the disease, and had taken several courses of mercury. She dated three years back the cachectic ulcerations on the face which had destroyed the *alæ nasi* and portions of the cheek and lips, and laid bare carious bone in the nostrils and mouth. The extensively necrosed portion of os frontis commenced as a soft node about the same period, together with several cachectic ulcers on the legs, all of which symptoms she laboured under on her admission into the hospital. She was greatly emaciated, and unable to walk from excessive weakness. Her pulse ranged from 112 to 120, and she had lost her appetite. She was treated in the hospital by courses of iodide of potassium and sarsaparilla, and took opium and quinine. She soon recovered her health and strength under this treatment, combined with appropriate diet and stimulants. In three months, all the ulcerated surfaces had cicatrised, and all dead bone had separated, with the exception of this large sequestrum of the os frontis, with other bones attached. This did not separate till December 25th, five months after her admission. The surface of the dura mater exposed by its removal was covered with bright florid granulations, with the exception of one spot of the size of a half-crown piece, where the dura mater presented a slough. When this came away, a hernia cerebri resulted. In three weeks, it projected to the extent of three inches, and was about the thickness of two fingers. This protrusion was excised at the level of the dura mater, and was succeeded by others, which, however, were removed when they reached an inch in length. During the whole of this period—six weeks—notwithstanding the hernia cerebri, her health remained good, and there were no head-symptoms. The granulations of the dura mater became covered with skin quite to the orifice through which the hernia cerebri protruded. On February 8th, however, she was attacked with paralysis of the right arm, and, on the following day, of the right leg. She became drowsy, but could be roused to answer questions or to take her meals. In the evening, she became excited, and removed the dressings. On the 14th, her appetite failed; and she gradually sank, and died on the 17th, nine days after the accession of the paralysis, and seven weeks from the occurrence of the hernia cerebri. At the *post mortem* examination, it was found that the left lateral ventricle had been laid open by the disease, and that the finger could be passed from the external wound into it. Time does not allow me to do justice to this very interesting case. I shall take some other opportunity of publishing it in full, with the *post mortem* examination of the brain.

The task I set myself at the commencement of this lecture was to make clear to you, in any given case of constitutional syphilis, how it should be grouped, and how it should be treated. If I have at all succeeded in this endeavour, I shall have the satisfaction of feeling that your time and mine has not been altogether thrown away; and I have now only to thank you for the attention accorded me.

CLINICAL MEMORANDA.

CASE OF WOUND OF THE ABDOMEN, WITH PROTRUSION OF THE OMENTUM: RECOVERY.

C. T., aged 16, was getting over a gate, on the top of which were several iron spikes, when his foot slipped, and he fell on the top of one of them. He did not feel much pain or inconvenience at the time, but shortly afterwards became sick and faint; but, on recovering, he walked home, a distance of about thirty yards, and, as he then felt well, he did not mention the accident, nor did he examine himself to see if he were injured. He remained up until about ten o'clock, when, on undressing, he discovered, as he says, "that his bowels were coming out". About an hour after this my partner, Mr. Prideaux, saw him, and found, in the left inguinal region, a wound about an inch in length, through which was protruding a piece of omentum, about the size of an egg, the neck of which was rather tightly constricted. The omentum, not being gangrenous, was speedily replaced by relaxing the abdominal muscles, and employing steady pressure. The wound was then closed by a suture or two, and a compress and bandage applied. He passed a good night, and in the morning seemed in good spirits, having no pain, nor was there any tenderness over the abdomen. He was kept perfectly quiet in bed and on low diet for a fortnight, at the end of which time the wound had perfectly healed, and he was allowed to sit out of bed on a couch. Three days afterwards he came down stairs, and on the next day I met him in the road, seeming perfectly well.

W. NETTLE, M.R.C.S., Liskeard.

THE ISOLATION AND TREATMENT OF WOUNDS.*

By GEORGE W. CALLENDER, F.R.S.,

Surgeon to St. Bartholomew's Hospital.

APART from the theories with which it has been supported, the great objection, practically, to the antiseptic treatment consists in the complicated nature of the precautions with which it is hampered. I propose in this paper to describe a plan for the treatment of wounds which is perfectly simple, which has the advantage of having no particular novelty to recommend it, and which has given results quite as satisfactory as, if not more so than, any which have been claimed by the advocates of so-called antiseptic surgery.

This table will suffice to prove that the treatment has been followed by the good results which I claim for it. All the patients, whose cases are here tabulated, were treated in the wards of St. Bartholomew's Hospital; and the table includes all who have been under my care, for the causes specified, since I have held office as surgeon, except in the table of amputations, which contains, in addition to my own, ten cases, consecutive with the remainder, which were under the care of Sir James Paget.

	Totals.	Died.	Recovered.	Fatal cases.
Operations (excluding those for hernia).....	199	6	193	
Compound fractures	28	0	28	1. Ovariectomy.
Amputations at the thigh ...	14	0	14	2. Ovariectomy.
" " leg	14	0	14	3. Nephrotomy.
" " arm ...	2	0	2	4. Lithotomy.
" " forearm. 3	0	3		5. Syphilitic laryngitis.
	33	—	33	6. Cystic tumour

The treatment of these wounds may be considered under distinct headings.

a. Removal of Foreign Bodies.—It is needless to dwell upon a condition so essential as this to the after-healing of a wound, but a reference to it leads me to remark (1) that all wounds made by the surgeon should be cleanly cut; for instance, the circular incision through muscles in amputation at the thigh should be made, as it can be, but is not always, with one sweep of the knife; (2) that amongst foreign bodies should be included ligatures, the use of which I always avoid, if possible, having employed torsion in nearly every operation. A surgeon, who has any doubt as to the facility with which vessels can be thus secured, may use the carbolised catgut ligatures; but these are but a poor substitute, and should, in my opinion, be only used exceptionally, as, for example, when it happens that an artery, such as the femoral, gives off numerous branches just where it has been cut across. It is then difficult to twist, and I have twice, amputating high up in the thigh, thought it right to tie the femoral under such circumstances. The facility with which arterial bleeding can be stopped by torsion depends upon the accuracy with which the vessel is seized by the torsion-forceps independently of surrounding tissues; for, if these be included, the twisting often fails. By torsion, we avoid all risk of secondary hæmorrhage (as distinguished from recurrent bleeding), and we leave the wound entirely free from introduced foreign bodies, such as ligatures.

b. First Dressing of Wounds.—After all bleeding has been stopped—and it is important that the wound should not be closed until all hæmorrhage has ceased—the surfaces may be washed with carbolised acid lotion (one part of acid in twenty of water). It is then closed with silver sutures, carbolised gut being in many cases objectionable as it is apt to give way prematurely, especially when opposed to any considerable strain. The wound is then fitted with a drainage-tube. It has been a matter of some trouble to find a tube quite suitable for this purpose; but, after various trials, I have had one made which holds itself in by means of a very simple arrangement of a spring, which can be protruded from one extremity, whilst at the other end a shield of metal prevents the tube from slipping wholly into the wound. This tube, as may be seen, is perforated at many points, so as to ensure free discharge through its canal.

I do not think it possible to exaggerate the importance of securing this drain for the removal of fluid from a wound (when otherwise it would be shut in) for the first twenty-four hours, after which time the tube can usually be removed. It is especially necessary to attend to this want when carbolised acid washing is used, in consequence of the

great quantity of fluid which then flows from the cut surfaces, and which is hurtful if retained.

The wound being thus closed and drained, some layers of lint soaked in carbolised oil (one part of acid to twelve of olive oil) are laid over the line of incision, or over the laceration, if such it be, and over these it is my custom to lay a quantity of cotton-wool for warmth and for protection simply, for at present I am not prepared to assign any especial virtue to its use. This mode of covering wounds has, it may be stated, been in use at St. Bartholomew's since the introduction there of carbolised acid in the year 1863.

c. Rest.—After this first dressing, the wound has to be placed in such a position as will subsequently ensure for it absolute rest. For example, after the removal of a breast, it is necessary to avoid all pads and bandages, which tend to fix the outer parts of the wound, whilst the inner move to and fro in the act of breathing. It is not likely that a wound of this kind will heal by first intention, unless left comparatively free; and I consequently close it with sutures, and then simply secure it further by the position of the arm, which is fixed, a strap of plaster holding the dressing of oiled lint in its place. The chief difficulty I have had to meet has, however, been in securing for amputations that rest which, as our President has taught us, is so essential to their repair; for, in such cases, provision has to be made, not only for temporary quiet, but for the avoidance of all disturbance of the parts during the after changing of the dressings. To obtain these advantages, I have had made and have employed the splints which are now shown, and which are swung by straps, so as to allow the patient some little freedom of movement, without risk of disturbing the stump; and it will be seen that each is provided with a catch and hinge, by which a portion of it can be lowered, so as to allow the surgeon to dress the wound without moving the limb. This arrangement, which we first used on the suggestion of Mr. Brewer, my house-surgeon, for a Syme's amputation, I now invariably employ, and the dressing of amputation-wounds has been thus rendered a well-nigh painless operation. There was some little difficulty in adapting a splint for thigh-amputations; but we have now one which works well, and which should have been shown here this morning, but that I was obliged to use it yesterday for a thigh-amputation; but it may be seen at St. Bartholomew's in use by any who may take an interest in the matter. In making arrangements for swinging limbs which are wounded, provision ought to be made for ventilation. This refers more especially to wounds of the lower extremities; and, to ensure this, and also to do away with the inconvenience caused by the upright rods of an ordinary cradle, the swing now shown is employed. It fits by a screw to the foot of the bedstead, and carries two rods on which cross-bars slide, and from the outriggers of which the limb is suspended. By arrangement of the bed clothes over this, a free ventilation from the foot of the bedstead is easily established.

d. Isolation.—After the first day, the wound is again dressed, the drainage-tube being now usually removed; and the dressings are renewed on the same plan as before, consisting of two or three layers of lint soaked in carbolised oil, and over this some cotton-wool; but, during the dressing, and indeed afterwards, no especial provision is made for the exclusion of the air. As far as is practicable, each important wound case is placed between patients free from wounds or discharge; but the isolation of each wound is practically effected by the plan of cleansing which is employed. This rod, carrying an ordinary test-tube, is suspended at the head of the patient's bed, and in the glass is placed, and renewed every day, a solution of one part of carbolised acid in five of rectified spirit of wine; in this is kept a camel-hair brush, and with this each wound is cleansed. By its use, discharge is expeditiously removed, and it has this advantage—that, not causing pain by its contact, it is very acceptable to the patient, whilst it necessitates gentle handling on the part of the attendant, for it is impossible to be rough with so delicate an instrument. Besides its value in lessening the risks of spreading infection by its use being entirely limited to the one patient, this plan of dressing assists in ensuring that rest which is so essential, for by its means wounds can be cleansed with a minimum of disturbance of the parts; and I do not think that anyone who has tested it would think of using anything in preference for the removal of discharge, especially where it has to be cleaned from fissures and recesses not easily reached by other methods. With this plan of wound-dressing, the results have been obtained to which reference was made at the beginning of this paper, and, in the great number of cases, primary union has followed the treatment, the most rapid recovery having been that of a patient who was up and dressed fourteen days after amputation at the thigh.

e. Antiseptic Treatment.—From what has been said respecting the dressing of wounds, it will be seen that, in a limited way, and, without its prescribed precautions, antiseptic treatment has been used. Cleansing

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

an accident wound, or washing an operation cut, with carbolic acid lotion has been the rule; whilst, over the immediate dressing of lint charged with carbolic oil, a covering of cotton-wool has served the purpose of protection and warmth-giving; but it is doubtful if it has assisted much in preventing contamination, as most of the cases of compound fracture have convalesced without its use. With these measures, my antiseptic treatment ends; and I have the strongest belief that success in the management of operation and other wounds is chiefly, if not entirely, ensured by extreme care and gentleness in the manipulation of the parts, by rigid maintenance of rest, and by providing free exit for all kinds of discharge. Thus, I hold that results quite as favourable as the best which are claimed for antiseptic treatment, can be obtained by a plan of management which is so simple, that the means for carrying it out are always at hand, and are thus available for any emergency.

Finally, I state that, with the exercise of proper care and supervision, patients do as well in a large hospital as anywhere else, and, in proof of this, I refer to the table which accompanies this communication.

SOME PARTICULARS OF TREATMENT IN A CASE OF PNEUMOTHORAX.*

By DANIEL NOBLE, M.D., F.R.C.P.

MR. THOMAS W. is about forty years of age. From youth up to the age of thirty, he had exercised his powers, both mental and bodily, far beyond the limits of prudence; and, about the age in question, he naturally became the subject of nervous exhaustion, impaired digestion, and other cognate derangements of the system. After trying, for two or three years, relaxation of business-efforts and various changes of air and scene, with only transient advantage, he finally resolved to give up business altogether, to leave Manchester (where he had resided all his life), and to live in Blackpool, as the place from which he considered that he had always derived the greatest benefit.

Dwelling in that locality, and amusing himself with a garden, and with the management of his property, which, in no respect, gave him either trouble or anxiety, he, for some half-dozen years preceding last December, had had very fair and enjoyable health. He was unmarried, but had a sister with him as his companion and housekeeper. Once or twice a year, he was in the habit of calling upon me in Manchester to consult me for some trifling ailment; never, however, for any mischief involving the chest.

It was soon after midnight in the morning of the 16th of last December, that he awoke with an acute and violent pain in the right side, which continued for several hours. He had previously had symptoms of but a slight catarrhal affection, which he attributed to over-occupation in his garden. There had, by his own account, however, been no disturbance of the general health nor any failure in flesh or strength. By daybreak, the severity of the pain had abated, but there remained a dry troublesome cough, with some difficulty of breathing; thereupon, the aid of a respectable local practitioner was summoned, but with this gentleman he, for some reason or other, became dissatisfied, and gave him his dismissal.

It was on the 18th of the month, two or three days after the commencement of the attack, that I was telegraphed for early in the morning; it was evening, however, before I could go. On arrival at the patient's house in Blackpool, a little before seven, I found that he could not be prevailed upon to recall his previous medical attendant; but he urgently expressed the wish that I should myself take charge of him altogether. I let him see that this was impossible; and that, on account of the gravity of the case, he must have some one on the spot; telling him that, if required, I would come over again, and see him in consultation. Upon this representation, he named Dr. Hardman, of the place—a gentleman of whom I had already heard, as a young practitioner both of judgment and of skill. He was accordingly sent for; and, on his coming to the patient's house, we investigated the case and came to the conclusion that, with pleuritis, there was associated severe bronchitis, especially on the right side, in which region there was hardly any appreciable murmur of respiration; whilst, on the left, there was one that was dry and unusually loud. The percussion-sound was everywhere clear, and not strikingly abnormal in any part. Nauseating doses of antimony were prescribed; and, as I could not return home the same evening, I promised, on leaving him, to call early the following morning on my way to the railway station. I did so, and again met Dr. Hardman. Although we found the symptoms in some respects relieved, they were not so to the extent that I had anticipated; the ex-

pectoration was but scanty; the cough was almost continuous; and the respiration, though a little relieved, was hurried, short, and embarrassed. I may state here that the pulse was only about 90, and that throughout the case the variations were but slight. The temperature was never more than 102; more frequently, however, below that point. But I had to leave somewhat hastily, so as to catch the train, and went away alike dissatisfied with the case and with the diagnosis that had been made.

Four days afterwards, on the 23rd December, I was again sent for, and went in the evening as before. On meeting my associate in the case, he at once observed: "I think you will find something more the matter than we thought;" whereupon, having given much consideration to the subject in the interval, I said: "Do you think there is pneumothorax?" (for this had occurred to me); he answered "Yes." And, certainly, on completing a re-examination, no other conclusion was admissible. The embarrassment of breathing had much increased; there was unintermittingly a dry irritating cough; no respiratory murmur whatever could be detected on the right side, yet there was an undue resonance on percussion; whilst the left afforded a loud so-called *puerile* murmur of respiration. To complete the evidence, it was obvious, on applying the stethoscope to the right infrascapular region, that there was "metallic tinkling," and also the sound denominated "amphoric."

Dr. Hardman told me that, since my previous visit, whenever, in consequence of symptoms of exhaustion, nutrients and stimulants had been pushed and antimony coincidentally withdrawn, he had found the dyspnoea sensibly aggravated—a result which he attributed, rightly I think, to the increased force with which, under these circumstances, the column of blood was thrown from the right side of the heart upon the restricted lung-space. Of course, as things stood, we were led to take a very grave view of the case. However, we agreed, in accordance with the view just expressed, to limit the food-supplies to fluids and simple diluents, and to maintain the administration of antimony in doses slightly nauseating. The patient, on the following morning, was again seen; and, probably, there was some slight relief to the more urgent symptoms.

My next visit was on the 30th of the same month, but I had had letters in the interval giving me a very gloomy view of the case; the dyspnoea, with all but sleepless nights from the irritating cough, continuing on the whole to increase. On arriving in the evening of the date just given, I found the patient literally in both bodily and mental anguish—almost gasping for breath in a state of hysterical excitement. There was immense pressure on the left lung, and considerable displacement of the heart, which had its systolic impulse enormously increased, thereby creating a distress that was simply intolerable. Indeed, the patient was plainly on the verge of suffocation, unless something were done to avert it. It was in these circumstances that I proposed to Dr. Hardman that we should liberate the air from the right pleural cavity, as it was obviously threatening life by its mechanical effects. In fact, at this time an unmistakable expansion of the thoracic parietes on the affected side showed itself; and this we verified by careful measurement. I was glad to find that my colleague had possession of instruments suitable for our purpose, and that he was quite confident of his manual dexterity in the use of them. Accordingly, after explaining matters to the patient and relatives about him, we got into order the so-called "aspirator;" and a trocar, with cannula of small bore, was pushed through the intercostal space between (I think) the fourth and fifth ribs; hereupon, the trocar being withdrawn, air at once rushed out, and, to expedite the process and to render it more complete, the aspirator was affixed, and a continuous pumping was kept up for many minutes. The relief was very speedy and unmistakable. There issued no serous fluid—only air. After withdrawal of the instrumental apparatus, the patient breathed with some comfort, the violent pulsation of the heart abated, and, after administration of an opiate, he became calm, and, during the night, had some refreshing sleep. On calling as usual in the morning on my way to the train, I experienced a great sense of relief when I found that he was alive.

As a result apparently of the benefit thus obtained, the patient's confidence in the resources of our art became unlimited; and he supplicated that I would, for a-while, come every evening; I agreed to repeat my visits as often as practicable, and, two days later, again went over to see him; to find, however, that the more serious symptoms were gradually returning. I will not unduly extend this paper by adducing details that have no special or peculiar interest. I will just state that, after seeing him two or three days consecutively, only to find matters worse, I proposed, on being unable to attend so continuously, that the aid of Dr. Hammond, of Preston, should be solicited; saying that I would introduce this gentleman to the case, and that, being nearer, he would be well able to come over in the intervals of my own attendance. This proposal was accepted; and, on the 6th of January of the present

* Read before the Lancashire and Cheshire Branch.

year, Dr. Hammond joined me at the Preston Station, and we went on to Blackpool together. On our way, I purposely avoided speaking of the case, telling him that I wished for his independent judgment concerning it. On our arrival, Dr. Hardman was in attendance as usual; and our new colleague proceeded to the investigation, readily establishing the diagnosis. I would here just observe that, in the interval between this visit and the period of the operative proceeding, there had been no sensible abatement of the physical signs as revealed by percussion and auscultation. In this state of things, our anxious discussion had regard purely to the question of what should be done for the patient's immediate relief; the symptoms having become almost as severe as they had been a week previously, when the mechanical appliance had been so successfully used. We all agreed that only some such procedure as that employed on the former occasion could by possibility avert the speedy extinction of life.

Having thought much of the case in the interval, I now proposed a certain modification of what we had done before—in this way: that a larger trocar and cannula should be introduced, and that, on withdrawal of the former, to the latter should be attached a long flexible tube, whose inferior extremity should be placed, and for a considerable time be maintained, in a bowl of water. This was agreed to; and Dr. Hardman is entitled to all praise for the patience and the skill with which he overcame the difficulties of carrying out the scheme. And now to avoid any undue repetition, and any material extension of this account beyond the assigned limits, I will say simply that the entire process realised our best anticipations. Air, and air only, bubbled from the water, which, of course, prevented regress. An opiate was administered, and Dr. Hardman remained with him through the night; the mechanical appliance being maintained *in situ* for some hours, so that greater probability might be afforded of some cohesive union taking place between the costal pleura and that of the collapsed lung. On seeing the patient the following morning, we found that a comparatively good night had been experienced, that the breathing was greatly improved, and that there was corresponding alleviation of all the other symptoms.

After this period the improvement went on continuously, with only slight drawbacks, in no respect distinguishing the case from others of a like nature. I saw him at intervals for two months after the later operation, and Dr. Hammond several times; Dr. Hardman, of course, being in constant attendance. I will only so far speak of the sequel as to say that, after this second *paracentesis*, the metallic tinkling and amphoric resonance progressively ceased, and that a dull percussion sound gradually displayed itself in the region wherein the former had previously been evidenced. All the other symptoms now abated, strength, however, was but very slowly regained, and I am informed that, at the time when I write, he is still but weak, though he remains quite free from the old and more distressing symptoms.

I have thought it right to bring this case before the profession, as I am not myself aware that there is much, if any, recorded experience precisely corresponding. Mechanically to relieve the chest in cases of pneumothorax is mentioned by several writers as a feasible practice; and I have an impression that I have somewhere read of its being done, with temporary relief, a few hours before death in cases of confirmed phthisis.

Referring to the practice in question, Dr. Copland, in his article on Pneumothorax, says:—"I am aware that the propriety of resorting to this mode of relief has been questioned; but an instantly impending fatal result has to be averted; and in some instances it may be averted for a considerable time, almost always for a short time, and possibly for months, or even years, by resorting to this operation. I believe that recourse to this operation should not be delayed when pneumothorax has occurred at an early period of phthisis, or when the patient is young, not greatly reduced, or whilst he has not advanced very nearly to a probable termination of a disease, which would certainly end fatally, even if perforation of the pleura had not taken place. The pain and risk of the operation are nothing in comparison with the continued distress experienced during the pneumothorax; and, although relief may be only temporary, the operation may be repeated several times without incurring the risk of life, but, on the contrary, greatly diminishing it." Thus much from Copland, who to the foregoing passage appends a note as under:—

"In 1833, a case of pneumothorax occurred in my practice, at an early stage of phthisis; the patient being young and robust, and not having lost flesh or strength. The nature of the mischief was prominently characterised; the heart was pushed remarkably far to the right side; and the rational and physical signs were all marked and extreme; the dyspnoea and distress. I advised that an opening should be made for the exit of the air; and the friends of the patient desired that Sir A. Cooper should make it. We met a few hours afterwards;

he admitted his ignorance of the nature of the lesion. I fully explained the cause of the symptoms, and of their extreme urgency; but he refused to perform the operation; stated that he had never performed it with the view of letting out air, and that he would not now do anything so novel, although he would have been ready to undertake it when he was a younger man. Having heard Sir Astley's determination, the patient's friends would not allow the operation to be resorted to by anyone else; and the patient died asphyxiated a few hours afterwards. The operation, if it had been resorted to in this case, might have prolonged life for a very considerable period."

MEDIAN LITHOTOMY.*

By WILLIAM CADGE, F.R.C.S.,
Surgeon to the Norfolk and Norwich Hospital.

FOR some years after its introduction to English practice, it must be admitted that median lithotomy received abundant discussion and a good welcome; many surgeons of distinction wrote and spoke highly in its favour; cases from all possible sources were anxiously sought for and garnered up, and a rich harvest of success was confidently predicted. For the last ten years, however—I may say since the publication of the last edition of Mr. Allarton's work on *Median Lithotomy*—much less has been said and written on the subject; enthusiasm has cooled; experience has grown; and it will not be considered out of place now to inquire, what is the tale told by this matured experience? Does median lithotomy still find favour with practical surgeons, and how will it now compare with the old time-honoured lateral operation?

As a contribution helping to decide these points, I desire to report, briefly and without going into minute details of cases, the results of my own personal observation and experience of median lithotomy, together with the impressions left on my mind by that experience. I may say that, when the operation was first introduced, I received it doubtfully and with hesitation, chiefly on the anatomical ground that insufficient room would be found for the removal, by fair means, of any but very small calculi. Having adopted it, and finding it suitable in these cases, I gave it a more extended trial. Stones have been removed, weighing from ten grains up to nearly five ounces, from patients of all ages—from 18 months up to 78 years.

Ninety persons have undergone median lithotomy; 54 by myself, and 36 by my colleagues and friends in operations at almost all of which I have been present and assisted. Of these 90 patients, 16 died: 26 were under 20 years, with 1 death; 5 from 20 to 40 years, with no death; 5 from 40 to 50 years, with no death; 13 from 50 to 60 years, with 3 deaths; 36 from 60 to 70 years, with 12 deaths; 5 from 70 to 80, with no death. This gives a mortality of 1 in 5½; whereas, in the total of cases in the Norwich Hospital, amounting now to nearly 1,000, the mortality is about 1 in 7½; but the average age of the median patients is considerably above that of the general list. If we take the cases of adult lithotomy, or those, say, of over 40 years, we find that the mortality of the median cases is 1 in 4, and of the large hospital total it is the same, or very nearly the same.

But I prefer to take my own fifty-four cases. I have fuller notes of, and more precise information concerning them, and can compare them more accurately with the same number of cases of lateral lithotomy and of lithotripsy; and although these numbers are too small and insignificant from which to draw statistical deductions of real value, they still may convey useful information, seeing that the three sets of cases have all been done by one hand, with the same amount of care, and without any principle of selection other than what was thought proper for each case. I will merely premise that at first, and again of late, the larger stones were reserved for lateral lithotomy; but for some years nearly all the cases of both large and small stones were treated by the median method: thus, the average weight of stone in 54 median cases was five drachms and five grains; and in 54 lateral cases, one ounce and two grains.

Now, as we know, speaking roughly, that the danger of lithotomy increases in direct ratio to the size of the stone, we should expect that the mortality would be less after the median than after the lateral cases; but it was not, for I find that, of 54 median cases, ten died; of 54 lateral cases, eight died. On the other hand, it is equally true, still speaking roughly, that the danger of lithotomy increases with increasing age; but I find that the average age of 54 median cases was 48½ years, and the average age of 54 lateral cases was barely 46 years. Separating them still further, so as to ascertain the result of the adult cases, it appears that, of 54 median cases, 40 were over 40 years, with

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

9 deaths, 1 in 4½; of 54 lateral cases, 34 were over 40 years, with 7 deaths, 1 in 5.

I need not analyse these figures any further; but having mentioned lithotripsy, I will just say that of 54 cases of lithotripsy the average age was rather over 63 years, and that this number included six deaths, or 1 in 9. These 162 operations include nearly but not quite all that I have done both in hospital and in private practice; they do comprise all the median cases, and all the lateral and lithotripsy cases fit for comparison. There have been a few partial operations and a few uncompleted lithotripsy cases, the results of which were undecided, but no fatal case has been omitted; indeed, as will be presently seen, some cases have been described as fatal in which the deaths have been but slightly and very indirectly connected with the operation. Except in one or two instances in which the patients were almost moribund when first brought under notice, I have never refused to operate by one or other method, no matter how diseased the prostate gland or bladder may have been, or what other complications may have existed, including cases of Bright's and other kidney-disease, heart-disease, and paralysis. There is an old and a wise rule at the Norwich Hospital which makes the assent of the majority of the medical and surgical staff necessary before a surgeon can operate for stone; and in these complicated cases the verdict has not unfrequently been—notably twice within the last month—"operate, it is right to do so, but the case is very unfavourable." On the other hand, I am aware of a few cases in which, either from the great age of the patient and mildness of the symptoms, or from the great size of the stone and the slight inconvenience produced by it (a combination occasionally met with), no operation has been desired or recommended. I have said that there were ten deaths out of the fifty-four cases of median lithotomy, the causes of which were as follows.

I. Age 1½. Convulsions and death in twenty hours. No *post mortem* examination.

II. Age 66. Death on seventh day from coma. *Post mortem* examination: cerebral and meningeal congestion; kidneys diseased: pyelitis: no urinary infiltration: prostate very large.

III. Age 66. Violent rigors, almost convulsions, on eighth day; death same day. No infiltration or sign of pelvic mischief. The patient had severe ague five years before.

IV. Age 64. Death from peritonitis coming on suddenly three months after operation. Wound healed. Probably pyæmia.

V. Age 62. Death on fifteenth day from diphtheria and diarrhoea. Old hemiplegia. Slight wound of rectum.

VI. Age 52. Death on fifteenth day from pyæmia and phlebitis of veins of legs.

VII. Age 66. Death on seventy-fifth day from exhaustion. Extensive disease of kidneys and pyelitis. Wound nearly healed. Prostate very large. Had chronic retention and phosphatic stone.

VIII. Age 64. Death on fourteenth day from pyæmia.

IX. Age 60. Death on tenth day from phlebitis of crural veins and exhaustion.

X. Age 64. Death on twenty-first day from pyæmia. Wound healed.

There were eight deaths out of the fifty-four cases of lateral operation, as follows.

I. Age 60. Death in twenty-four hours from shock and hæmorrhage. Large stone.

II. Age 68. Death on seventh day from pyæmia and abscess of liver.

III. Age 70. Death on tenth day from exhaustion. Much ecchymosis behind bladder. No urinary infiltration. Kidneys fatty. Liver pale, soft, and fatty.

IV. Age 11. Death on sixteenth day from pyæmia.

V. Age 73. Death same day from shock and hæmorrhage. Large mulberry stone.

VI. Age 72. Death on eighth day from exhaustion. Stone in kidneys, and extensive disease of these organs.

VII. Age 70. Death on twelfth day from exhaustion. Bladder sacculated. Encysted stone. Kidneys diseased.

VIII. Age 71. Death on fourth day from exhaustion and hæmorrhage. No sign of infiltration of urine. Kidneys diseased. Prostate very large. Stone large.

It thus appears that pyæmia was the cause of death in nearly half the cases; that pyelitis and chronic kidney-disease was the next most frequent cause; that shock and free hæmorrhage combined, occurring in old and feeble subjects with large prostate and large stone, caused two, perhaps I may say three, deaths; but that there was not one unequivocal death from urinary extravasation and pelvic cellulitis. Peritonitis existed in two or three instances, but it was clearly due to pyæmia and phlebitis. Phlebitis of the crural veins, in my experience, is one of the most common mishaps which follow lithotomy. It is not always of a septic and fatal character, but sometimes of a non-septic

and local character, allowing, probably, the patient to recover, but still endangering that recovery; and I may be permitted to warn those surgeons who may not be frequently called on to treat stone-patients, to be very watchful for every slight febrile symptom after lithotomy, and especially to ascertain if there be pain and tenderness along the saphenous veins.

I will refer now to some points of comparison between median and lateral lithotomy, as shown in the experience just related.

1. As to the *mortality*: it would seem that, age for age, there is nothing to choose between them; nor does there occur to me any anatomical or other ground for thinking that there ought to be any advantage of one over the other. The median incision, it is true, is smaller than the lateral; but it traverses very much the same structures, and in some cases it leads, by its very limited extent, to a positive danger of over-dilatation and laceration. What I wrote ten years ago, that "any merit the median plan might have would be found to be distinct from the mere mortality", is still and will continue to be true, because "deaths after lithotomy depend mostly on causes other than those due to the mode and the extent to which the incisions are carried."

2. As to the *difficulty of the operation*: I believe that it requires more care and more skill to carry out with accuracy the steps of the median than of the lateral operation. The space is so limited by the rectum below, that the slightest deviation of the knife in that direction, or the dragging of a full-sized rough stone through the small wound, must endanger that bowel; and I at once admit that, whereas I cannot remember injuring the rectum more than once in lateral, I have done so at least four or five times in median operations. This may have been due to want of skill; but I have heard the same admission from other and probably more expert lithotomists than myself. In children, where, as a rule, the incisions should be free, so as to permit the easy entrance of the finger or instruments into the bladder, I have found the narrow limits of the median incision so inconvenient, and so prone to lead to the serious disaster of separating entirely the urethra and pushing the bladder away from its connections, that I have wholly relinquished the median operation in very young patients. The lateral is just as safe, easier of performance, and any increased time in the recovery and healing of the larger wound is of no consequence to a young child. Again, the extraction of the stone is a work of more nicety and difficulty in the median than in the lateral operation; in either, this is incomparably the most important step of the operation; and when the prostate gland is enlarged, as is frequently the case in patients over sixty, the importance and difficulty of extracting the stone are vastly augmented. I do not pretend to speak of the extent to which dilatation of the neck of the living bladder may go, for there are no means of ascertaining it; but I have a firm belief that, in most cases of median lithotomy, there is some rupture of mucous and submucous tissue; and when the stone is of any size, and the prostate is enlarged, then inevitably the two lateral lobes are separated by rupture along the thin rectal aspect of the neck of the bladder. In more than one case, I have been conscious of this occurring during extraction. No harm to the patient resulted; but it is not a desirable or scientific proceeding. In other cases, where the stone was of some magnitude, I have divided the prostate laterally or bilaterally. In one instance, I removed a calculus which weighed 4½ ounces, and this has been held up as proof of what the median operation is capable; but I would rather allude to it as a warning against the operation, than as an example to follow, for there was much difficulty in the extraction. I was conscious of a considerable yielding of the prostate; and even at the external wound there was a rupture of the perineum almost into the anus. The patient recovered slowly and with difficulty, and I believe that a slight perineal fistula remained. In the lateral operation, on the other hand, should the stone prove to be of considerable size, it is easy to enlarge the incision to a sufficient extent; and it will be the surgeon's own fault if he use an undue amount of force in extraction. In cases of stone of unusual size, and when there is no great fear of urinary infiltration, I prefer to extend the incisions in the direction already made, rather than to make a fresh division of the opposite side. In one case, I assisted a friend to remove a large mulberry stone which weighed just eight ounces; and it was accomplished safely by applying the knife two or three times to the resisting tissues, while the stone was firmly but not too forcibly drawn forwards.

3. One more point for comparison I would refer to—viz., *hæmorrhage*. This mischance has, in my practice, been greatly more frequent after median than after lateral operations. In the latter, it has rarely been necessary to tie any vessel or use the plug; if the knife be kept properly below the level of the artery of the bulb, there will seldom be any bleeding to be called troublesome; but in the median incision it is almost—I believe I may say quite—impossible to avoid wounding the bulb, which projects downwards across the line which

the knife must traverse. When the bleeding goes on to too free an amount, it is useless, in the small central wound, to search for the bleeding-point, even if there were any one vessel to tie; but usually, as I have said, it is the bulbous structure which affords the blood, and the plug is the proper remedy; and I am free to allow that, with the plug fairly pushed in *above* the tube chiefly, arrest is easy—more easy, indeed, than to compress the artery of the bulb by the plug in lateral lithotomy.

If, then, it be admitted that the median operation is unsuited for children; that, for the average of cases, the mortality is as great as in lateral lithotomy; that the operation is more difficult; that hæmorrhage is more troublesome, and wound of the rectum more frequent, than after lateral lithotomy—it will naturally be asked, What are the advantages of the central operation? and to what cases is it applicable?

My present experience teaches me that it is advantageous and suitable only for those patients in whom the stone is of small size—about that of a date or a filbert—and where, for some sufficient reason, lithotripsy is not available. Within these narrow limits, median lithotomy is admirable; the incisions are small, and there is but little fear of bleeding or injury to the rectum; the recovery is rapid; the bladder retains the urine, and voids it voluntarily almost from the first; the patient is saved from much of the discomfort of lying in wet sheets with an urinous smell; and the wound heals almost by the first intention. I repeat that, within this limit, the operation is excellent; and every patient who is cured by it may rest assured that he is cured with as little pain, discomfort, and injury, as surgical science is capable of. Beyond this limit, the path becomes thorny and dangerous; and, in the lung run, he who treads it will, I firmly believe, repent and fail to obtain the success which is so dear to all lithotomists. I have traversed that path, but prudence bade me retrace my steps; and I have ventured to think that this imperfect record of my doings may interest some, and enable others, who perchance have fewer opportunities, to profit and guide their practice by my experience.

THE USE AND ABUSE OF NUX VOMICA AND ITS ALKALOIDS.*

By JAMES THOMPSON, M.D., Leamington.

FOR the sake of form, I have named this paper on the use and abuse. Of the first, the *use*, I intend to say but little, as this is known well to all; the *abuse* will be what I desire to make some remarks on. My attention was drawn to the subject by some cases which I have had during the present year, and, as I can find no reference to it in any works on therapeutics which I have been able to consult, I have deemed the subject not unworthy of being considered in this Section. I remember, when a student, spending some time in a house where homœopathy was followed, and the inmates seemed, at all hours of the day, to amuse themselves by swallowing globules and tinctures, the active ingredient of which was said to be derived from *nux vomica*; thus, during the day, they took a sufficient amount of this powerful tonic to feel invigorated and stimulated.

The matter passed out of my mind until recently, when an American gentleman came under my care; he had been sent to England for change of air and scene. He had, from his account, suffered from some cerebral attack, due to excitement and overwork in commercial pursuits. His American physician had prescribed Easton's syrup in drachm-doses three times a day. When I saw him, he was taking such doses several times a day, and had done so for a long time. He was in a highly nervous state, sleepless and excited in manner; he took a dose of syrup, and then felt better; but the stimulation was temporary, and then he was more depressed than ever, and he required another dose before he could attempt anything. At first, I did not realise the cause of this state. Medicine and regimen were of no avail, as he continued to take the syrup. After some persuasion, he consented to give it up, although he declared he thought he would die. I advised a course of mineral water, a Turkish bath twice a week, and a shower bath every morning. In a fortnight's time he was all right, and has continued so up to the present time.

Now this patient seemed on the verge of what was very like delirium tremens, and I have no doubt that the strychnine in the syrup was the cause. He drank nothing save a couple of glasses of sherry at dinner and lunch.

Among my patients I have a highly hysterical lady of middle age, much in society, who, when she is going out, takes twenty or thirty

drops of tincture of *nux vomica* in a little water. Formerly she took sal volatile, and she says she finds the tincture much the more potent. She is aware of the power of the drug, and she only uses it on particular occasions. When much is used, she finds herself so excitable that she takes some aperient medicine for some days and a dose of chloral at bedtime. I find, on inquiring, that a medical man, whom she met at an hotel when travelling, had first suggested it to her.

A medical friend, whom I asked if he had ever noticed any deleterious effects from the use of these medicines, admitted that every day he longed for 11 A.M. to come, as, for a very long time, he had taken a dose at that hour, and that he could not get through his work without it. I made an experiment on myself to ascertain the exact effects, and, although I never take any stimulant before dinner, I soon found I could not get on without it. I took the syrup in drachm-doses once daily for three weeks, and in the fourth week I found myself so shaky, with crampy pains in the abdomen and legs, that I was warned to give up. The next week I was low and depressed, but soon recovered. I satisfied myself that it was producing much the same effects as repeated nips of brandy or glasses of sherry.

From inquiries I have made, I am satisfied that this form of indulgence is on the increase. Prescriptions containing preparation of strychnine are treasured up, and sent to the chemist to be dispensed whenever the holder feels a little low. I am much impressed with the necessity of marking such prescriptions, so that they may not be dispensed without a countersign. Recently a patient drank at a draught eight ounces of a mixture, which she had found comforting on a former occasion; it produced most serious symptoms, and might have proved fatal had not assistance been speedily summoned and active measures taken.

RETROSPECTIVE JOTTINGS.

By C. M. DURRANT, M.D.,

Physician to the East Suffolk and Ipswich Hospital.

It has been often, and truly, remarked that a very large field of unproductive but valuable matter has been, and still is, allowed to lie waste for want, not so much of cultivation, as of circulating for practical purposes the extensive experience which almost every medical practitioner possesses, even if he be only of comparatively few years' standing. To leave metaphor, I would say that, if only one-half of the practitioners throughout the three kingdoms were to detail the practical facts which have been impressed upon their own minds, the profession would possess an amount of experience that, if properly collated, would be invaluable. Believing, as I do, that the advance of our knowledge of disease will be in proportion to our future understanding, with certainty, the functions and derangements of the nervous system, how helpful would be a constant afflux from all parts of the kingdom, especially in reference to the conditions of this economy. That we are continually passing through cycles of diseases, mainly caused by disturbance of nerve tension, cannot, I think, be doubted; and although in our present ignorance we attribute, with the vulgar, all kinds of noxious influence to the weather, I am persuaded that the time will come when we shall be able to associate, with far more certainty than at present, meteorological and barometric changes with direct nervous influences, either functional or organic.

How frequently do we notice a complete absence of expected disease during weather to which we, in our present wisdom, feel disposed to attribute everything that is bad; while, on the contrary, how often, in the finest, and apparently most health-giving weather, do we find the largest amount of sickness, and often a wide-spread epidemic. To take a simple example, I need only allude to ordinary catarrhal affections, to show that, if the peculiar paresis upon which these depend were better understood, the accumulated evidence of the many would become very valuable in reference to locality as an exciting disturber of nerve influence. Again, the phenomena of asthma, chorea, and many other affections that occur, more or less, in groups, might be largely elucidated by the repeated addition of wide-spread observation.

I merely set down these ideas; believing that, if they were worked out, a mass of what is now but wasted experience would furnish, in time, a basis upon which the most valuable data might be obtained and a more exact knowledge acquired.

SPINAL AFFECTIONS.

I do not know whether it has struck other practitioners, but I have been impressed myself with the fact of the increase of spinal paralysis generally, and of certain forms of the malady in particular. In referring to this, however, I confine myself strictly to the symptoms produced

* Read before the Medical Section at the Annual Meeting of the British Medical Association in London, August 1873.

by lesions of the cord itself or its membranes, not referring to disease of the bones or cartilages, which more immediately fall under the surgeon's care.

Many of these cases of spinal weakness are slight, and scarcely admitted by the patient, but nevertheless they exist. So far as my observations tend, loss of motion more frequently preponderates over defective sensation; and, when once this is fully developed, the restoration of lost power becomes difficult and doubtful. There is one form of spinal paralysis referred to by Sir Thomas Watson, in which the symptoms yield rapidly and perfectly to treatment. This variety is caused by effusion of serum between the cord and its membranes. It is generally excited by cold and damp, in a previously healthy person, and, if treated actively at the onset, yields quickly and satisfactorily. Of this variety, I have lately seen a well-marked instance. The patient, a middle-aged man in perfect health, took cold, and, within three weeks, became paralysed, dragging his legs, which had considerably lost their natural sensibility. There was distinct tenderness on sharp percussion over the lower dorsal spines. A blister to this spot, with the perchloride of mercury and a stimulating diuretic, removed rapidly the paralysis, and he was walking as well as before in five weeks from the application of the blister. Of far more serious import, unhappily, are the class of paralytic affections to which I would now refer. These are cases, obscure frequently in their origin, for they are essentially latent, and spring from subacute myelitis, very chronic in its progress, and often very unyielding to treatment.

As I have remarked before, I believe that these cases are on the increase, and I am disposed to regard them as one only of the many evils resulting from the present competitive "rush to live" and its inevitable exhaustion, which we may witness so painfully in every walk of life. Two causes may be mentioned as the chief exciters of this paralytic condition: one being an exhaustion of nerve-force from prolonged over-fatigue, giving rise to irregular vaso-motor nerve-influence and impaired nutrition, and the other (to which may perhaps be added a syphilitic taint) being excessive indulgence in venery, than which, though little suspected by the patient, there is no more influential cause existing. In other words, any circumstance inducing an extraordinary demand on the spinal cord, may produce in the predisposed this chronic inflammatory affection. A long and exhausting walk, or prolonged unaccustomed exertion in the erect posture, have been known to produce chronic myelitis. The more severe cases of this affection fall, of course, immediately under the supervision of the medical attendant; but the results of the latent or more chronic form may be detected constantly in the streets, especially of our more busy centres, as indicated by the partial dragging of one leg and the consequent interference with perfect walking.

A delicate-looking patient will complain to us that, after prolonged exertion, and perhaps exposure to cold, he has been seized with pain in the dorsal region of the spine, which has partially subsided on rest, but again returned in a mitigated degree; that he has had a tingling sensation in his feet and legs, which he describes as "going to sleep"; and that latterly he has experienced a disagreeable sensation of tightness round the waist. On questioning, we shall find that the bowels are difficult to move, and that the urine does not flow so readily as has been usual, and that there is a tendency to an involuntary escape of a small quantity from time to time. Such are the features observable in the early stages of an attack originating in cold or prolonged fatigue; but, if we also can obtain a confession of sexual excess (for what is healthy to one is enormously excessive in another), we may have, in addition, intermittent priapism accompanied by diminished sexual power.

Such are the more prominent characteristics of this by no means uncommon and, I believe, increasing disorder; and, as the restoration of spinal nerve-power, when once decidedly impaired, is difficult to accomplish, so does it become all-important to detect the lesion early, and to lose no time in adopting remedial measures. Although I regard the condition of the cord in chronic myelitis as essentially one of impaired nutrition, I am convinced that, if the patient be seen early, the application of a blister over the affected portion of the cord will be found of real service, both by relieving local congestion and acting as a direct nerve stimulant. After this, with a view of further exciting functional activity, the alternate application of cold and hot sponges to the part will sometimes greatly counteract nerve-atony.

Among the more valuable of the nerve-tonics in spinal malnutrition, I would particularise perchloride of mercury, arsenic, and cod-liver oil. These may be supplemented by large doses of the perchloride of iron. In no case should a persevering trial of these medicines be omitted; and, if a syphilitic complication be suspected, large doses of the iodide of potassium will also be demanded. I have frequently prescribed belladonna, ergot, and strychnia in chronic myelitis, when prolonged

and unyielding; but I cannot say that I have been impressed with their value, or witnessed any positively beneficial results from their use.

There remain yet two other measures which must not be overlooked as valuable auxiliaries in the treatment of this affection. The one is the persevering, but not exhausting, use of the galvanic current. The use of this agent, if limited to alternate days, will often be seen to materially assist in restoring lost power to the weakened limbs.

Another suggestion of importance is to carefully ensure warmth to the debilitated nerve-structures. This may be best accomplished over the cord, by wearing a protecting unstimulating plaster, than which nothing is perhaps better than belladonna. At the same time, the limbs should be carefully enveloped in flannel drawers and worsted stockings; and all exhausting procedures on the part of the patient must be absolutely and unconditionally forbidden.

An interesting case of functional ataxy, or interference with perfect co-ordination in the movement of the lower limbs, has recently come under my notice. The patient, a young woman, who was suckling her fourth child (she having borne them very rapidly), was attacked with intermittent hæmoptysis, and for this condition I was requested to examine her chest. The lungs were healthy, but she was anæmic and weak, with an excess of impoverished milk in her breasts. She was directed at once to wean her infant; and steel and quinine with ammonia were prescribed. She improved under this plan, but she now complained of inability, when walking, of keeping her limbs under control. At the same time, she was attacked with what she termed rheumatism in the right humeral and scapular region, but which, although not amounting to hyperæsthesia, was clearly traceable to nerve-irritation. She was at once put upon cod-liver oil, and full doses of perchloride of iron, when these (to her, alarming) symptoms gradually subsided. This case was simply functional, depending upon an exhausted state of the spinal cord, so far as the ataxic symptoms were concerned, and not (as would have been pronounced but a few years back) upon a congestive or inflammatory condition of that structure, and was treated accordingly. The neuralgic disturbance of the shoulder depended probably rather either upon a temporary congestion of the meninges of the upper part of the cord, or upon a similar condition limited to the covering of the nerve-trunk itself, the result of malnutrition.

In similar cases we must not lose sight of the fact, as has been shown by Sir William Gull, Dr. Wilks, M. Charcot, and others, that arthritic affections are not an uncommon accompaniment of meningeal or myelitic diseases of the spine. In all cases of nervous affections, correct treatment can alone be based upon correct diagnosis. Hence the very great importance of advancing our present knowledge, especially by collective information, as suggested at the commencement of this paper. There is a wide and but partially explored field before us, which will amply repay minute and precise investigation.

The deposits in the nerve-structures as the result of syphilis are becoming better understood; but to be able to demonstrate, which we cannot do at present, the subtle changes in the texture of the brain, spinal cord, or nerve-filament, under the influence of hereditary transmission, or even in a case of hysteria, would prove an enormous advance in nerve-pathology. I feel persuaded that the more the nervous origin of disease is admitted, the more surely shall we find ourselves steering in the right direction.

[To be continued.]

THE ETIOLOGY OF PYREXIA.

By CHARLES MACLEAN, M.B., Applecross.

I THINK I need offer no excuse for bringing under the notice of the profession the undermentioned facts; for, considering how important it is that we should ascertain what is the true pathology of fever, any contribution towards that object, however small, must receive a welcome. I had hoped that these or similar experiments might be undertaken by abler hands; but, as they were not forthcoming, I decided on making them myself, the subject being full of interest. I leave the facts to speak for themselves, only observing here that, being purely experimental, they bear out all that I have said in my paper on Fever (BRITISH MEDICAL JOURNAL for June 7th and July 5th), which was based on almost entirely clinical observation.

I made the first set of experiments in order to ascertain the effect on temperature of bromide of potassium and chloral respectively. The temperature was in every case rectal. The second set of experiments was to observe the effects of these same medicines on the capillaries.

1. *Temperature.*—Normal temperature of a kitten (mean of three times a day), 99.8 deg. Fahr.; next day, after bromide of potassium, 99.3 deg. Same kitten, on another occasion, after chloral, 100.3 deg.

Same, after a large dose of chloral, 100.8 deg. Same, after a large dose of bromide of potassium, 98.6 deg. Normal temperature of a grown cat, taken as before, 102.2 deg.; next day, after chloral, 103.3 deg. To three kittens, of the same age as the above-mentioned one, and whose normal temperature was the same, I gave chloral; and their temperatures, from an hour to two hours after administration, were respectively 98, 98.2, 98.3 deg. Fahr.

11. *Size of Capillaries.*—The capillary vessels of a frog's foot were normally 1-1200th of an inch in diameter; same frog, the day after taking bromide of potassium, capillaries 1-2000th of an inch. Second frog, an hour after taking chloral, capillaries 1-1500th of an inch; the same frog, next day, capillaries 1-800th of an inch.

It appears from these experiments, then, that a dose of bromide of potassium lowered the temperature of the twenty-four hours from half a degree to more than a degree; whilst chloral raised it from half a degree to a degree; primarily, it reduced it more than a degree. But, if I select those readings of the temperature corresponding to the period after ingestion at which I observed in the frog's foot the maximum contraction and maximum dilatation of the vessels after bromide of potassium and chloral respectively, I find that the difference in temperature is even still more marked; the rise after chloral in the case of the cat being upwards of two degrees—a regular miniature fever; and the fall after the bromide being fully a degree and a half. Now, the microscope showed that the diameter of the capillaries was greatly diminished after the administration of bromide of potassium, and much increased after chloral; the first effect of the chloral, however, being to contract the vessels and cause the blood to move in an oscillating and interrupted manner. I would remark, with regard to the action of the bromide, one peculiar result as seen under the microscope: the blood-corpuscles, being about 1-1600th of an inch in diameter (of breadth) when they arrived at the capillaries, often halted for a moment, considering, as it were, the altered state of affairs. They soon, however, adapted themselves to circumstances, and went through with a push—being quite out of shape, however, in the passage, with a diameter often less than 1-2000th of an inch. Indeed, after repeating the dose of the bromide, I could see some capillaries from the 1-2500th to 1-3000th of an inch in diameter, and the corpuscles still going through them, but greatly elongated, appearing like worms running about. This fact shows what has been doubted by physiologists, that the blood-corpuscles can and do penetrate through capillaries considerably smaller than themselves.

I took a dose of chloral myself on two occasions, not, however, in connexion with this subject. The next day, I noticed nothing unusual until I exerted myself a good deal, and then it was that a feeling of heat and languor came on, as if the vessels were able to resist a moderate pressure for some time, but, when the heart's action was greatly and suddenly increased by exertion, the walls of the minute arteries, weakened by the chloral, yielded to the pressure, and the capillaries were inundated.

I cannot but think that it is contrary to fact to say that in pyrexia there is contraction of the vessels of the skin and lungs, as one theory of fever supposes; the first look of a patient with enteric fever having always conveyed to me the idea of distension of the surface, and the stethoscope equally revealing a congested state of the air-passages. Indeed, I could generally tell in this manner whether the temperature would be greater or less, before using the thermometer.

With reference to the experiments of Naunyn and Quincke alluded to by Dr. Burdon Sanderson at the annual meeting, I would remark that he (Dr. Sanderson) seems to take it for granted that division of the spinal cord in the neck is necessarily followed at once by paralysis of the vaso-motor nerves. Now, with all the deference due to so great an authority as Dr. Sanderson, I have to say that, after dividing the cord in the cervical region, for at least forty-eight hours, during which time I had it under observation, there was no dilatation of the vessels whatever; the only effect the operation had on the vessels being to cause some contraction, which lasted nearly thirty hours. The animal met with an accident which caused its death at the end of two days. Division of the cord, in fact, did not influence the vaso-motor power much more than the reflex in the frog; the animal in other respects being to all appearances dead. Of course, the effect would be different in the higher animals, but different only in degree. Now, what effect it did produce in the frog was contraction of the capillaries; so in man, whose organic functions are more immediately under the controlling influence of the brain, there would be still more contraction, in the first instance, following such an operation; and the result would be lowering of the temperature, according to the experiments made. It is highly probable that this contraction, caused by the irritation of the nerves by the operation, would give place before death to paralysis and dilatation, and, therefore, elevation of temperature. Hence, strange as it may seem, the results obtained by Naunyn and Quincke on the one

hand, and by Rosenthal on the other, may possibly have both been correct, depending on the time after the operation at which the observations were taken. The inquiry is full of interest.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

BRISTOL GENERAL HOSPITAL.

REMOVAL OF GREATER PART OF BOTH SUPERIOR MAXILLÆ SIMULTANEOUSLY FOR MALIGNANT DISEASE: RECOVERY.*

(Under the care of NELSON C. DOBSON, F.R.C.S., Surgeon to the Hospital.)

I HAVE been induced to bring the following case before the notice of the Association, because I believe it to present several points of interest, independent of the extent of the disease, and the formidable nature of the operation undertaken for its relief. These various points I will briefly mention after I have described the case.

Sarah Meredith, aged 52, was sent to me from Brynmawr in Wales by my friend, Mr. Meadows, and was admitted into the General Hospital under my care, November 15th, 1872, suffering from extensive disease of both upper jaws. The great difficulty which she had in speaking, in consequence of the encroachment of the disease on her hard palate, and her imperfect knowledge of the English language, rendered it next to impossible to get much information from her as to the history of the case. She was accompanied by no friends, and Mr. Meadows could not assist me with the history, as she only applied to him a few days before he sent her to the hospital. However, it was ascertained that she was a widow, and had had five children, all of whom were dead. She had always had good health before the present disease commenced, which was about six months ago. At that time, she stated, her gums pained her a good deal, for which she applied to a chemist, who gave her some "hot burning lotion" which produced greater irritation, and shortly after its use she noticed the gums began to swell and ulcerate in patches. She was not certain whereabouts in her mouth she first noticed the ulceration; but, as far as I could make out from her, it seemed to have begun immediately behind the two central incisor teeth of the upper jaw. There is no family history of cancer. This is all the information I could gain from her, except that the disease had rapidly increased during the last month.

Her condition before the operation was this. On looking into the mouth, there were three or four large patches of punched out ulcerations extending from the alveolar ridge to the anterior margin of the soft palate. The alveolar process was edentulous, though a patch or two of ulceration seemed to indicate the position of an old tooth-stump, which, however, I could not find. The alveolar ridge was considerably expanded, and projected from between the lips; so that, when the jaws were closed, the mass overhung the teeth of the lower jaw. This expansion and projection of the process was such that the upper lip was tightly stretched over it, and very thin in consequence of such stretching. The cartilaginous part of the nose was pushed up and flattened. The anterior part of the palatine process and the alveolar ridge of both superior maxillæ had the appearance of a fine warty ulceration; and this induced me and all who saw it to believe the disease to be epithelioma. On elevating the upper lip, the portion of alveolar ridge beneath it was found to be nearly uniformly distended, and having here and there over its surface pale looking nodules, with scattered patches of vessels, but no ulceration. The lips were perfectly free from disease. There was no glandular enlargement discoverable anywhere. She suffered considerably pain, swallowed with difficulty, and her articulation was exceedingly indistinct, whilst her general appearance, with flattened nose, expanded and protruding alveolar process, presented a hideous sight, which was increased by the wan and care-worn expression of those features which still remained. The disease appeared to have invaded nearly equally both superior maxillary bones, the right being, perhaps, a little the more implicated, and to have attacked chiefly the palate processes of these bones, as well as the horizontal plate of the palate bones, and, to a slight extent, the soft palate itself. I could detect no expansion of the antra; no projection into the orbits, and none into the nasal cavities. The chief encroachment of the disease was into the mouth, so far as could be ascertained before the operation. This, then, being the state

* Read before the Bath and Bristol Branch.

of things, and the unfortunate patient being anxious that something should be done to relieve her at all risks, I put the case as plainly before her as I could as to the serious nature of the operation and the probable speedy return of the disease, and left her to decide, which she did in the affirmative. I then, with the consent and assistance of my colleagues, operated on her in the manner to be presently described, and with the result which you see. We all thought that the bones were so deeply involved that it would be necessary to remove the whole of both superior maxillary and palate bones, together with a portion of the soft palate; and this was the operation I determined to do, though it will be seen that, as the operation proceeded, I did not find it necessary to remove either of the orbital plates of the maxillary bones. With a view of removing the parts before named, I proceeded in the following manner.

The patient having been prepared in the usual way, she was placed on the operating-table at a convenient height, and the head and shoulders were raised by pillows so as to place her as nearly as possible in the semirecumbent posture. Chloroform was administered, and she was brought fully under its influence before I began. Then, standing at the patient's right side, and somewhat in front of her, I entered the point of the scalp into the left side of the face immediately below the inner canthus, and cut downwards along the side of the nasal bone and cartilage in the natural hollow by the side of the nose. I then gave a horizontal inclination to the knife, cutting through the cartilage of the nose into the nostril as far as the middle line of the lip, when I again cut down vertically, dividing the upper lip in the median line. I thus had the front of the face mapped out into two flaps. I then dissected the left flap cleanly up from the bone to the malar and maxillary suture, and along the lower margin of the orbit, and separated the attachment of the internal oblique muscle from the floor of the orbit, and attempted to pass an aneurism-needle armed with thread to carry a chain-saw through the speno-maxillary fissure, intending to divide the malar and maxillary suture by means of the chain-saw; but, as I experienced some difficulty in catching the thread, owing to the point of the needle being entangled in the granular fat of the orbit, I gave up the trial of the saw, and readily divided the suture by means of strong bone-forceps, and afterwards divided the nasal process of the left maxillary bone. I then dissected up the right flap, including the lateral cartilages of the nose and the cartilage of the septum, sufficiently high to enable me to repeat the same bony divisions on the right side which I had already practised on the left, and found that I had quite sufficient room to do this satisfactorily without any further incision into the integument of the face—a point of considerable importance. The only bone-surfaces which now required division were those between the nasal surface of the palatine arch and the vomer, the separation of which I readily accomplished by a strong pair of curved scissors. I now separated completely the soft parts around the tuberosities of the superior maxillary bones, including the attachment of the buccinator muscles; and, finally, cut straight across the soft palate from one side to the other beyond the limit of apparent disease. The mass was now separated so far as its bony connections were concerned, and also its soft parts, and I readily depressed and withdrew it, as you see it, by passing the thumb of each hand into the nostril, and grasping the lateral mass of the tumour with my fingers, and thus, by the exercise of moderate force, withdrew the diseased mass, making only a few cuts with the knife where I found it necessary. There was very little hæmorrhage, not more than a few ounces of blood being lost during the whole operation, only one artery (which I took to be the left posterior palatine) spouting, and this soon being stopped by a little pressure. The facial arteries were twisted; and no artery in the mouth required ligature or actual cautery. A small portion of the tumour on the left side broke off from the mass during its withdrawal, and required separate removal with the knife. I found, on the completion of the operation, that I had not removed both superior maxillary bones in their entirety, notwithstanding that I had made the requisite bone-section for this purpose; for the diseased portion, detached as I have already described, allowed itself to be enucleated without bringing away either floor of the orbits. The anterior walls of both antra appeared to be involved in the mass and not distinguishable from it. I removed the palatine process of the four bones forming the bony palate, and all the right superior maxillæ with the exception of the orbital plate, whilst there was a small portion of the posterior wall of the left antrum as well as its orbital plate remaining. On looking into the mouth after the completion of the operation, there was, of course, an enormous cavity, the roof of which was formed by the ethmoid bone. A fringe of the soft palate, which was apparently healthy, was left. The incision on the side of the nose was brought together by silver sutures, that in the lip by hare-lip pins. She was carried to bed in good condition, and decidedly improved in personal appearance.

On November 22nd, the day after the operation, I found she had passed a good night. There had been very little oozing, and she had had a fair amount of sleep. She had been unable to swallow, and had, therefore, to be fed through an elastic catheter passed into the œsophagus, through which beef-tea, milk, and brandy and egg, were slowly injected. I removed the hare-lip pin this day, the lip having healed by the first intention. The whole line of incision looked well.

I need not detail the history of the case further from day to day, except to say that, on the 26th, all the sutures were removed, and that she was able to swallow her food. She was able to get up three weeks after the operation, though she was rather weak. There was a suspicious looking spot on the left side of the soft palate to which I applied chloride of zinc paste; and, at this date (May 10th), the left inferior turbinate bone does not look healthy, and I expect to have to remove it.

Description of Tumour.—The diseased parts removed involved chiefly the palatine processes of both superior maxillary and palate bones, as also a large part of the bodies of the upper jaws, and especially that of the right side; the whole of the bone, with the exception of the orbital plate, being involved in the disease, and removed. The whole of the posterior wall of the right antrum and tuberosity of the palate-bone were taken away, so that the finger could be placed in the right pterygoid fossa; whilst on the left side, as far as I could make out in such a mass, the posterior wall of the antrum, as well as the orbital plate, was not removed. On looking at the tumour, you will notice



that the alveolar process contains no teeth, and that it is broader and deeper than natural, and has lost nearly all the characteristics of the original healthy bone. It measures nearly an inch and three-quarters from the oral to the nasal margin in front; and in this position you will also notice a well marked fissure, more widely separated than natural, which indicates the position of the intermaxillary suture. The whole of the palate-surface is stripped of its mucous membrane, except a few patches here and there; whilst the alveolar process is expanded, and protrudes prominently forwards. Here and there, in this portion of the diseased mass, you see circular soft patches which look like the remains of old teeth-stumps; but, if they be so, they, like the rest of the bony structures, have been softened by the disease which has invaded them; the whole of the mass, which was originally bony, being now as soft, and as easily penetrated by a needle, as a piece of liver—the only indication of bone being a few spicula on the anterior walls of the antrum. There is running from before backwards, on the nasal surface of the tumour, the cartilage of the septum and a part of the vomer. There is also, in addition to what has already been described, a mass as large as a hen's egg, which filled completely the right antrum; it is somewhat smaller now, partly from the removal of small slices for the necessary microscopical examination, and partly from maceration. There was a similar

but smaller growth in the left antrum, which was broken off during the operation, and not preserved.

Present Condition of Patient.—She is able to go about freely. There is nothing to indicate the loss of jaw which she has sustained, except the line of incision on the left side of the nose, and some, though not by any means very considerable, flattening of the face. The nose is as prominent as ever; the left nostril is a little wider than the right, as I had to divide the cartilage on that side. On looking into the mouth, there is the gap which you would expect to find, though it has filled up a good deal since the operation. A fringe of the soft palate still remains. She can talk so that I can understand her, though, of course, her articulation is not very distinct, but certainly improved since the operation. She swallows without difficulty solids and fluids. Her senses of taste and smell are not much impaired.

Pathology of the Tumour.—I have been much puzzled how to name this disease, but have finally come to the conclusion that it belongs to the class of epulides, and is probably an instance of that form of disease which C. Heath mentions in his book on *Diseases of the Jaw* as "epitheliomaous epulis." He says, in describing such a tumour, "that the structure of the growth is distinctly glandular, very much resembling some forms of compact adenoid tumour of the breast;" an observation confirmed by one of the sections of my tumour, which Dr. Martyn kindly made for me. And moreover, the general appearance of the growth was similar to the well-known case of epulis in which Mr. Liston removed both upper jaws, in the year 1836, though not so exaggerated. In several carefully prepared sections made for me by Dr. Martyn, I noticed an almost endless variety of structure. In all, fibrous tissue appeared to predominate. There were also varying sized cells, many of which looked like ordinary squamous epithelium; other cells were round, or oval, with several nuclei. In parts there was fatty degeneration. Again, other specimens showed forms of enchondroma, while others showed a structure precisely similar to a section of adenoid tumour of the breast. These, then, are the principal features which presented themselves in the microscopical examination of the tumour. In some respects my case was not unlike one in which Mr. Lane removed both superior maxillæ, in 1861, for a disease which he calls "albuminous sarcoma," in his description of which he says (Heath, page 229), "Very little bony material could be distinguished in the position of the palatine processes of the maxillary and palate bones, and the growth which occupied their place was soft and elastic, and was ulcerated in two or three spots of the size of a fourpenny piece." This description almost exactly corresponds with that I have given of the case just described.

Remarks.—Partial operations on the upper jaw have been practised for at least two centuries, but the removal of the superior maxillary bone in its entirety is an operation of comparatively recent date. So far as I have been able to ascertain, the first instance of entire removal of one side of the upper jaw was that of M. Gensoul, of Lyons, in 1827, though the demonstration of the possibility of such an operation is due to Lizars, of Edinburgh. Since 1830, the operation has become an established one in surgery, most hospital surgeons having performed the operation at least once. On the contrary, there are but few recorded cases of simultaneous removal of both superior maxillary bones. Heath mentions the cases of Liston and Lane, to which I have before referred. He also says that the operation has been performed by Rogers, Heyfelder, Dieffenbach, and others. Heyfelder made two incisions from the angles of the mouth, and reflected the integuments. The incision which I made I have before described. It has the advantage over Heyfelder's incisions, that it does not divide the main trunk of the facial nerve, and therefore interferes but little with the muscles of expression of the face. It also divides the facial arteries where they are comparatively small, and also leaves the parotid duct uninterfered with; and finally, and not least important, it leaves the patient much less disfigured. Fergusson has insisted strongly on the performance of operations about the jaw with the smallest possible incision of the integument, and he has pointed out practically, that even large tumours may be removed from the jaw with but very slight incision. The other points of interest in the case are the extent of the disease, the formidable nature of the operation for its relief, and the success of the operation, both as regards the removal of a loathsome disease, which must long before this have proved fatal to the patient, and also as regards the disfigurement which remains, and which is wonderfully little, considering the mutilation which the patient has undergone.

PRESENTATION.—Dr. Justyn Douglas, on resigning the post of Resident Medical Officer to the Bournemouth Dispensary—which he has held for two years—in order to begin private practice, has been presented by the patients who were under his care with a microscope and other apparatus. The amount subscribed for this purpose was £10.

FORTY-FIRST ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON, August 5th, 6th, 7th, and 8th, 1873.

PROCEEDINGS OF SECTIONS.

SECTION D.—PSYCHOLOGY.

Thursday, August 7th.

THE President, Dr. HARRINGTON TUKE, delivered an address on the Present State of Psychological Medicine. It was published at page 188 of the JOURNAL for August 16th.

On Insanity and Intemperance. By D. YELLOWLEES, M.D. [This paper was published at page 394 of last week's JOURNAL.]—Dr. THURNAM (Devizes) confirmed the views of Dr. Yellowlees, stating that insanity in Wilts had arisen from 25 per cent. to 36 or 37 per cent. in the last few years, wages having been considerably raised.—Dr. BATTY TUKE (Edinburgh) confirmed the statement made in the paper, from his experience during strikes. He did not think that general paralysis was caused by intemperance.—Mr. MOULD (Cheadle) thought that not more than 5 per cent. of inebriates were reclaimed.—Dr. CLOUSTON (Edinburgh) drew attention to a paper of M. Falret on the *Annales Médico-Psychologiques*.—Dr. ROGERS (Rainhill) spoke on the quality of the drink taken.

Some of the Causes of Idiocy and Imbecility. By J. LANGDON DOWN, M.D.—Following up his inquiries into the history of two thousand cases of idiocy which had come under his observation, Dr. Down found that 24 per cent. were first-born children. He regarded two causes as potential in these cases: (1) pressure on the cranium; (2) suspended animation from retarded labour. He also attributed something to the more exalted emotional life of women during their first pregnancies. Among primiparous idiots, one-fourth had been born with suspended animation. While the ratio of sex among idiot primiparæ was 3 males to 1 female, the ratio of those born with suspended animation was 5 males to 1 female; indicating the influence of the increased size of the male cranium over that of the female. He pointed out that there is less danger to the mental future of the child in the timely use of forceps than in allowing a lingering labour. Three per cent. of the idiots had been delivered by forceps, and 2 out of the 3 per cent. were born with suspended animation, probably from the use of the forceps having been too long delayed. Disparity in the ages of the father and mother did not appear to be very productive of idiocy. In 7 per cent. only was there a disparity exceeding ten years. In all the cases, the father was the senior. Four per cent. of the issue were males, and 3 per cent. were females. Five per cent. of idiots had fathers who were above 50 at the time of their birth, and the male progeny were the most influenced, 4 per cent. being male and 1 per cent. female. A much more potent cause was found to be the neurotic condition of the progenitors. In 45 per cent. there were well-marked neuroses in one or both families. If the neurosis were marked on the maternal side, the first children were the most affected. If the neurosis, on the other hand, were paternal, he found that it was the later born children that were affected. He related several cases that had lately come under his notice, where the father had died from locomotor ataxy and general paresis. In these cases, the early members of the family were mentally vigorous, while the last born were idiotic. The result was shown to be more perilous to the offspring of those where the neurotic tendency was on both sides of the progenitors, and it was this circumstance which caused the danger in marriages of consanguinity.—Dr. LALOR remarked on the influence of the relative influence of father and mother.—Dr. BUCKNILL remarked on the size of first children, which he considered equal to that of subsequent ones.

John Howard as a Psychological Study. By W. A. GUY, M.B., F.R.S.—Dr. Guy reminded his hearers that the year 1873 is the centenary of that year, 1773, in which John Howard was appointed Sheriff of Bedford. To this propitious appointment we Englishmen owed the cleansing of our prisons, not only from the jail-distemper and its allied diseases, but from moral abuses which formed the perfect counterpart of them. Nothing was then to be found in the prisons of any European country so revolting to the sense of justice or decency. These, our prison reproaches, Howard studied; and, by his representations made before a Parliamentary committee, he was the means of removing them. And this he did in the short space of one year, receiving the well-merited thanks of both Houses of Parliament. But this successful labour of a

year was but the first of a series of most laborious and systematic inquiries directed to the conditions of prisons, hospitals, schools, work-houses, and lazarettos, lasting for seventeen years, and extended throughout the whole of England, Scotland, and Ireland, and into every part of Europe. But, before he obeyed the call of duty as Sheriff of Bedford, he had prepared himself by seventeen other years of judicious and philanthropic labour, beginning with the release of his fellow-prisoners in France and continued at Cardington, which he reconstructed and regenerated. It is not possible to give an adequate idea of the labours of this man—labours which have placed his name at the head of that long list of philanthropists of which England has much reason to be proud. Dr. Guy, however, had taken an opportunity of showing, in a paper read before the Statistical Society early in the year, that Howard was very inadequately described as a philanthropist; for he was that, and much more—a statist or statistician of the highest order, and the founder of the new epoch of preventive philanthropy. But, as Howard was popularly looked upon as a philanthropist *par excellence*, any blow that might be aimed at him would be felt by the whole body of which he was the chief; and it would be a disastrous day for England, should it ever arrive, when it would be possible to describe a philanthropist as one who neglected the duties of his own household and family in search of more remote spheres of usefulness; but with this, as all men know, John Howard had been charged. Dr. Guy, indeed, stated that he had himself been asked a series of questions, imputing to Howard every form of ill-conduct to his own son, from simple neglect up to downright cruelty; every feeling, from indifference to hatred. Believing, as he did, that there was no real foundation for any of the charges implied in these questionings, he would be ready at any time to assign reasons for his own belief that Howard was not open to such attacks. The subject being both important and well-timed, Dr. Guy said that he would promote its full discussion by offering a prize of £10 to be expended in such a way as might be most acceptable to the Medico-Psychological Association, and given to the essayist, who should present the best psychological analysis of the character of John Howard, having reference both to his own labours and to the fact of the insanity of his only son, and the effect which Howard's management and treatment of him might have had in developing that sad condition. The title of the essay to be "John Howard, as a Psychological Study."*

On Criminal Psychology. By DAVID NICOLSON, M.B.—There were two points taken up in his paper:—1. A general classification of criminals on mental grounds with reference to prison discipline and treatment; 2. The forms of weak-mindedness met with among criminals. Dr. Nicolson pointed out, in the first place, how prison discipline expressed itself as a test of mental capacity, by necessitating a primary division of imprisoned criminals into those who are fit and those who are unfit to undergo it. The discipline and some of the more irksome circumstances of prison life have in certain cases to be modified and more or less relaxed, in order to suit inferior or morbid conditions of mind. Some prison-offences are committed by individuals whose mental state at once suggests a question as to the expediency or advisability of punishment; and a "weak-minded" class is formed, requiring special observation and treatment. This weak-minded group, whose mental condition, taken generally, does not warrant a certificate of lunacy, has to be separated from the great body of prisoners. The forms in which the mental inferiority or disturbance reveals itself may be comprised under three general heads or classes—1, simple weakness; 2, states of depression; 3, states of exaltation. Questions of practical interest arise from a study of this group of criminals; as, for instance, their social and moral responsibility, and the best mode of dealing with them in prison or out of it.

Morphia in some Cases of Insanity. By W. J. MICKLE, M.D.—The object of this paper was to exemplify the influence exerted by tonic and stimulating doses of morphia on certain subjects of melancholia. Moderate but continuous stimulation was aimed at, and therefore small or medium doses were given, and their action was sustained for prolonged periods. Though there was nothing new in the plan of administration followed in these cases, yet it was highly different from the method frequently adopted, of making gradual increments to the doses, until large quantities of opium or morphia were taken daily, at the risk of deteriorating the mental and physical powers, and of inducing an unnatural craving for the drug to relieve the depression flowing from the abuse of so powerful a neurotic. Insanity had usually become firmly established for some time in the cases dealt with in the paper, and the patients were unpromising subjects for treatment. They suffered from chronic melancholia, either of a quiet character, the patients being sor-

rowful, cast down, and displaying the usual aberration of thought and will; or, secondly, they also exhibited some excitement, moroseness, and disposition to occasional impulsiveness or violence. For sake of comparison, ten of each class were selected, as nearly as possible of similar ages and conditions of life, and all of the male sex. The bodily and mental health of the quiet melancholics, and the bodily health of the more irritable patients, were benefited, in the aggregate, in nearly equal degrees; but the mental state of the latter was, on the whole, ameliorated to a far less extent. The changes noticed in the various mental symptoms of the whole number during treatment were discussed under several heads. Moroseness, irritability, and impulsiveness, when they existed, were, though improved in some cases, frequently less benefited than the other phases of aberration, and, indeed, were occasionally aggravated by morphia. An explanation of this was suggested by attention to the variations in the physiological effects of the alkaloid in different individuals. The action of the particular treatment on nutrition and on the digestive organs was given in outline, and cases were mentioned illustrative of the relief obtained by previously inducing the action of bromide of potassium, in persons in whom gastric derangement, faintness, etc., were apt to follow the administration of opiates. In the last place were mentioned the general conclusions derived from an investigation into the influence exercised by morphia, in certain doses, on the morning and evening pulse and temperature of a number of the patients. The writer admitted that no very striking curative operation could be attributed to the course of morphia prescribed in the twenty cases on which the paper was based; but the physical health was much improved in the aggregate, while the mitigation of distress, and of other phenomena of mental aberration, was not inconsiderable. Females were referred to whose recovery seemed wholly to depend on morphia given in the same way; improvement ceasing again and again when the latter was experimentally omitted, but returning under the revivifying influence of the alkaloid, when its use was resumed.

The Pia Mater as a Coat of the Cerebral Vessels. By J. BATTY TUKE, M.D. (Edinburgh).—Dr. Tuke illustrated his paper by a series of microscopic preparations, in which he expressed his opinion that the so called hyaline membrane on the arteries of the brain is really the normal sheath of the vessel thickened by disease. He alluded to the statement of Rindfleisch that the cerebral arteries do not enter naked, and showed specimens in which he believed he could trace a thickened pia mater gradually fining off into a purely hyaline membrane as it penetrated the deeper portion of the brain. He also exhibited specimens in which a distinct membrane could be traced apart from the vessels, lying in vascular tracts from which the other coats had been removed. With regard to the hyaline membrane of the vessels of the pia mater, he coincided with the opinions of Gull and Sutton as to its existence, but not with their theory of its formation, as he had found it constantly in cases in which no disease of the heart or kidneys existed. He believed it to be due to a thickening and opacity of the pia mater immediately investing the vessels, caused by hyperæmia; that it was brought more prominently into view by the employment of reagents, but that it could be seen without their use; that where it could be demonstrated in the pia mater, it could be traced by careful dissection passing inwards as a sheath; and that it could be more easily found in cases of disease than in healthy subjects. The general tenor of the paper was to indicate the existence of an anatomical sheath of the cerebral arteries, formed by an extension inwards of the tomentum cerebri, supporting the views of Lockhart Clarke and Robin.

Is there such a Disease as Acute Primary Mania? By W. H. O. SANKEY, M.D.—Dr. Sankey criticised the plan generally adopted by writers on insanity, of making some prominent feature arising in the course of a case the chief feature in its description, without regard to what has gone before or what may follow. Examples of this were found in the use of the terms emotional, identical, impulsive, and intellectual insanity; puerperal mania, phthisical mania, etc. He regarded this as an unnecessary departure from the ordinary rules of pathology. Regarding acute mania as a primary disease, he said that in his experience of twenty years he had not been able to find anything agreeing entirely with the descriptions of it. The cases which had come under his notice as alleged instances of acute primary mania were: 1. Cases of general paresis in what the French call the expansive stage; 2. Secondary attacks of recurrent insanity. He concluded by saying that, if it be the fact that no case of insanity commences as mania, the name should be expunged from the list of diseases, and used only as a term for a symptom or series of symptoms; and, if it be true that no primary case commences with violence, the knowledge of the fact becomes highly important in a medico-legal point of view.—The PRESIDENT referred to two cases, in his opinion, of acute primary mania.—Dr. BATTY TUKE (Edinburgh) agreed with Dr. Sankey that there is

* For particulars respecting this prize, the reader is referred to the October number of the *Journal of Mental Science*.

no such disease, but combated his strictures as to Dr. Skae's classification.—Dr. CLOUSTON (Edinburgh) followed with similar arguments.—Dr. ARLIDGE (Newcastle-under-Lyme) maintained the advantage of the old nomenclature, based on the symptoms, and not on the causes, and was of opinion that acute primary mania does exist.—Dr. YELLOWLEES (Bridgend) favoured the causation classification, failing a basis for a pathological one. He instanced a case, in his opinion, of acute primary mania.—Dr. BOYD considered insanity to be merely a functional derangement.

The Delusions of the Insane; their Real Value as a Means of Diagnosis. By J. G. DAVEY, M.D. (Northwoods).—This paper was written to prove that insanity may, and oftentimes does, exist both with and without delusions; that, even in the worse, as in the mildest forms of the disease, the presence or the absence of delusions can matter but little as a means of diagnosis; that delusions in the insane are simply the effects of a pre-existing and abnormal state of the ever active affections. Cases of madness, the author affirmed, are seen of long standing, and, in every sense, confirmed and irremediable; yet, during their whole course, from beginning to end, nothing like delusions appear. It was shown that these views have an important bearing in a medico-legal sense.

Observations concerning Medical Relief and Pauper Lunatics, based on Personal Experience. By ROBERT BOYD, M.D.—Statutory regulations from 43rd Elizabeth to 32nd Victoria were referred to in the paper. The author called attention to the fact that applicants for parochial relief, if insane, may remain for fourteen days in the workhouse, this most valuable time as regards treatment being lost before they are sent to the asylum. As no suitable means, according to modern views, for the treatment of acute cases of insanity, had been provided at the St. Marylebone Infirmary, the guardians applied to the visitors of Hanwell Asylum to have exchanges made of acute cases in the infirmary for harmless and chronic ones in the asylum. In consequence of the refusal of this application, alterations were made, and a licence obtained for ninety-five patients at Marylebone. In reference to this subject, the Metropolitan Commissioners in Lunacy in their Report of 1844 observed: "The professed and main object of a county asylum is, or ought to be, the cure of insanity. The patient who had the benefit of a trial in that asylum, where he has become incurable, should, we submit, give way to the afflicted pauper who is in the workhouse or at home, and is probably curable, and equally entitled to be received into the asylum, where, by prompt and proper treatment, he may be restored to health and to his family, instead of being permitted to remain an incurable lunatic, a source of expense to others, and of suffering to himself." In the last Report (1873), the Commissioners in Lunacy, with regard to the insane in workhouses, stated that "one of the abuses most frequently met with is the undue detention of patients labouring under dangerous or curable forms of insanity, and requiring care and treatment in an asylum." Notwithstanding this condemnation by the highest authorities, recent cases of insanity are still subjected to improper detention in workhouses. By the Lunacy Acts, the reception in workhouses of incurable and chronic cases of insanity was permitted under certain conditions, but, not being compulsory, was seldom acted upon, although in the agricultural districts many workhouses have only had for many years past about a fourth of the occupants they were intended to hold. Meanwhile, guardians and ratepayers were protesting against the large sums required for adding to overcrowded asylums, already too large for proper management; and yet they did not take advantage of the provisions in the Lunacy Acts for utilising the spare room in their workhouses to relieve the asylum. The suggestion had been made of amalgamating such unions. If that were done, some of the workhouses might be vacated, and made at once available as asylums for chronic cases. The most prolific cause of pauperism was sickness. It had been stated that 72 per cent. was due to this cause alone. Mr. Gathorne Hardy estimated it at 50 per cent. when introducing his Bill, after inquiring into the dispensary system in Ireland, where the proportion spent in medical relief was four-and-a-half times greater than the sum spent in England. The efficiency of the Irish system was not only proved by the death-rate being a third smaller, but also by the diminution of pauperism and of poor-rates. The cost of the relief of the poor in England during 1869-70 was 7s., in Scotland 6s., whilst in Ireland it was less than 3s., per head of the population. The Metropolitan Poor Act of 1867 not only provided dispensaries, but hospitals and asylums, for the sick, insane, and other classes of the poor; and those institutions might be used for the purposes or medical instruction, as was formerly the case at the St. Marylebone Infirmary. The medical practice of that institution was formerly recognised by the London University, the Royal Colleges of Physicians and Surgeons, and the Apothecaries' Company. If the Metropolitan Poor Act were extended to the provinces, the Local Government Board having superseded the Poor-law Board, the

sick and insane would be brought under the same control; there would no longer be that conflict of authority which is detrimental to the curable cases of insanity; the sick would be no longer under the inefficient contract system; and poor-rates would thereby be diminished. Practical medical instruction at the bedside of the patient, which could only partially be carried out in hospitals, owing to the large number of students usually attending them, would be very materially increased when the sick and insane asylums were thrown open to students, and, being state institutions, could always be regulated for the interests of students and the benefit of the public.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

TREATMENT OF SALIVATION BY ATROPIN.—Dr. W. Ebstein relates, in the *Berliner Klinische Wochenschrift* for June 23rd, the case of a man aged 68, who had an apoplectic attack, followed by paralysis of the left half of the body and of the muscles of mastication and deglutition. He had also a constant discharge of saliva, amounting to a pint or more in twenty-four hours. Applying the fact ascertained by Heidenhain, that atropin neutralises the influence of the chorda tympani on the salivary secretion, Dr. Ebstein gave it in doses of 0.0015 gramme (about the forty-third of a grain). The result was, that the quantity of saliva discharged was reduced to about one-sixth of the amount above mentioned. After the subcutaneous injection of about one-fourth of a grain of atropin over the submaxillary gland on the paralysed side, the salivation ceased in seven minutes, and did not return for fourteen hours. The same result was produced, but after a longer interval, by injecting solution of atropin into other parts of the body or dropping it on the eye.

APPLICATION OF CHLORAL TO ULCERATING BUBOES.—Professor Gamberini has used a solution of hydrate of chloral (10 parts in 100 of water) as an application to soft chancres and ulcerating buboes. He states that under its use—the application being made twice daily—the granulations soon assume a bright red colour; the sore acquires a healthy appearance; the pus, from being abundant and serous, becomes reduced in quantity and of good quality; and the work of cicatrization goes on satisfactorily. The observations on which he founds his remarks are twenty in number; they appear to indicate the value of chloral hydrate in the treatment of slightly atonic sores with abundant suppuration, but there is nothing to show that the intensity of the syphilitic poison is diminished by its use.—*Giornale Italiano delle Malattie Veneree*, April; *L'Imparziale*, August 1st.

GALVANISM IN DIABETES.—A diabetic patient aged 44, under the care of Dr. E. Bischoff (*Arzt. Intelligenzblatt*, 23, 1873, and *Wiener Medizin. Wochenschrift*, August 2nd), had for thirty-two days discharged on an average daily 2,885 grammes of urine and 24.6 grammes of sugar. In consequence of intercurrent occipital neuralgia, galvanism was applied to the neck. The negative electrode was applied high on the neck, and the positive between the angle of the lower jaw and the mastoid process, then over the supraspinous fossa; and again, the positive pole being retained in the latter position, the negative pole was drawn twelve or fourteen times over the course of the occipital nerve and the cervical spinous processes; finally, the negative pole was applied alternately in the right and left supraclavicular fossæ, and the positive in the epigastrium and over the liver. This treatment was continued, the application in each place being made for one or two minutes daily, for thirty-two days. The daily quantity of urine became reduced to 2,056 grammes, and that of sugar to 11.69 grammes. Two months after the galvanism had been left off, an examination of the urine for fourteen days showed that the quantity discharged daily had risen to 2,488 grammes, and that of sugar to 19.87 grammes. On the death of the patient a year and a half afterwards, there was found to be chronic disease of the vessels in the floor of the fourth ventricle and the neighbouring parts of the brain.

THE ELECTROLYTIC TREATMENT OF MALIGNANT TUMOURS.—Dr. W. Neftel (*Virchow's Archiv*, vol. lvii, part 2) uses a Siemens's battery in the electrolytic treatment of tumours. In moderately large, hard, and slowly growing tumours, two to four needles are inserted at equal distances into the growth, and are connected with the negative pole, while the positive pole is applied on the skin at some distance. The current is at first weak, and then is quickly increased to thirty-five or forty elements; it is allowed to act at this strength for twenty or thirty

minutes, the position of the anode being frequently changed, so that a circle is gradually described around the tumour. The current is then gradually weakened. The application is made every third or fourth day under anaesthesia, the parts of the tumour to which the needles are applied not being the same on each occasion. Generally, four such applications are sufficient; but, to complete the cure, the application for a time of a weaker current (four to eight elements) is necessary. The plate of the cathode is laid on the tumour, and retained there from a quarter to half an hour. This application is not painful, and must be continued for some time after the disappearance of the tumour, in order to prevent the return of the disease. In some cases, a clear inodorous alkaline fluid escapes from the needle-punctures after the tumour has become softened. This, according to Neftel, indicates gradual softening and absorption. In very large ulcerated medullary tumours, Dr. Neftel inserts an anode needle into the centre, and four cathode needles close together under the base, changing the position of the latter every twenty minutes, until the whole tumour is undermined. After a week or ten days, it sloughs off; and the weak current is then applied as above described.—*Wiener Medizinische Wochenschrift*, September 6th.

DISEASES OF WOMEN.

VESICO-VAGINAL FISTULA COMPLICATED WITH CALCULUS.—Dr. Alves Branco relates in the *Correio Medico de Lisboa* for July 1st the case of a woman aged 25, who came under his care in the S. José Hospital on account of vesico-vaginal fistula, the result of injury in her first labour four months previously. The opening, which would, when first formed, admit the index and middle fingers, became reduced in diameter in four months to a centimeter (.39 inch). She now complained of severe pain in the hypogastrium; and, a month afterwards, of heat and pain in the bladder, aggravated by the act of micturition. On passing a sound through the fistula, a calculus was detected. Dr. Branco made two attempts, with an interval of a week, to perform lithotomy; but failed, in consequence of the impossibility of keeping the bladder full of water, and of the extreme irritability of the organ. He therefore enlarged the fistulous opening on both sides by means of a probe-pointed bistoury, and removed a calculus as large as a nut. A month later, he united the edges of the fistula by silver wire sutures. The patient was discharged cured.

REPORTS AND ANALYSES

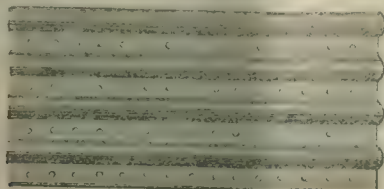
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

WATERPROOF SPLINT PAD.

THESE India-rubber sheets consist of parallel lines of tubing, arranged at a distance of three-eighths of an inch apart; the intermediate flutings are perforated by punched apertures equidistant five-eighths of an inch from each other, so that equable pressure may be maintained on the splint without interfering with natural discharges. These sheets are very grateful to patients; they may be cut to any required size, and are always clean and ready for use. Solidity can be readily given to the pad by inserting in the parallel tubes soft metal wires or common canes;



PATENT No 2516.

ARNOLD & SONS LONDON

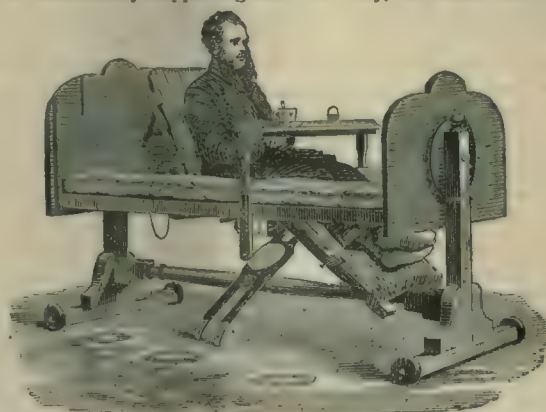


a glue or starched bandage, or caoutchouc band, should then be superimposed. Such an arrangement is well adapted for the treatment of fractures of the lower extremities in children. I have used this pad for the last two months in the wards of the Westminster Hospital, and am much pleased with its advantages. The diagram represents the sheet

laid flat, and the lower line shows a section. Messrs. Arnold and Son of Smithfield are the sole manufacturers. The estimated cost of the pad is 12s. 6d. per lb. RICHARD DAVY, F.R.C.S.

BALL'S REVOLVING OR NON-REVOLVING INVALID BED OR COUCH.

THIS bed, devised by Dr. Ball of Spalding, consists essentially of a larger or dorsal, and a smaller or facial, mattress with frame, and an intervening reversible side-rest, bolted to a head- and foot-board, which work on two pivots, fixed in two perpendicular supports, so that the patient can be completely revolved either horizontally or (if preferred) vertically upon the face, so as to lie comfortably upon the facial mattress. By a simple contrivance, he can be retained at any angle and on either side, with a view of removing pressure from a threatened bed-sore. While the invalid is lying thus upon the face, the larger dorsal mattress, with its frame, can be easily revolved, either partly or completely, off the invalid, in order to enable the surgeon to dress a bed-sore, whilst the nurse is at the same time changing the patient's linen. There is also a simple contrivance by which the head can be comfortably elevated while lying upon the face; and a small short pad slides or pulls out on either side of this narrower facial mattress, for the purpose of comfortably supporting one arm only, the other arm being



already at rest. The face-mattress has two holes in it—one to receive the face, the other for the toes: it is also furnished with an amber-coloured looking-glass and reading-desk. The intervening side-rest is reversible, and secures the invalid between the mattresses while being revolved; it also forms the back for the couch when required. The larger or spinal mattress consists chiefly of three parts—1. Bed-chair, which is lifted out of it; 2. A trap-door, which either falls down, so that the legs will gently drop through, and with the aid of the bed-chair allow the invalid to be placed in the sitting posture, as represented in the engraving; or the trap-door may be elevated to form a gout-stool. The intervening or central waterproof part contains an opening for the reception of a deodorising bed-pan, which is lifted up to the invalid from beneath the bed, and thus avoids any movement of the patient whatever. When the pan is not required, a spring cushion or mattress is substituted. Where bed-sores usually form upon the back, a long narrow movable mattress is employed, and can be removed altogether, or a water- or air-cushion substituted if desired. On each side of the spinal mattress a tea-table can be attached, and converted into a reading-desk when wished. A rocking movement can, when desired, be imparted to the same by a cord, which can be pulled by a feeble invalid. The facility by which an invalid, either very feeble or in great pain, can be undressed and dressed, is one of the best parts of this ingenious contrivance, and is accomplished by dividing the night-dress into an anterior and a posterior half, so that one half can be applied first, after which the invalid is easily revolved, in order that the other half may then be applied, and the two sides secured together by soft strings, or some such contrivance.

In addition to this, there is attached an inhaling apparatus, by which eau de Cologne, sal volatile, chloroform, ether, medicated pastiles, or fuming vapours, etc., may be inhaled through a flexible tube without disturbing the invalid. The whole is mounted on wheels covered with India-rubber, and provided with sliding handles. The apparatus is so constructed that a single person, or even a strong boy or girl, can revolve, dress, or undress the patient, attend to the bed-sores, etc., and return the invalid to his usual or any other position without additional help.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W. C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 11TH, 1873.

MEDICAL ANSWERS TO LAY CORRESPONDENTS.

The author or editor of the medical column in the *English Mechanic* replies to our observations of last week, in a letter which we publish in another column with a reluctance wholly due to consideration for its author. It will be read, we believe, with very general surprise and very great pain. It is possible to have clear and plausible grounds for mistaken proceedings; and it is customary, when gentlemen entertain views dissimilar from those of their peers, to express them in the language of propriety and of moderation. Whatever might be thought of the course of proceeding which Dr. W. H. Stone adopted, every one would have expected that, if it became necessary for him to justify it in the eyes of his astonished brethren, he would do so in language not unworthy of himself or of his profession. Those, however, who look to the text of the letter in which he appeals to our readers to-day, will be as grievously disappointed and as justly indignant at the manner as at the matter of the letter. In defying the rules and traditions of his calling, he can find no better form of words to describe his position than by declaring himself a member of a "clique" whose rules he declines to follow, and as at odds with the views which we last week expressed, on the ground that this is "the recognised organ of a large trades-union".

A physician who describes the Fellows of the Royal College of Physicians and the staff of St. Thomas's Hospital as a clique, and the British Medical Association as a trades-union, takes very bold ground, and may fairly be expected to illustrate his thesis by some singular evidence of his own disinterestedness and self-devotion, and to support it by clear and well developed argument. It does not, we think, well become any physician to remain a member of a clique whose rules he defies, or of a body whose principles he repudiates. It was inexplicable that Dr. Stone should appear in all the full glory of his titles as Fellow of the Royal College of Physicians and Senior Assistant Physician of St. Thomas's Hospital, as editor of the medical answers to correspondents of the *English Mechanic*, before his present explanation was given. It is still less comprehensible, now that his explanation has appeared; for it was possible before to presume the existence of some, to his mind overwhelmingly strong, ground of action, which might be considered conclusive, against the obvious objections to his proceeding. We can gather no such justification from the text of his letter, so far as it is possible to understand it. In reply to a leader which he characterises—with truth, we hope—as courteous, he answers by an intemperate and coarse defiance of the unknown professional multitude for whom he cares not an iota, and of the particular professional "clique" to which he belongs. We are not quite sure what this clique may be; but we interpret the phrase to mean the body of the Fellows of the College of Physicians and the staff of St. Thomas's Hospital. These are the cliques whose titles he weekly associates with his name at the head of his answers to correspondents in the weekly journal of mechanics which he favours with his professional advice, and we know of no other clique to which he can refer. Little, however, as Dr. Stone may care for the opinion

either of "the jealous profession" or of "the unknown multitude for whom he cares not an iota", or of the "trades-union" known as the British Medical Association, on behalf of which he considers that we are bound to express mercantile views, there are still some persons, not clearly indicated, to whom Dr. W. H. Stone desires, or rather consents, to offer some sort of explanation. He speaks of it as a correction of facts; but, on the face of his letter, it is rather a declaration of principle. We have not at any time seen the first number of the *English Mechanic* in which Dr. Stone's intentions were explained to his lay readers, but we interpreted the number actually forwarded to us in the plain and evident sense of his words. It is a twopenny weekly paper, having, we believe an excellent reputation as a journal of mechanics; and in its medical column, edited by Dr. W. H. Stone, a number of correspondents apply by letter for advice on matters affecting their health, which advice they receive gratis. The advice goes to the extent of ordering medicines; and we are therefore totally at a loss to understand Dr. Stone's intimation that the title of our last article, which is repeated at the head of this, conveyed a vile untruth. Bad language never mended any cause, and we must leave to this gentleman a monopoly of it.

What Dr. Stone is doing, he describes thus:—"The editor of this excellent scientific paper, knowing me as an old correspondent on mechanical subjects, asked me to exercise a general supervision over the medical and semi-medical correspondence, of which he thought a good literary and technical critic was comparatively ignorant. To this I willingly consented, on the understanding that it should be done openly and without remuneration." Why the *English Mechanic*, of all papers, should have a medical and semi-medical correspondence in its columns, whence its warrant, or where its necessity, does not appear. But the fact is, according to Dr. Stone's explanation, that, finding a medical correspondence in a popular weekly paper, and being asked to manage it, he undertook the answers to correspondents on gratis terms, and on condition that his name and titles should be printed at the head of it. Here is no audacious suspicion, but the bare fact, as he that hath eyes may see, and as Dr. Stone explains it. Now, as to his reasons for doing what he describes as a new thing, which induced him to expose himself, not only to the not "uncourteous remarks" to which he now replies, but to the less courteous censures in other quarters which he politely and moderately describes as the "misrepresentations of the nameless paid scribes of a jealous profession;" the reasons which Dr. Stone alleges for contributing a column of medical answers to correspondents to the *English Mechanic* are these.

"I am of opinion that the first advances to a knowledge of the simple routine and process of the medical world are often difficult; that many, from mere ignorance, fall into wrong hands; that still more, by having certain names daily paraded before them in general prints, lose their health, their business, and their lives; nay more, they even diminish the gains of the medical man, of which you are so zealous a guardian, by expending them on quacks! There is a charmed line around our profession, which, by habit, seems nothing to us; but which is very real to those outside. The usual go-betweens being interested and unlearned, there is need of one or more, who, being above suspicion, may give the merest rudiments of advice, such as we, in our esoteric conceit, term 'vague,' but which prevent initial and fatal errors. Of this fact, also, you seem to have a dreamy cognisance."

Dr. Stone avowedly writes this to remove our astonishment at this "new thing" which he is doing. We are fain to confess that he has added to it. We read with some astonishment in the first part of the explanation, that the editor of the *English Mechanic* was comparatively ignorant of his medical and semi-medical correspondence, and that Dr. Stone described himself as undertaking to supervise it. But we conclude that the plain English was, not that the editor was ignorant of the correspondence, but that he could not prepare the answers to it, and that Dr. Stone undertook to do so. We do not see why he should consider it a merit, and make it a condition, that he should do, without remuneration, work for which the editor is paid, and which presumably

increases the circulation and returns of the journal. But Dr. Stone's general justification remains to us as mysterious as we believe it will be to the members of the "clique" who will read it and to the "jealous profession", and, we believe we may add, the intelligent public at large.

Taking his reasons categorically, his first is to facilitate the advances of non-medical persons to a knowledge of "the simple routine and process of the medical world." But the simple routine and process of the medical world is, that a person who needs medical advice should be personally examined and questioned by a medical man, and receive advice based upon such examination; if he be a poor person, he can receive it gratuitously; and we are afraid to say, from memory, how many million persons annually avail themselves of that privilege in this country. We altogether fail to see, therefore, how a hospital physician facilitates the adoption of this routine by an act which most persons would be more disposed to look upon as a directly mischievous and public departure from it.

His next reason is that, by having certain names paraded before them, many fall into the hands of the quacks. It would be an obvious, but we believe it would be a quite unjustly significant, retort, if one of the "nameless scribes of a jealous profession" were to point out that the name, which is here weekly paraded in opposition to the quacks, is that of Dr. W. H. Stone, Fellow and Physician, etc. Dr. Stone's style of controversy, and his statement of reasons, alike invite the remark; but we hold sincerely to the belief that he is merely wrongheaded in the matter, and is entirely free from self-seeking. That does but make his course the more dangerous, since by consecrating, by purity of motive, an evil and dangerous course, he makes it the more easy for others of far different character and intentions to use, for the worst purposes, the forbidden weapon which is forged ready to their hand; and of which, from his example, they might plead that the use is lawful. In point of fact, Dr. Stone's plea goes for just nothing. It only implies that the editor of the *English Mechanic* should advise his readers to avoid quacks and shun advertising doctors; and that he is perfectly well able to do, without retaining for the purpose the services of a hospital physician whose name is weekly advertised at the head of the column—much, we should imagine, to the confusion of those "outside the charmed line of our profession," who must find it difficult to draw nice distinctions in the matter of advertising.

Dr. Stone's final reason is, that there is a charmed line round our profession, and that "there is need of one or more go-betweens" who shall give the rudiments of advice, "such as we, in our esoteric conceit, term 'vague'." Now, it is much easier to assert than to prove the necessity for such "go-betweens". The only "go-between" a patient seeking gratuitous advice and his physician of whom we can see the necessity, is the hospital porter or the officer of the Charity Organisation Society; at any rate, we do not see how the physician can properly be his own "go-between": if commenced from pure philanthropy, such a system may easily degenerate into mere touting. Nor can we conceive that, if a patient require quinine or iron, it helps the matter much for the physician go-between to order "two or three grains of some preparation" which, in our esoteric conceit, we term a vague and harmful mode of prescribing.

More trashy reasons were surely never adduced by any man than those which Dr. Stone alleges with so much vehemence of manner in defence of his new thing. After all, however, he must be aware that a medical column in a popular paper is no new thing, but a very old thing, and one very universally condemned and repudiated by the respectable part of the profession, not only in this country but all over the world. The argument *quod ab omnibus, quod ubique*, is always of no small cogency; when it is met by suggestions so empty as those put forward by this physician, it is irresistible. Dr. Stone describes the profession as jealous—"as *Cæsar's wife*", is the answer. The imputation which he throws out, that the course which he is pursuing is for-

bidden to respectable physicians only because it hurts the mercantile interests of the profession, is coarse, and contrary to the facts. It is calumnious of a profession which gives a larger amount of gratuitous service to the people and to the State than do any or all others, and to a college which bids its Fellows to regard their fee always as an honorarium, and prohibits them from recovering fees by process of law.

The practice of inserting a "medical column" in a popular paper, and of giving medical advice to lay correspondents through such a column, is forbidden by the sentiment of the profession; because much more efficient means of seeking and giving gratuitous advice exist in abundance; because such a practice affords no means of sifting deserving from undeserving applicants; and because so insufficient and imperfect a means of communication can give no sufficient information, and tends to degrade the relations of doctor and patient, to supply the patient with very imperfect assistance in his difficulties, and to bring the medical art into contempt. This is so in any hands; and hence the proceeding is a forbidden one. It is well that it is forbidden, for it is open to the most serious abuse.

There must be some opinions which Dr. Stone respects, much as he may depise those of a jealous profession generally. We beg him to take the advice of his most judicious friends. We shall be surprised indeed, if he find one who will not tell him that he has altogether failed to justify the course which he defends, or who will not advise him frankly to acknowledge an error of judgment and to desist from it. In the position which he now assumes in respect to it, further discussion would clearly become necessary in the bodies to which he belongs, and this must be serious in its consequences. Frankly, we should much regret it. Dr. Stone is a physician of culture, capacity, and excellent antecedents, notwithstanding the unfortunate display which he makes to-day; it would be deplorable that he should persist in so false a course as this on which he has entered. With the strong preconceptions and the irritable impatience of criticism which he manifests, we can hardly hope to have convinced him; but in any case we may beg him to take wise counsel from his senior colleagues in the profession, and to be guided by it. Let him consult his senior colleagues in St. Thomas's Hospital, or the President and Censors of the College of Physicians, and abide by their advice. We shall be surprised if they do not advise him to retrace an unwise course, and to express regret for the most unseemly language in which he has expressed his feeble defiance of professional opinion.

ALBUMINOUS EXPECTORATION.

II.

LET us pass on to the opinions enunciated by MM. Woillez and Marrotte, and see if *traumatic perforation* can give the key to albuminous expectoration as a result of thoracentesis. Woillez, in his *Traité des Malades Aigues des Organes Respiratoires*, pronounces the opinion that puncture of the lung in thoracentesis is more common than is usually supposed. At the meeting of the Société Médicale des Hôpitaux on June 28th, he dwelt upon the fact of recent puncture of the chest; on the physical and chemical similarity of the fluid extracted from the pleura to that expectorated; on the issue of a small quantity of blood by the cannula; and, above all, on the presence of blood in the earlier portions of the expectorated liquid; finally, on the issue of bubbles of air through the cannula during the course of the operation. He attributed the mischief to the operation itself, consisting as it does in plunging a sharp instrument more or less roughly and directly into the chest, without knowing, says M. Woillez, whether the lung be floating or not in the liquid, and whether it do not advance to meet the point of the instrument; and likewise not knowing if some local adhesion do not retain it within reach of this point. M. Woillez considers one of the best proofs of the lesion of the lung by the trocar to be more or less rapid expectoration, after puncture, of a fluid resembling that extracted from the pleura; and, amongst the outward characteristics, he cites one having a particular value in his eyes—namely, that the expectorated fluid may be sanguineous. In

the cases under consideration, however, not one of the true signs of perforation was noted; neither issue of blood through the cannula, nor passage of air from the bronchial tubes into the pleural cavity by pneumothorax, is spoken of. MM. Marrotte and Woillez have never demonstrated any perforation, nor has any ever been found on necropsy. It is, besides, as pointed out by M. Hérard at the meeting of July 11th, 1873, necessary to know if effusions followed by sero-albuminous expectoration were small effusions, and if the lung may have been injured during the operation. But, in M. Terrillon's twenty cases, in three only from one hundred to fifteen hundred grammes of fluid were removed; whilst in the others the amount rose from two thousand to five thousand five hundred grammes. Therefore, in the majority of cases, the lung was removed from the thoracic wall, driven back to the vertebral column, and thus sheltered from the point of the trocar. M. Béhier points out, in his lecture on June 13th, that it is an incontestable fact that, if the albuminous expectoration arose from perforation, it would not take an hour to come on; it would be as immediate and instantaneous as the injury itself, as in Boule's case already mentioned. In that case, the lung would have been wounded four times in succession, notwithstanding that every precaution against such an accident was taken. It is evident that this cannot be the fact, and consequently perforation of the lung by the trocar may be put aside.

We now come to the third explanation—*The passage of the pleural liquid into the pulmonary vesicles, and thence into the bronchial tubes.* This will not detain us long, for it is acknowledged to be impossible; it is contradicted by the anatomy of the lung, and by the physiology of combined absorption and circulation, which teach us, as M. Terrillon says, that the fluid passes into the vessels and is carried into the general circulation. Why, then, should not the pleural liquid be submitted to this physiological law? Besides, in bringing forward this explanation, the fact that the pleura loses its absorbent properties when it is inflamed and becomes covered with false membranes, is entirely lost sight of.

We now come to the fourth explanation, enunciated by M. Pinault in 1858, and repeated with much clearness and force by M. Hérard in 1872; *the transudation of the sero-albuminous liquid through the alveolar walls* by means of rapid pulmonary congestion with pulmonary oedema. This is based on sound physiology and on pathological phenomena, and is upheld by the majority of physicians, MM. Hérard, Moutard-Martin, Béhier, Dujardin-Beaumetz, Brouardel, and others, and is demonstrated by clinical observation and necroscopic examination. Physiology explains this transudation as follows. Section of the pneumogastric nerves brings on a frothy effusion in the bronchi and a sanguineous engorgement of the pulmonary tissue. One of the two products of secretion is nothing but bronchial mucus; the other, which is most abundant, is serous matter. M. Jaccoud, touching on the oedema of congestion, in his *Elements of Internal Pathology*, says, "constituted by a serous exudation in the walls and on the free surface of the alveoli, oedema is the constant and necessary consequence of all pulmonary congestion of a certain standing." M. Charles Robin, in his *Traité des Humeurs*, acknowledges that the capillary network of the surface of the alveoli may, under the influence of either temporary or permanent congestion, allow a certain amount of fluid quite distinct from the bronchial mucus to exude. M. Moutard-Martin grapples with the question in a very clear and decided way. "You cannot," he remarks, "clinically establish your so-called pulmonary perforation, while, on our part, we do clinically establish the sero-sanguineous congestion of the lung, by the presence of slight dulness and subcrepitant râles, of pulmonary oedema and hæmoptysis." That it may be proved after death, is shown in M. Gombault's case reported by Terrillon. In the explanation of this transudation, it is easy to understand that, when a lung has been compressed for a certain time, when it has been excluded from the air, that natural excitant, penetrating rather suddenly into the pulmonary vesicles, would produce irritation of the mucous membrane, and an excitement of the vessels which, in a very short time, would be followed by paralysis, of which the inevitable consequence is passive congestion with oedema. If we add to this the

destruction of the epithelium, which clothes the alveoli and strengthens the walls of the capillaries, the probability of MM. Hérard's and Moutard-Martin's explanation will be much increased.

In certain cases of albuminous nephritis, the desquamative congestion at the commencement allows the capillaries of the kidney to let the albumen escape into the tubules and mix with the urine; here the modified alveolar mucous membrane readily allows the albuminous serosity to filter through. Further evidence of the rapid congestion of pulmonary oedema, and of the expectoration resulting from this oedema, may be found in the analysis of the two fluids. The very complete researches of M. Dujardin-Beaumetz show that these fluids have a very distinctly marked difference of character. He says, "while both fluids [contain urea, mucine, and albumen, the expectorated fluid only contains 1 part in 1000 of albumen; the other, on the contrary, contains from 66 to 88 parts in 1000. This difference in the analysis," says M. Dujardin-Beaumetz, "includes, in our opinion, the difference in the origin; and we can now affirm that the expectoration is exclusively derived from the bronchial mucus."

Further, in favour of the theory of pulmonary congestion, as an etiological condition of the accident in question, the different cases of albuminous expectoration after thoracentesis, observed by M. Louis Lande, Professor in the Bordeaux School of Medicine, must be recorded. He proves the non-identity of the two fluids in a decisive manner, by citing the cases of Dr. Musson and Dr. H. Gintrac, in which the phenomenon came on after thoracentesis, performed for purulent effusion. To this may be added the conclusive proof given by MM. Revillout, Jalabert, Renan, etc. M. Revillout has applied himself specially to this subject; and the series of investigations which he has published in the *Gazette des Hôpitaux* for June and July are calculated to throw much light on this interesting problem. They are on very simple cases, attacks of albuminous expectoration not only arising without any thoracentesis, but even without the presence of any pleurisy.

In a series of clinical records, M. Revillout has accumulated a progressively significant number of cases, which, from their great theoretical and practical interest, deserve to attract the attention of physicians. In one of them, an old man, subject to attacks of asthma, did not at the time suffer, nor had ever suffered, from pleurisy. On two occasions he was seized with alarming crises, characterised by a cough, which at each expiratory movement brought up a mouthful of albuminous fluid tinged with blood, with which the patient soon filled a large basin.

In a similar case, M. Jalabert of Carcassonne, rejecting all idea of a pleural origin for the fluid, especially as the patient was subject to similar attacks from time to time, which were completely relieved by bleeding, did not hesitate to diagnose pulmonary congestion with excessive bronchial secretion, and combatted the attack by agents capable of exciting the contractility of the small vessels, such as ergotine and syrup of belladonna.

These cases, M. Revillout remarks, lead us to form more just notions of acute pulmonary oedema. Similar cases have also been described by Robert Bree and Laennec. These accidents are not brought on by asthma only; for Dr. Renan of Saumur gives a report of a similar case, which might perhaps be considered as a manifestation of paludal infection. It is, then, to the fourth explanation of the phenomena of albuminous expectoration that the balance of evidence inclines. The subject is one of great clinical interest, and deserves the attention of medical observers, with a view to the definitive solution of the question at issue.

DR. BOLL, private teacher and assistant in the physiological laboratory of Berlin, has been appointed Professor of Comparative Anatomy and Physiology in the University of Rome.

INFANTICIDE has become so prevalent in New South Wales, that a movement has been originated with the view of establishing a foundling hospital.

DR. JULIUS HESSEL of Kreuznach, and Dr. Carl Faber of Freudenstadt in Wurtemberg, have been appointed Resident Medical Officers to the German Hospital at Dalston, in place of Dr. Frederick Adolphus Nieden and Dr. Paul Schliep, who return to Germany.

THE SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of the Sheffield Medico-Chirurgical Society was held at the School of Medicine on October 2nd. Dr. Hardwicke of Rotherham was elected President; Mr. H. J. Walker, Treasurer; Dr. Frank Smith and Dr. Young, Members of Committee; Mr. A. Hallam and Mr. A. Jackson, Secretaries. The Society consists of seventy members, and several gentlemen were nominated to be balloted for at the next meeting.

ADELAIDE UNIVERSITY.

It is stated by the *Australian and New Zealand Gazette*, that the Government has signified its willingness to grant a site for the proposed Adelaide university; to give £10,000 towards the cost of its erection, provided an equal amount is raised by private subscription; and to provide an annual grant equal to 5 per cent. on other subscriptions.

THE CHOLERA IN PARIS.

ACCORDING to the returns laid before the Academy of Medicine by M. Delpech, the number of deaths from cholera in Paris during the week ending September 29th was 66, being 37 less than in the preceding week. Of the 66 deaths, 30 occurred at the patients' homes, 2 in the military hospitals, and 34 in the civil hospitals. The number of cholera-patients admitted into hospital during the week was 63. M. Brouardel has recently laid before the Société Médicale des Hôpitaux a statistical comparison of the epidemics of 1853, 1865, and 1873. From September 5th to 25th, 1873, 318 deaths were reported; while from November 7th to December 1st, 1853, there were only 154; and 245 from September 1st to October 18th, 1865. In these two epidemics, the mortality did not reach a high figure until the second month: in December 1853, the deaths were 568; and in October 1865, 4,536. In comparing the numbers of deaths in the first three weeks of the epidemics of 1865 and 1873, the following results are obtained: first week in 1865, 39 deaths; 1873, 95 deaths: second week, 1865, 34 deaths; 1873, 147 deaths: third week, 1865, 34 deaths; 1873, 76 deaths. It is to be observed that in 1865 the death-rate did not diminish sensibly as it has done in the present epidemic; nevertheless, it is to be remembered that in 1853-54 the number of deaths, after falling to 3 in February, rose to 101 in March 1854, 1,023 in June, and 3,610 in August.

HOSPITAL ABUSES.

THE circumstances of the in- and out-patients applying at the Queen's Hospital, Birmingham, has been investigated by an officer of the Charity Organisation Society at the instance of a Committee of the Hospital. The result has been to show so large a proportion of imposition on the charity of the subscribers and the resources of the hospital, that a Subcommittee appointed to report, strongly urge that such inquiries shall be continuously maintained with a view to check abuse. We have repeatedly urged that a similar check upon abuse of public charity should be instituted at all our metropolitan hospitals; and examples have been furnished from time to time in our columns during some years which leave no reason to doubt that such an inquiry is no less called for, and would have no less salutary results in London than in Birmingham hospitals.

HABITUAL DRUNKARDS BILL FOR NEW SOUTH WALES.

A COPY of an act to be submitted to the Parliament, was laid before a meeting recently held at Sydney, of the Subscribers to the Asylum for Inebriates. It proposes to authorise the duly appointed officers of the institution to detain inebriates for a sufficient period, the measure being based on that passed in Victoria.

METROPOLITAN MAMMALS.

THE cloud which overhangs the milk-trade just now must, we think, be pronounced to be like that which Polonius agreed to be very like a whale. The cetacean habit, inherited from the whale which rescued Jonah, of "taking a little profit out of the water", has been proverbially prevalent amongst milkmen—our metropolitan mammals—long before the rise in prices of provisions; and, notwithstanding that rise in prices, the few large companies and honest dealers who have of late years and up to this date been in the habit of providing pure milk at the rate of 4d. a quart have been able to realise very fair and even handsome profits, and we believe are still able to do so. The retailer of milk purchases it pure, delivered at the railway stations, at the rate of seventeen pence per gallon of eight quarts. This allows him the very large margin of nearly fifty per cent. for expenses of distribution and profit, if he retail it at the rate of 4d. per quart. Thus, at present prices, large distributors are able to realise handsome profits; if small tradesmen seek a yet larger profit by adulteration or by raising the price, it is because the milk-trade is still an example of excessive multiplication of middle men, and excessive additions to prime cost to enable them to earn a living. Where a very limited trade exists, a large-profit must be made to furnish an income to the tradesman. The moral is, that consumers should resist any addition to the present price of milk, and that medical officers of health should continue to see that the Adulteration Act is persistently enforced. The result may be that the milk-trade will fall into fewer hands, and the distribution of milk will be arranged generally on a large, well organised, and economical system. There is no reason why we should be unduly mulcted to suit the purposes of a crowd of small middle men, who have hitherto gained a doubtfully honest living by adulterating one of the first necessities of life.

SWIMMING-BATHS ON HAMPSTEAD HEATH.

THE dismal hollow on Hampstead Heath known as the "Vale of Health" affords, as a rule, several occasions annually for coroners' inquests on drowned boys. The filthy and dangerous pond, ten feet deep in the "Vale", appears to offer unusual opportunities for stickleback fishing, and it is accordingly much resorted to by the London boys, who in due course become immersed and drowned. In the last case of the kind, which occurred a short time ago, the body was allowed to remain for eight days in the water before being removed, it not having, strange to say, previously occurred to the police that the missing boy might possibly have met his death in the usual place. It is difficult to know how long the police or Metropolitan Board of Works may allow this dangerous and insanitary pond to exist in its present state; but we hope that the admirable suggestion made by Dr. Lankester at the last inquest may be seriously taken into consideration by the Board of Works. He proposed, and a resolution approving of the suggestion was unanimously adopted by the jury, that the site of this pond, and perhaps others of the Hampstead ponds, should be converted into swimming-baths, supplied with wholesome water, for the north of London, which is sadly deficient in anything of the kind for the working classes. How this should be done, whether by a metropolitan rate or by private enterprise, is immaterial, provided the authorities can be prevailed upon to sanction the scheme and move actively in the matter.

SALFORD HOSPITAL SOCIETY.

THE annual dinner of this society was held on Thursday, October 2nd, at the Cattle Market Hotel, Salford, when about twenty gentlemen were present. Mr. A. W. Stocks presided during the earlier part of the evening in the absence of Dr. Crompton, who joined the party later, and took the chair. Mr. H. J. Heywood acted as vice-chairman. After dinner, some discussion arose as to the propriety of changing the hours of meeting, many gentlemen being fully occupied in the evening. It was ultimately resolved that, in future, the meetings should be held on the first Tuesday of every month, at half-past four in the afternoon. The next meeting will be held on Tuesday, November 4th.

SWIMMING-BATHS ON THE THAMES.

THE metropolitan Board of Works have sanctioned a proposal by the Floating Swimming Bath Company, to place a swimming-bath on the river, on the west side of Charing Cross. One of the landing-stages at Charing Cross Bridge is not used for public traffic, and it is proposed to place the bath at this part of the river. Dirty water is a comparative term, and probably there are many persons in the metropolis who are indifferent to the condition of the water at this part of the river, and will use the bath. Moreover, in a few years, before the general public have been educated to use the baths, the sewage of the river-towns above may be disposed of in some other manner than into our source of water-supply. Impure and ugly looking though the water be at Charing Cross, it is quite capable of cleansing, to some extent at least, the poor population of the metropolis, who are not given to much tubbing. Moreover, opportunity for healthy exercise in acquiring the useful art of swimming is most desirable.

A PORT HOSPITAL FOR LIVERPOOL.

DR. TRENCH, the Medical Officer of Health for Liverpool, recently printed an able report and discusses the important subject of hospital accommodation, on quarantine ground, for the port. He points out that an old man-of-war, used as a hospital ship, would require fixed moorings, at a first cost of £2,000; and would require every second year to be overhauled and examined, at a cost of £250. Moreover, the difficulty and expense of communication between such a hospital and the shore, and the consequent cost of management would be very large. He strongly recommends the establishment of a hospital for first sanitary purposes on the land, bordering on the quarantine area; and he has, in accordance with this recommendation, placed before the committee the plan of a temporary hospital, to be built of iron and wood, as suggested for the purpose by the medical department of the Local Government Board, in a memorandum issued on January 31, 1872.

EARLY MEDICAL PATENTS.

THE first person who introduced patent medical remedies in England, says the *Chemist and Druggist*, was John Dickson, 1620, whose patent is numbered sixteen, and relates to a "certain commodious instrument called a back stall, back frame, or back skreene, for the ease and relieve of such sick persons and others as are, or shall be, distempered or troubled with heate of their backs through continual keeping or lying on their beddes." In 1632, Thomas Grent invents "a moveable hydraulike or chamber wethercall like a cabinet, which being placed in any roome or by a bedside, causeth sweete sleepe to those which either by hott feavers or otherwise cannot take rest, and withall altereth the drye hot ayr into a more moystining and cooleing temper, either with musical sounde or without." In 1726 we find Benjamin Okell describing—

"A new chymicall preparacon and medicine, styled 'Doctor Bate-man's pectoral drops,' stated to moderate sweat and urine, and to be useful in rheumatism, afflictions of the stone, gravel, agues, and hysterie."

In 1742, Michael and Thomas Belton introduce "an oyl extracted from a flinty rock for the cure of rheumatick and other cases." This is one of the few remedies which has weathered the competition of a century. The next year John Hooper brings out his "female pills," which, he says, "are compounded out of the best purging stomatick and antihysterick ingredients," but he does not more definitely specify these. In 1747, Dr. Robert James takes out a patent for his still famous fever powder, and, at the same time, for a pill which has been almost if not completely discarded. The powder, he says,

"Is prepared by calcining antimony by long-continued heat in an unglazed earthen vessel, adding to it from time to time any animal oil and salt. The compound is then boiled in melted nitre, and the powder is subsequently obtained by dissolving the nitre in water."

Nobody else has ever been able to make the powder by this formula, and it is highly probable that Dr. James never did. In 1774, the same

physician ventured on another patent for pills, described as "analeptic pills," and with a fair range of usefulness, including the "lowness of spirits," which is such a fertile source of hope to modern medicine-mongers. These pills contain his own fever powder with pill rufi and gum ammoniacum, the two last having to be dissolved "in a cave underground, furnished with the conductors of electrical fire."

TYPHUS FEVER IN LONDON.

TYPHUS fever, which has been uncomfortably frequent in one or two districts of London for several months, has broken out in a fresh locality, viz., in the vicinity of Drury Lane, and stricken a considerable number of persons. At the weekly meeting of the Metropolitan Asylums Board on Saturday, it was stated, in presenting the report of the Stockwell Fever Asylum, that, of the sixty-three admissions, forty were cases of typhus fever, of which the greater number were received from the parishes of St. Giles's, St. George's Bloomsbury, and St. Olave's Southwark.

EPIDEMIC THYROIDITIS.

A FRENCH local paper reports that M. Girrier, Army Medical Inspector, has been sent by the French Minister of War to St. Etienne, to study an epidemic which has prevailed in the garrison, and to apply prompt and energetic remedies. During nearly three months, the soldiers of the 76th regiment of infantry have been attacked with an inflammation of the thyroid gland. The disease, instead of diminishing in intensity, appears to have assumed within the last few weeks a degree of development which, if not dangerous, is such as to cause anxiety. At the time of the report, there were nearly two hundred soldiers under treatment in hospital. All plans of treatment adopted by the regimental surgeons have been ineffectual. Not one of the men attacked has perfectly recovered; those who were discharged convalescent have returned. Iodide of potassium has produced no appreciable effect. The non-commissioned officers at first escaped, but lately have been attacked. The soldiers of the 96th regiment remained free for a long time; but cases have occurred among them, as well as among the cavalry. While the number of patients has daily increased among the soldiers, not a single similar case has occurred among the civil population in the neighbourhood of the barracks. The cause of this obstinate epidemic is believed to be purely local: The garrisons of Montbrison, Lyons, and other large towns in the neighbourhood, are completely free.

THE ADULTERATION OF TEA.

MR. ALFRED H. ALLEN, in an interesting paper on Detection of the Adulteration of Tea," states that in his capacity as public analyst (under the Adulteration Act) at Sheffield, a considerable number of teas have come under his notice, the majority of the specimens having been brought to him by the tea-dealers themselves as a security against selling tea which, if analysed by him officially, might be condemned as adulterated. From several samples, he has found that some adulterated green teas contained large admixtures of exhausted leaves (dried), strongly coloured by Prussian blue. Inferior green teas were found to be exhausted leaves strongly faced with French chalk and a little Prussian blue. Samples of sloe leaves bore a very close resemblance to genuine green tea in every respect. He examined some specimens of a tea labelled "Rough flavoured, thick, sappy, Mouing Congou, at 2s. per pound, better than you can get elsewhere for 2s. 6d." He found that 95 per cent. of this tea contained foreign and exhausted leaves, intermixed with sulphate of iron; the remaining 5 per cent. consisting of catechu, starch, magnesia, metallic iron, graphite, sand, etc. He finds that genuine green teas are richer in tannin than black teas, in about the proportion of two to three. The infusion of green tea is not nearly so strong in colour as that of black tea, though it is half as strong again in tannin, so that the depth of colour cannot be regarded as a proof of the strength, though so considered generally. If a solution of carbonate of soda be added to a weak infusion of tea (strained away from the leaves), a considerable darkening is observed,

though certainly the infusion can become no stronger. These facts explained why careful housewives have a fancy for putting soda in the tepid, the infusion becoming sensibly darker by the addition, to say nothing of the extra colouring matter extracted from the leaves. Apart from its softening effect on the water (the advantage of which he thinks doubtful), there can be no good reason for its addition.

CHOLERA IN ITALY.

WITH the exception of some scattered cases occurring in Friuli, the cholera seems to have disappeared in the Venetian provinces. The last official report for Venice was issued on September 28th; and, on October 4th, no cases had occurred for several days in Treviso and Padua. In Polesina, the number of cases has been very few; and Vicenza and Verona have remained exceptionally free. There have been a number of fatal cases in Genoa and Naples, and the disease lingers at the gates of Milan and Rome.

ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS.

THE forty-sixth meeting of the Association of German Naturalists and Physicians was held at Wiesbaden on September 17th and following days. The attendance amounted to upwards of a thousand. Among the principal features of the meeting was an address by Professor Virchow on the Natural Sciences in their Relation to the General Education of Man. It was decided that Breslau should be the place of the next meeting.

DEATH FROM THE INHALATION OF ETHER.

WE have this week to make the sad announcement of a death from the inhalation of ether. It occurred at the Royal South Hants Infirmary. We shall be glad of the comment of Dr. Morgan and of our Boston contemporaries.—David Newman, aged 14, a strumous lad, who had suffered from repeated attacks of cornitis, was admitted an in-patient of the above institution on September 25th, 1873, under the care of Dr. Lake. On Wednesday, October 1st, he was brought into the operating room in order that iridectomy might be performed. When on the table he exhibited considerable alarm, and required some persuasion before he was induced to lie down. Dr. Griffin having taken charge of the pulse, half an ounce of ether was poured on a sponge contained in a cone of spongio-piline, and the latter was closely applied to the mouth and nose. After a few minutes' inhalation, the ether being nearly exhausted, three drachms more were poured on the sponge. Shortly after commencing to inhale this second quantity he began to struggle violently, getting at length into a state bordering on opisthotonos, his face becoming intensely scarlet. Dr. Griffin then announced that his pulse, which up to this time had been perfectly natural, had become very feeble. The ether was at once discontinued, when, the pulse having improved, Dr. Lake operated, no more ether being administered. At the close of the operation, which occupied only a few seconds in its performance, and before the eye could be bandaged, the pulse became imperceptible, the breathing was suspended, and the countenance livid. The tongue was drawn well out of the mouth and held there; the calves of the legs were vigorously flagellated, and the chest freely slapped with a wet towel. The effect of these measures was to cause the patient to respire freely, to cry out lustily, and to kick about on the table; but this improvement did not last long—probably about a minute. The pulse at the wrist did not return, and the breathing again stopped. Artificial respiration—at first by Silvester's method, afterwards by Marshall Hall's—was then had recourse to; at the same time an intermitted current of faradic electricity was passed in the course of the phrenic nerve; this at first caused strong periodic contractions of the respiratory muscles; but after about ten minutes or a quarter of an hour these ceased to respond to the current, and it became evident that life was extinct. These measures were, however, still persevered with for about three-quarters of an hour. At the necropsy twenty-one hours afterwards, the brain was found to be healthy, and not much congested. The right cavities of the heart were full of dark fluid blood, but the left cavities contained

only about a drachm of a similar fluid. The valves were healthy. The muscular structure, although somewhat flabby, presented no decided evidence of fatty degeneration. The lungs were congested, and of a somewhat bright red colour. The other organs were healthy.

SOLANUM VULGARE.

THE fiftieth anniversary of the *Lancet* was celebrated on Saturday by a dinner given by the proprietors in the Freemasons' Tavern. The chair was taken by the editor, Dr. J. G. Wakley, who, in the course of an interesting account of the rise and progress of the journal, referred to the reforms which it had contributed to effect, such as the abolition of flogging in the army, the detection of food-adulteration, the abatement of workhouse abuses, and the Medical Act of 1858. Dr. Wakley concluded by paying a becoming tribute to the memory of his father, whose long and successful career as a surgeon, as an editor, as a coroner for Middlesex, and as M.P. for Finsbury, was a practical refutation of the doctrine of division of labour. In this tribute we warmly concur. It may be suggested, however, as a gentle hint for the future, that a journal differs so far from a potato, that it is not desirable that all its merits should be underground. A well known nobleman, remarkable for his ancestral pride, still bears his Eton nickname of "the illustrious potato". But letters are a republic; and a journal cannot live solely on the memories of the past.

HOSPITAL SUNDAY.

IN a report issued from the Lord Mayor and the Executive Committee of the Metropolitan Hospital Sunday Fund, it is stated that the total sum received up to September 4th was £27,700 : 8 : 1. Sermons were preached on behalf of the fund, at nearly 1,100 places of worship, and the collections resulted in the receipt of £25,743 : 1 : 4. The collections at 88 schools amounted to £112 : 11 : 8. Sundry workmen contributed £244 : 7 : 6, and other donations brought in £1,489 : 18 : 8. The total expenditure in carrying out the collection amounted to £750 : 8 : 10. The Committee have awarded £24,571 to 54 general and special hospitals, and £2,185 to 53 dispensaries and other medical charities. It has been determined to hold a meeting on the 22nd of this month in the Egyptian Hall, for the purpose of electing the Council for 1874.

VOLUNTARY MILITARY MEDICAL SERVICE IN AUSTRIA.

AN examination of one hundred and forty candidates for appointments to voluntary service for one year in the Austrian army was held last month in Vienna. The examination lasted nine days; and, according to its results, the candidates, after obtaining the degree of Doctor of Medicine, would be appointed reserve-surgeons with the rank of upper lieutenant, reserve-assistant-surgeons with the rank of lieutenant, or would be attached to reserve regiments without charge. About two-thirds of the candidates were appointed reserve-surgeons, and one-third reserve-assistant-surgeons. The subjects of the examinations were military hygiene, sanitary service in peace and war, hospital duty, organisation of the army, military surgery, military pharmacy, and the duties of an apothecary. The examinations were conducted in the native languages of the candidates—German, Italian, and Slavonian.

M. NÉLATON.

THE remains of this distinguished surgeon were buried at Père-la-Chaise on September 23rd. The ceremony was conducted without pomp, in accordance with his expressed wish; but a large concourse of his professional and public friends and admirers attended the funeral, and military honours were paid to him, as a grand officer of the Legion of Honour, by a battalion of the line. The pall was borne by representatives of learned bodies, viz.: M. Bouillaud, for the Institute; M. Depaul, President of the Academy of Medicine; M. Bouchardat, for the Faculty of Medicine; and M. Bécclard, Vice-President of the Medical Association of the Seine. Among those who attended the funeral was Mr. T. B. Curling, F.R.S., President of the Royal College of Surgeons of England. No discourse was pronounced over the tomb.

SCOTLAND.

A TESTIMONIAL to Dr. Fergusson is being promoted at Leslie, Fifeshire, by the inhabitants, as a token of their regard and gratitude. Dr. Fergusson is compelled to leave the district on account of illness in his family.

WEST OF SCOTLAND CONVALESCENT HOME.

THE annual report of this Home, presented at the meeting of subscribers, at Glasgow, on Monday, is a most favourable one. In consequence of the increasing number of applicants for admission, the directors have commenced the erection of an additional flat, which will hold upwards of thirty-five beds. This will make the total accommodation sufficient for one hundred and fifty persons.

GLASGOW SOUTHERN MEDICAL SOCIETY.

AT the Thirtieth Annual Meeting of this society, held on the 2nd instant, the following office-bearers were elected for session 1873-4. *President*: James Dunlop, M.D. *Vice-President*: John White, M.D. *Treasurer*: Edward McMillan, Esq. *Secretary*: John Dougall, M.D. *Seal-Keeper*: Robert T. Paton, M.D. *Court-Medical*: Eben Duncan, M.D. (convener), Robert W. Forrest, M.D., David Tindal, Esq., William Rice, M.D., J. H. Menzies, M.D.

SCOTCH MORTALITY.

SOME interesting statistics as to the relative rates of mortality at different seasons of the year are culled by a daily paper from particulars given by the Registrar-General for Scotland. The examination was confined to the deaths registered in the ten years 1856-1865 in the eight principal towns of Scotland; but these contain very nearly a third of its population, and the facts they exhibit as to the influence of season are regarded as showing the effect upon Scotland generally. Dividing the year into two equal parts, the mortality as a whole is seen to be greatest in the winter and spring, and least in the summer and autumn; but the most fatal month of the season, and the extent of the influence of the season, vary with age. Equalising the months to thirty-one days for comparison, it is found that the mortality of children under five years of age was least in September and greatest in February, and that the deaths in the ten years ranged from 8,649 in September to 11,165 in February. At the next age taken, from five to twenty years old, there is less variation in the monthly number of deaths than at any other period of life. August was the month of least and February of greatest mortality, and the range was from 1,929 deaths in August to 2,348 in February. Among persons between twenty and sixty years of age, the vigorous period of life, September was the month of least and January the month of greatest fatality, and the range was from 4,724 in September to 7,033 in January. The returns relating to persons above sixty years of age begin to show the baneful effects of cold, the difference between the least fatal month (September) and the most fatal (January) ranging from 2,536 deaths in the former month to no less than 4,337 in the latter. The result of the whole is to show that September is, in Scotland at least, the healthiest month of the year.

IRELAND.

DR. MERRICK AND THE CORK ASYLUM.

DR. ALEXANDER S. MERRICK, the Assistant Medical Officer of the Cork District Lunatic Asylum, having been appointed Resident Medical Superintendent of the Donegal Lunatic Asylum, Letterkenny, the governors of the former, at their last meeting, upon the motion of Sir Thomas Tobin, passed the following resolution. "The well deserved promotion of Dr. A. S. Merrick to the position of Resident Medical Superintendent of the Letterkenny District Lunatic Asylum necessarily deprives this institution of his valuable services. We, the governors, feel we cannot allow his departure from us without recording the high

sense of respect we entertain towards him, the confidence placed in him, and the great satisfaction we always experienced at the manner he discharged his very responsible duties during the period (nearly three years) he was connected with this institution. Many of us have had constant opportunities of observing the attention and regularity he invariably evinced in the working of this large asylum—the largest (except Richmond) in this country—more particularly since the decease of the late resident superintendent, Dr. Power, when the entire responsibility of the efficient management of the asylum devolved on him. His uniform care and kindness to the unfortunate patients entrusted to his charge have invariably met with the cordial approbation of the Board of Governors. The promotion of Dr. A. S. Merrick from this asylum we hail with feelings of pride and pleasure at the well merited recognition of his services by his excellency the Lord-Lieutenant; at the same time we regret losing so valuable, so painstaking, and so efficient an officer; and we feel confident that he carries with him to his new sphere of duty the good opinion and best wishes of this board for his future advancement and welfare in life."

QUEEN'S COLLEGE, CORK.

THE Government have appointed Professor Sullivan, of the Catholic University, to be President of this College in the place of Sir Robert Kane, who resigned. The appointment is one which has caused great uneasiness and discontent, as Professor Sullivan has been long known as the uncompromising enemy of mixed education, and the steady advocate of ultramontane opinions. We had hoped that the Vice-President of the College, Dr. Ryall, who has discharged long and faithfully the duties of his office, would be selected.

IRON HOSPITALS.

THE Local Government Board have lately sent a circular to the guardians of the various unions throughout Ireland, drawing their attention to the fact that, where arrangements are deficient, hospitals composed of iron suitable for the accommodation of twelve patients, fitted with water-closets, washing places, nurses' rooms, etc., can be procured at prices varying from £220 to £250, or for twenty patients for £280. These buildings can be set up and made ready for the occupation of patients in one month; and appear well-fitted for use, should cholera or any other epidemic show itself suddenly in places unprepared with hospital accommodation.

PRESENTATION TO DR. GREEN.

ON September 18th, the friends of Dr. Hugh Green, of Waterford, presented him with an address and testimonial, consisting of a gold chain, valuable clock, and a pair of figures with glass shades, on his resignation as medical officer of the Kilmacthomas Union Infirmary and Fever Hospital, which posts he has held for the past twenty-nine years.

PROMOTION WITHOUT PURCHASE.

TWO surgical vacancies have occurred in the Richmond Hospital, Dublin, owing to the retirement of Messrs. Robert W. Smith and Robert Adams. As the Richmond is one of the best surgical hospitals in Dublin, and as an appointment in it does not require any purchase money, any vacancy is eagerly looked after; and there have been for some time past candidates too numerous to mention hard at work canvassing and trying to get influence to bear on the governors of the hospital, in whose hands the appointments to these posts lie. They have not, it is stated, the vestige of a chance, and they only make an application to ventilate their claims, and without any expectation of succeeding. Mr. Butcher, it is rumoured, will have the refusal of one of these vacancies; whilst the other, it is whispered, is reserved for one who has never been connected with any hospital, but who has the good fortune to possess a certain kind of influence, not exactly political, which it is confidently expected will place him far ahead of the other competitors.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS,

On OCTOBER 1st, 1873.

ST. GEORGE'S HOSPITAL.

THE Introductory Address was delivered by Mr. R. BRUDENELL CARTER, Aural Surgeon to the hospital.

Mr. Carter commenced his address by saying that the utility of introductory addresses had been called in question, and by defending the ancient custom on several grounds. He then discussed medical education in the sense of Paley's definition of education, as comprising every preparation made in our youth for the sequel of our lives. Among these preparations the storing up of knowledge occupied a high place; but the due and harmonious training of the faculties by which knowledge was to be applied was of still greater importance. His hearers would be called upon to attempt the solution of very difficult, because very complicated, problems; and it would avail them little to have filled their memories with learning, unless they had also cultivated the power of observing with accuracy, and the power of judging with discrimination. For the purposes of such cultivation they enjoyed many advantages over the students of preceding generations, especially the great advantage of being required to bring to their work minds exercised and strengthened by liberal education. They must not take it for granted, however, that this liberal education had done all for them, in the way even of preliminary training, that their minds required or could profit by; for much of the school teaching of the present day seemed to be guided by a belief that the introduction of compressed facts would mechanically expand the intellect. He deplored the wide extent of knowledge now demanded from the young at various preliminary examinations, saying that it placed an obstacle, always formidable and often insurmountable, in the way of real education, and could only be attained by a sacrifice of thoroughness, and of some of the chief objects of teaching in respect of everything that was said to be taught. These chief objects were to produce and cultivate a habit of careful attention to the meaning of words, and to accustom the mind to a high standard and to a certain kind of reasoning. He compared the show pupils, who are able to write down marvellous answers to a multiplicity of questions on a multiplicity of subjects, to the wooden cannon known among artillerymen as "quakers." These require for their production, in unlimited numbers, besides the blocks of wood, only a turning-lathe and a paint-brush; and they are placed to deceive an enemy in embassies that would otherwise be vacant. There was, however, one grievous flaw in the analogy; for our English "competition wallahs," instead of being used to deceive an enemy, are used only to deceive ourselves. Unfortunately, our notions of education are still entirely empirical; and, although physiologists are entering upon researches which promise to establish a science of mental culture founded upon a study of the structure and functions of the portions of the nervous centres subservient to the acquirement and the application of knowledge, it would as yet be premature, even if it were possible, to speculate on the results to which these researches may lead. At present, in seeking the best attainable preliminary education for the profession of medicine, we could only use the common means ready to our hands, such as the dead and living languages (especially English), together with mathematics, physical science, and the indirect culture to be obtained from the topics of the day, from the personal tastes, from the floating information of the social and domestic circles.

With regard to all these, the results produced should be of a far higher kind than any superficial or fleeting proficiency in the studies or pursuits themselves. The aim should be to use these studies as agencies for the development of the qualities of mind that would be most useful to the medical student, and that would best qualify him to pursue his allotted path with diligence and with success. These were, first, the power of observation, the power of searching out and recognising facts, so as to obtain materials for the operations of the judgment; secondly, the faculty of imagination, by which to link together the known with the unknown; thirdly, the power of maintaining a suspended judgment whenever certainty was unattainable; fourthly, the love of truth. Under each of these heads he discussed its special bearings, showing the uses of the several faculties, the means by which they might be cultivated

and the errors which might arise from their being absent or deficient. In speaking of the imagination, he observed that its scientific uses were due to the fact that the boundaries of exact knowledge on every subject, whether human knowledge in the aggregate or that of any individual, were separated from the darkness of the unknown by an intermediate region, into which some light had penetrated. This region was the province of the imagination, or, if the phrase were preferred, of disciplined and rational conjecture. Our minds, in relation to it, might be likened to the explorers of a strange country, who were fully acquainted only with those regions that they traversed, but who had also gained such notions, of the belt separating them from the horizon, as enabled them to determine in what directions they would endeavour to make further progress. As soon as we became possessed of certain facts, we called upon the imagination to account for their occurrence, and it furnished us with some suggestion upon the subject. This suggestion was a hypothesis, which might or might not be verified by further inquiry. Its proper use was to determine the direction in which we should pursue that inquiry; and we should be prepared either to adopt or to abandon the hypothesis, according to the results that the inquiry might produce. He had heard of two students who examined the same patient in order to compete for a clinical prize. The first, who possessed great powers of observation, had his imaginative faculty for the moment dormant. He was struck by a very remarkable discoloration upon some portion of the patient's body; and, accepting the presence of this discoloration as an ultimate fact, he carefully described it in his account of the case. He made a drawing of its very irregular outline, and took careful measurements of its principal dimensions. The second student, when he came to the bedside, also saw the discoloration, but he was more imaginative than his predecessor, and his imagination led him to frame the hypothesis that the phenomenon was due to the presence of dirt! He tested the accuracy of this hypothesis by means of a sponge and warm water, and established it by washing the stain away. The incident, although trivial, was not the less instructive, and might well serve to teach the attitude of mind in which we should approach the investigation of disease. With regard to the love of truth, he warned his hearers that truthfulness was not something easy and natural, but that, in fact and in its widest sense, it was one of the last attainments of the disciplined and cultivated intellect. He said that children and the uneducated could no more adhere strictly to truth than ordinary persons could walk upon a tight-rope; and pointed out, even among the educated, the common preponderance of a desire to know what was said over a desire to know what was true. But nothing short of a desire to know what was true could furnish an adequate motive for the careful investigation of disease, or could overcome the temptation of floating easily along the current of the fashionable doctrine of the day.

He then considered the relation of the special departments of practice to the work of the hospital as a whole, telling his hearers that a man who practised any single branch of the profession, without a sound knowledge of the whole, was not a specialist but a charlatan; and that, whatever might be their future aims, they would best qualify themselves for success by becoming general practitioners in the most comprehensive sense, and by leaving differentiation to be accomplished in the future. There was, however, one branch of special study that demanded their closest attention, and that was the study of the varieties of human temperament and character, so that they might learn to use the mind of each patient as an instrument for promoting the recovery of his body. The Apostle said of his own word, "Even as I please all men in all things, not seeking mine own profit, but the profit of many that they may be saved;" and medical men must be actuated by the same spirit if they would heal the infirmities of their brethren.

In the conclusion of his address, the speaker dwelt in terms of pride upon the high character of the profession, and, calling to mind the words of Mr. Prescott Hewett on some former occasion—"It is not enough for a doctor to be honest; he must be chivalrous"—he urged the duty of the medical man to place the gifts with which God had endowed him at the service of suffering humanity. Estimated on a money basis, it was said the profession was "hardly worth following."

"So think the vulgar. Life and time
Ring all their joys in one dull chime—
Of luxury and ease."

For his own part, he believed that there was no enjoyment superior to the systematic and harmonious exercise of the faculties of the mind, no satisfaction greater than was afforded by the fulfilment of duty, and no lives happier than those of the great majority of the profession. If he were asked to define the sources of their happiness, he would call to his aid Charles Dickens, who had placed his story of *Bleak House* in the mouth of a heroine who became a doctor's wife, and who thus concludes her narrative: "We are not rich in the bank, but we have

always prospered, and we have quite enough. I never walk out with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises, or see them in grateful eyes. I never lie down at night but I know that in the course of the day he has alleviated pain and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often, often gone up in the last hour for his patient ministrations. Is not this to be rich?"

QUEEN'S COLLEGE, BIRMINGHAM.

THE Introductory Address was delivered by Mr. JOHN CLAY, Professor of Midwifery.

After offering a welcome to his audience, commenting on the prosperous condition of the college as a school of medicine, and giving some advice to the new students, the lecturer proceeded to speak of Public Health—the agencies at work in relation to it, their operations, and their probable results. He defined public health as the science which has for its object the study of the laws of health, with a view to applying the knowledge thus obtained to the prevention of disease. After giving a view of the elementary doctrines of the science,—in the course of which he referred to a former pupil of the college, Mr. Postgate, as the deviser of the Adulteration Act—Mr. Clay pointed out the interest of the subject to the public, the profession, and to the students. Referring to its history he said: "The history of public health legislation, taken in connection with recent agencies at work for promoting health, is a most interesting and instructive study. The common law of England in the early periods of our history provided but very scantily in regard to the sanitary arrangements for the scattered population then existing. It was in 1388, in the reign of Richard II, that we find the first instance of special legislation on a sanitary subject. That act imposed a penalty of £20 (nearly equivalent to £60 at the present day) upon persons who cast animal filth and refuse into rivers and ditches. We are indebted to the Court Rolls of Stratford-on-Avon, for the information that Shakespeare's father was fined in 1552 for depositing filth in the public street; and the fine again imposed upon him, six years later, for not keeping his gutter clean, is an additional example of a salutary punishment. Such efforts at cleanliness in past times, however, were rather accidental than systematic. According to the report of the Sanitary Commission of 1869, the regulation of sanitary powers in former days was conducted by sheriffs' courts and courts of the leet; but the investigation of the offences and the infliction of the penalties was a tedious process commonly neglected, and even when entered upon the result was not very efficacious. In process of time, the crown was empowered, as far back as the reign of King Henry VIII, to issue commissions to form 'great sewers' for the drainage of large districts, mostly for the reclamation of marshes and other waste lands; but no provision was made for the smaller drainage, which separate and individual dwelling houses required for the health and comfort of the inmates and of the neighbourhood. As civilisation advanced and population increased, special legislation was resorted to by the inhabitants of towns or populous parishes for the means of improving their condition, and for the suppression of nuisances. For more than a century and a half, there will be found in the annals of Parliament a large number of these local and private acts, and during the last century they became very numerous. Making allowance for the variations considered necessary by local circumstances, they had become uniform in their nature and provisions. The legislature was content to receive the applications as they were made, and to grant them, subject to specific modifications as were necessary, but no general measure was provided for the country until 1845, when what is termed the 'model act' was passed. The effect of this legislation was that, as regards certain very general sanitary powers, it should not be necessary to introduce the provisions which it contained in any future bill, but that they should be admitted as part of future measures by mere reference and words of incorporation. All these intermediate acts of legislation were, however, tentative and unsystematic. The first real attempt to create a national system of public health was made by the Public Health Act of 1872, which called into existence the Local Government Board, to which all matters of public health are to be referred. This act, the result of the recommendations of the Royal Sanitary Commission, really forms the basis of a new system, a sort of Magna Charta of public health; and, curiously enough, it brings us back an old foe with a new face; for the sanitary problem of 1873, as in the reign of Richard II, is how to keep our rivers from being polluted with the noxious and effete material derived from the congregation of large masses of population." He then gave an account of the machinery created for carrying out the measures relating to the public health; and concluded with the following summary of the duties of the medical

practitioner in regard to the subject. "It is for us, as members of the medical profession, to teach our patients the claims which the community has upon heads of families and upon individuals. In our daily visits, we carry with us the means of restoration of health, and even of life, to thousands of households. Let us take as part of our remedial agency, the inculcation of those laws of health which tend to prevent disease, as well as of the agencies which are directed to its cure. We know how in our generation sickness has been lessened, vital force and vigour enhanced, and the term of life prolonged by attention to hygienic and sanitary laws. We know, too, how further advances in this direction may be certainly expected, from a closer observance of the rules which nature discloses to the researches of science, and which science formulates in the noble health-giving art we practise. We know again, how much the health of the community depends upon individual knowledge and personal care. Let it be our business to teach those who look to us for instruction, how the health of the household depends upon the supervision of its head; how the health of the community depends upon that of the household; and how the action of local authorities, guided by the control of the central government, can be rendered effective for national benefit only by the exact comprehension of principles by individuals, and the intelligent application of personal efforts. Though we are still lamentably deficient in our knowledge of the laws of health, and still more so in our personal and corporate application of them, we have nevertheless made great progress within the last few years; and as public opinion becomes better informed, and grows more certain in its requirements, and more vigorous in its action, we may expect to realise progress infinitely more solid, and more rapid than the measure we have yet achieved. To a great extent this must depend upon the medical profession. Opportunities of incalculable extent and of inestimable value are now open to us. The necessity of our services and of our guidance in sanitary affairs, as well as in the more immediate relations of professional practice, numerous appointments, important, honourable, and responsible, are reserved to us. Foremost amongst these is that of medical officer of health, a position which, especially in a large town, is worthy the acceptance, and demands the best exertions of any medical man, whatever his rank. To a competent person so placed, and fairly supported by the authorities of his district, a most important and most beneficial work is possible. By degrees, when legislation strengthens, the control of all agencies for the prevention of disease, and the promotion and maintenance of public health will be placed in his hands. In the meantime, he is armed with great powers, and is authorised to cultivate a vast and productive field. It is his function to inquire into and detect the secret causes of disease amongst the community, to devise remedies for them, to indicate the measures necessary for their removal and prevention. By discharging this duty with intelligence and fearlessness, a medical officer of health will earn the approval of his own conscience, the honourable testimony of his profession, and the gratitude of the public. For he will help to solve the problems which now beset the varied questions of sanitary science; he will inculcate with authority the laws which tend to develop higher personal qualities, and foster purer and healthier social habits; he will become the means of uprooting the seeds of diseases from crowded districts in which they have become endemic; and thus fulfilling the desires and realising the purposes of a public benefactor, it will be his benevolent function, under the Divine blessing, to strengthen the vital force of the community, and to prolong human life under the conditions of health and vigour which make life worth having. This is the tendency of legislation as regards the future of our profession. Let each one of us, in his own way, accept the responsibility and endeavour worthily to fulfil it."

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The Introductory Address was delivered by Dr. CATON, Lecturer on Physiology.

After referring to the changes and improvements made in the Liverpool Medical School, and to the opening of the new buildings which had just taken place, Dr. Caton commented on "Physiology in relation to the Health of the Community and the Advance of Medicine." After contrasting the slow progress of physiology, and, consequently, of medicine in ancient times, with the greater advances of medicine and hygiene which have more recently followed the establishment of a sound basis of physiological science, Dr. Caton considered the question—how far has this progress of physiology and medicine influenced on a large scale the health and life of the community? Having stated a few facts, which proved a great saving of life to have been effected in recent as compared with former times, he said that the average duration of life in this country was only forty years; and, among the lower classes particularly, the duration of life

was much less than it ought to be. This was referable to causes connected with the general condition of the people, in our state of civilisation, which had a progressively injurious effect on life and health. Noticing the effects of overcrowding, intemperance, etc., which, in towns, result in an average mortality of one in thirty-seven annually, compared with one in sixty in the country, while the greater increase of town population renders the evil a growing one, he passed on to another important cause, not fully recognised, viz., the interference with the operation of the great law of natural selection as regards human life. In an uncivilised state of society, the strongest and most healthy alone survive, and become the parents of the succeeding generation, whereas, in civilised communities abounding in conveniences and resources, feebleness of constitution or tendencies to disease, which would otherwise be weeded out, survive, and in the next generation produce a morbid predisposition sure to develop in bad hygienic conditions. Thus, while Nature would sacrifice the individual, but benefit the race, medical science saves the individual, but, unless by good hygienic conditions the morbid tendency be overcome, endangers the health and vitality of succeeding generations. In obviating these evils and dangers, much has been done by sanitary legislation, and much more remains to be done. Many, however, of the causes at work in producing disease, are such as no legislation can ever directly reach. For example, the bringing up of children properly, and the due ventilation of houses, are within the control of individuals only. In order to still further bring our knowledge to bear practically on the welfare of the lower classes, Dr. Caton advised the teaching the people the rudiments of physiology and hygiene; such as the importance of fresh air; the danger of sleeping in close, crowded bedrooms; the danger of inhaling sewage gas; the value of sunshine, of exercise, of the abundant use of pure water; the main rules of diet, such as a knowledge of the different kinds of nourishment necessary for health, and the forms in which they can best be obtained; the proper diet, and bringing up of children; the effects and dangers of intemperance on the individual and on his offspring; simple rules as to clothing; the dangers of unhealthy occupations, and the modes of escaping their injurious effects.

In addition to applying and diffusing the practical parts of physiological knowledge, it was highly desirable to attain to more precise acquaintance with the laws of life. The prospects of the science were never so bright and encouraging as at the present time. In this country, and still more on the continent, many highly trained workers were engaged in research, employing the most exact and scientific methods. After describing some of the more recent advances made in physiology, Dr. Caton said that the time would doubtless come when our Government would recognise the importance of aiding this department of science. The work of investigation was at present carried on mainly by medical practitioners, who earned their bread by the practice of their profession, and who gained little or nothing by their scientific work, except the esteem of the few who were able to understand the subject. The public in general knew nothing about it. The science was thus at a disadvantage, depending too much on the efforts of isolated men, who could only devote to it a small part of their time. The gain to the science, and the ultimate benefit to the country, would probably be great if one or more Government-supported laboratories were established, and some of the more eminent physiologists paid to devote their entire time to the work. "It is not at all unreasonable to believe that sooner or later a profound acquaintance with the laws of animal life, will enable the medical profession to be of many-fold greater service than at present. We may fairly look forward to a period when, by the aid of science, whole classes of existing diseases will have been swept away entirely, such as the infectious fevers. By further carrying out sanitary laws, and by improvements in the habits of the people, constitutional diseases may be rendered far less frequent; while a more exact knowledge of the nature of disease, together with advances in therapeutics, surgery, will enable the medical man to give relief and avert death, much more speedily and certainly than can be done now. In fact, it is quite reasonable to expect a time when natural death—death at the full term of years, un hastened by any form of disease—shall be the rule, and not as now, the exception, and when the great majority of men may enjoy seventy or eighty years of vigorous life."

Dr. Caton concluded by a few remarks addressed specially to the students in reference to the work of the session about to commence.

NEWCASTLE-ON-TYNE COLLEGE OF MEDICINE.

The Introductory Lecture was delivered by Dr. LUKE ARMSTRONG.

Dr. Armstrong began by addressing the younger students, assuming that they recognised the importance of the step they were about to

take, and, at the same, forwarding them what theirs was to be no life of luxury, but one of toil, care, and anxiety. He urged them so to conduct themselves as students that they might, in after life, look back upon the first of October, 1873, not only as the commencement of a College curriculum, but as the inauguration of an honourable career. Dr. Armstrong cautioned the first year's men against idleness as the first downward step, and advised them to adhere to a systematic course of study. He also recommended them, when in doubt, to consult their lecturers, and, in their general conduct, to follow the example of the medallists of their class; and, above all, to shun the "chronic student," as one who, though not naturally vicious, was certain to exert an influence for evil on new students. The speaker drew attention to the importance of the work of first year's men in the duty of after-life. In addition to reading, and attendance at lectures, the speaker showed the urgent necessity for practice in the dissecting-room and laboratory. To the men of the second year, Dr. Armstrong earnestly recommended diligence, not only on the ground of duty, but as an example to their juniors. The third and fourth year's students, in addition to recommendation to work, until the goal towards which they were pressing was passed, were cautioned against the idea that they had nothing to learn after they had obtained their diploma. The lecturer also alluded to several matters of ethical interest, and cautioned those for whom his remarks were intended, in case a fellow-practitioner was guilty of a breach of etiquette towards them, never to retaliate, but to remember that "two blacks do not make a white." Behaviour at coroners' inquests and in courts of law, the disastrous effects following want of care in the ordering of alcoholic stimulants, fashion in medicine, hospital practice and its abuses, etc., afforded themes for practical advice. There was one matter, Dr. Armstrong said, to which he would draw serious attention; the more so, that it was a subject not hitherto publicly discussed. Sick benefit societies (so long as they were properly used) were undoubtedly a great blessing to the working-man; but, as medical officers to those societies, many of his hearers would think it a very suspicious circumstance that one person should be in four or five different societies. This was sufficiently demoralising; but, unfortunately, this was not all. A sum of money for funeral expenses, etc., was usually allowed on the death of any member of the family; this, multiplied four or five times, gave the parent an interest in the death of his offspring. The speaker gave examples, from his own experience, of the sad results of this system, and called upon his hearers to exert their utmost influence to check it.

LEEDS SCHOOL OF MEDICINE.

The Introductory Address was delivered by Mr. SCATTERGOOD, Lecturer on Forensic Medicine.

Mr. SCATTERGOOD said he regarded the presence of many not directly concerned in the work of the School of Medicine, as an evidence that its existence for considerably more than a generation had attached them to it by ties of friendly interest and sympathy. A successful career of two-and-forty years sufficiently justified the wisdom of the eminent and sagacious men who founded the school. In reviewing the changes which had taken place in the methods of medical education in that period (during half of which he had had the honour of being a teacher in that school), the principal one seemed to be the greater attention paid to "practical instruction." The modern education required from the student not perhaps less reading but more doing, more employment for his hands and his five senses in proportion to that for his memory. The student had not less to do with written books, but he was more constantly referred to the great Book of Nature, with which he was to compare them, thus beneficially becoming more of an active seeker after knowledge, and less of a passive recipient of information. This gave him more of the *locus standi* of an original observer. Every student, for instance, who dissected his parts carefully and conscientiously, might be said in a sense to re-discover for himself the facts of human anatomy. The lecturer then sketched the history of the difficulties attending the study of anatomy when subjects could be procured in sufficient quantity only through the "resurrectionists." He alluded to the progress of histology under the increased employment and improved character of the microscope, and the advance made in physiology since the times of Bell and Magendie. Over and above the improvements in therapeutics, induced by new pathological views, or by the introduction of more powerful remedial agents, there had been during the last forty years a gradual change of treatment, indicated by the disuse of bloodletting and of "heroic remedies." He proceeded to show that the field of research constantly enlarged, that the workers in it increased in numbers and intellectual activity, also that great improvements were

made in the number and character of the instruments now employed. But the use of instruments of precision in scientific inquiry would no more, he said, put an end to speculation than the use of weapons of precision would put an end to war. By our instruments we ascertained facts; but every fact discovered was the germ and starting-point of new hypothesis and theory. In the relations of the individual medical practitioner and the profession in general towards the community, the last forty years, and especially the latter part of it, had seen great alterations. There had long been signs of an increasing appreciation by the public generally of the value of our profession, and a greater and fairer recognition of the service it does to the community. This had been shown not merely by the reception of the British Medical Association by a hospitable Lord Mayor, by the attendance of a busy and distinguished Prime Minister at its dinner, and by the notice taken of its proceedings by the metropolitan press—signs as these were of the way in which the current of opinion was flowing—but it had been shown in a much more satisfactory way, namely, by a call to new duties and enlarged responsibilities; by a discovery on the part of the public that, besides the cure of disease, we should undertake the care of health. This idea was not of spontaneous growth in the public mind; it was a sentiment implanted there by our profession itself. In the first year of the present century, not to go farther back, the late Professor Gregory, the author of the *Conspicuous*, said in his lectures at Edinburgh, "By the practice of physic we mean the art of preventing and curing disease." And seventy years later Sir William Jenner wrote, "I have always taught that the highest branch of medicine is preventive medicine." And in this key had written all the masters of our art. The lecturer alluded to the introduction of vaccination, and other measures of preventive medicine which the profession had promoted during the present century—often against opposition on the part of the public. The general practical tendency of all scientific research in medical sciences pointed in the same direction. If enlarged knowledge of diseased processes, and greater acquaintance with the action of remedies led to improved curative treatment, this improvement consisted in the more speedy arrest of disease, in a more perfect restoration of the body to that state in which it most strongly resisted morbid agencies. Improvements in treatment had a preventive effect. The discoveries in other fields of research had a more direct bearing on preventive medicine. In other words, the practical side of Physiology was Hygiene.

The lecturer proceeded to comment on the position of medical officers of health, who, he said, should be unfettered by private practice, and therefore need to be more adequately remunerated for their services; and, this being done, candidates for the post would feel the necessity of qualifying themselves by a special course of training, which it now therefore became the governing bodies of the profession to provide, or to encourage and direct; and further, to furnish, by means of some diploma or certificate, a guarantee of individual fitness, and a warrant for public confidence. After some judicious words of advice to the students present, the lecturer concluded as follows: "To revert once more to the considerations which I laid before you in an earlier part of this address, is their interest confined merely to us who are practitioners, or who are only outside observers? So far is this from being the case, that it is the students of to-day, and even the youngest of them, whom the present position of scientific research and progress in medicine most concerns. Is the field of observation widening every day? It is to you that its cultivation will be entrusted in the future. See to it that you appreciate its extent, and that you now prepare yourselves for the labour which the coming age demands of you. Every man is a debtor to his art; and what he has received from the past generation he is bound to repay with usurious interest to the generation which will follow him. Have the last few years seen a greatly increased number of workers and an intensely quickened condition of mental activity? Then remember that, with the increasing spread of knowledge and of education, the tension will constantly increase, and the competition become keener year by year. None will be able to take a worthy part in the future who do not now assiduously cultivate every faculty of mind which they possess; and no less needful is it that you should miss no opportunity of acquiring the command of all those instrumental appliances by which the power of the senses is so largely extended in range and precision. With the increasing demands of the age upon our profession, its responsibilities will admit of no slackening of the high tone of morality and the noble spirit of self-sacrifice which have always characterised it. The student's career will afford him abundant opportunities of exercising these. And thus acting, in proportion to your diligence will be the consciousness you will feel of frequent failure: in proportion to the amount of knowledge you acquire will be your sense of how little it is in comparison with the great world of thought and experience be-

yond you; in proportion to the extent to which you exercise your powers, and discipline your mental faculties, will be your feeling of their weakness and imperfection; and thus to earnest work and devotion to duty will be added that humility which is the crown of both."

ARMY MEDICAL SCHOOL AT NETLEY.

THE opening lecture of the present session of the Army Medical School at Netley was delivered on October 1st by Surgeon-General LONGMORE, C.B. After some words of welcome addressed to the newly assembled candidates for commissions in the public services, and explanations of the special work done at the school, the lecturer took for his text and discussed the subject of hospital arrangements in the field, and the most effective means of affording surgical help to wounded soldiers on the occasion of battles in European warfare. The experience gained in recent wars, especially the Bohemian war of 1866 and the more recent Franco-German war, was particularly dwelt upon and used for illustrating the subject of the lecture. The discourse was listened to throughout with much attention, not only by the leading members of the staff of the Netley establishment, but also by the gentlemen who had freshly arrived. These consisted of eleven gentlemen who had passed for the British army, the same number for Her Majesty's Indian army, and six for the Royal Navy. A certain number of commissioned officers of the army and navy medical services had also arrived to go through the courses of practical study at Netley, and were present at the lecture.

THE SOCIAL FESTIVITIES OF OCTOBER 1ST.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE annual dinner was held at the Adelphi Hotel, on October 1st. Additional interest was attached to the occasion in consequence of the formal opening of the new buildings, already described in the *JOURNAL*, by Mr. John Torr, M.P. About ninety gentlemen, including past and present students, lecturers, and other members of the profession, sat down to dinner, under the presidency of Dr. Robert Gee. The toast of the Evening, "Success to the Liverpool Royal Infirmary School of Medicine," was appropriately proposed by the chairman, and duly honoured by the company. A most enjoyable evening was spent, the pleasure of the reunion being greatly enhanced by some excellent gleesinging, contributed by a party which included, amongst the performers, some prominent members of the local profession.

LEEDS SCHOOL OF MEDICINE.

THE annual dinner of the Leeds School of Medicine was held on Wednesday evening, October 1st, at the Great Northern Hotel, after the delivery of the annual address by Mr. Scattergood. About sixty gentlemen were present, most of whom were members of the profession practising in Leeds and the neighbourhood; and amongst the guests of the Council of the School were the Mayor of Leeds (Mr. Oxley), the Vicar (the Rev. Canon Woodford, D.D., Bishop-designate of Ely), and others. The usual toasts were proposed—"The School of Medicine" being given by the Vicar and responded to by Dr. Heaton, the Senior Physician to the Leeds Infirmary, and Treasurer of the School.

THE PRIZE LISTS OF THE MEDICAL SCHOOLS.

LONDON HOSPITAL.

After the introductory lecture, the following prizes for the Session 1872-73 were distributed by Mr. Currie, Chairman of the House Committee of the Hospital.

Clinical Medicine: £20 Scholarship, Mr. R. Kershaw. *Clinical Surgery*: £20 Scholarship—Mr. T. D. Watson; Honorarium, £15, Mr. W. Lang. *Clinical Obstetrics*: £20 Scholarship, Mr. T. D. Watson; Certificate, Mr. R. R. Llewellyn. *Dressers' Prizes for Zeal, Efficiency, and Knowledge of Minor Surgery*: £15, Mr. F. B. Collenette, Mr. S. D. Clippingdale, and Mr. A. Brandum; £5, Mr. H. E. Price, Mr. E. G. C. Snell, and Mr. J. Needham. *Buxton Scholarships*: £30, Mr. W. P. Mears; £20, Mr. S. H. Fisher; Certificate, Mr. E. Brumwell. *Human Anatomy, Physiology, and Chemistry*: £25 Scholarship, Mr. R. H. Fox; Certificate, Mr. H. Haggood. *Special Certificates to Medical Assistants*: Messrs. J. Blunson, H. T. Shapley, C. W. Drew, F. E. Pocock, R. R. Llewellyn, R. Kershaw, W. Porter, H. M. Lecker, W. H. Todd, B. Crawshaw, R. D. Smith, C. A. Low, E. O. Bark, J. H. Alden.

THE MIDDLESEX HOSPITAL.

THE following prizes and certificates of honour were distributed by Mr. Ross, Chairman of the Weekly Board, after the introductory address by Mr. Morris. The Dean presented a very favourable annual report

of the progress of the school, showing that the number of entries had markedly increased, and that the success of the students at the College of Surgeons and other examining bodies had been most gratifying.

Bradley's Scholarships: 1. Mr. Samuel J. J. Kirby; 2. Mr. Arthur Tomes. **Governor's Prize:** Mr. A. Tomes. **Clinical Prizes:** Mr. Henry Jackson, Mr. F. M. Williams (equal). **Medicine:** Mr. S. J. J. Kirby. **Surgery:** Mr. E. F. Kissack. **Pathological Anatomy:** Mr. A. Tomes. **Practical Surgery:** Mr. A. Tomes. **Anatomy:** Mr. Alexander T. Scott. **Physiology:** Mr. J. W. B. Mason. **Chemistry:** Mr. G. Sherman K. Biggs. **Dissections:** Mr. G. C. Karop. **Midwifery:** Mr. J. W. B. Mason. **Medical Jurisprudence:** Mr. J. W. B. Mason. **Materia Medica:** Mr. T. Cambridge. **Botany:** Mr. A. Lucas. **Practical Chemistry:** Mr. W. Walker. **Practical Physiology:** Mr. W. Walker. **Psychological Medicine:** Mr. A. T. Scott. **Medical Society's Prizes:** Mr. A. Tomes, Mr. S. J. J. Kirby. **Entrance Scholarships,** October 1872: 1. Mr. Reginald Paul; 2. Mr. W. S. Thomson.

Certificates of Honour.—Mr. William E. Cree and Mr. William M. Beaumont (Clinical Knowledge); Mr. Arthur Tomes (Medicine); Mr. S. J. J. Kirby (Practical Surgery); Mr. David Hepburn (Anatomy, Physiology, and Surgery); Mr. Geo. C. Karop (Anatomy and Physiology); Mr. J. W. B. Mason (Anatomy); Mr. W. S. Thomson (Chemistry); Mr. A. T. Scott (Forensic Medicine); Mr. E. Price (Materia Medica); Mr. T. Cambridge, Mr. G. Clements, and Mr. E. Price (Botany); Mr. Percy Cree (Practical Physiology); Mr. S. J. J. Kirby (Comparative Anatomy).

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The prizes for the Session 1872-73 were delivered on October 1st by Mr. John Torr, M.P., who presided at the opening of the session.

WINTER SESSION.—**Exhibitions:** Mr. T. L. Roberts, Mr. J. Lewtas, Mr. G. G. S. Taylor, Mr. J. Marmon. **Third Year Subjects:** Mr. G. W. Joseph, and Mr. R. N. Pugh, Silver Medals; Mr. G. G. S. Taylor, Bronze Medal. **Second Year Subjects:** Mr. W. F. Shain, Silver Medal; Mr. J. Bark, Bronze Medal; Mr. S. F. Bigger, Mr. A. L. Douglas, and Mr. E. S. Wood, Honorary Certificates. **First Year Subjects:** Mr. J. T. Smith, Silver Medal; Mr. W. H. Wright, Bronze Medal; Mr. W. Gruggen, and Mr. W. Latham, Honorary Certificates.

SUMMER SESSION.—**Second Year Subjects:** Mr. F. C. Gresham, Bronze Medal. **First Year Subjects:** Mr. J. Twinem, Silver Medal; Mr. W. Gillibrand, Bronze Medal; Mr. W. Townson, Honorary Certificate. **Comparative Anatomy and Zoology:** Mr. R. H. Jones, Prize; Mr. H. Pilkington, Honorary Certificate.

REPORT

ON

THE OUTBREAK OF ENTERIC FEVER AT WOLVERHAMPTON.

[FROM A SPECIAL CORRESPONDENT.]

THERE are many points, full of interest and instruction, in the Wolverhampton outbreak of enteric fever. It is extremely desirable, in the interests of science and of the public, whose interests indeed are identical, that an exhaustive inquiry should take place, for official information is at present refused, and private efforts are threatened with an action for libel. Mr. Manby, and other able professional men, are moving for such an inquiry; and a petition to that effect will be sent to the authorities on Monday. Meanwhile, we present the following results of a personal investigation.

In the course of July, a case of enteric fever occurred in Brook Street, a poor neighbourhood, comprising several courts and about thirty old houses, some built back to back. As to previous health, it figures badly in the reports of some of the medical men, but many of the families themselves speak of several years of previous good health; and it cannot be called worse in appearance than many parts of other towns. This first case it is difficult now to trace exactly; but had it been recognised, and disinfected, the whole epidemic might have been prevented. Many of the privies in this part drain *direct* into the sewer. The sewer here is the old so-called "Blackbrook," bricked in; it is close to the surface, and runs under some of the house floors. With privies and open sewer-gratings and other unhealthy conditions, the single case soon became twenty-four. In three houses we saw in as many minutes eight sufferers now convalescent, and they readily reckoned up as many as twenty-four in the thirty houses. Of these, five children and one grown lad died. At one of these houses, in which every inmate had had fever, they sell milk; not much, it is true, for it is only got from one cow, which is not kept on the premises. At the time of my visit, the milk-vessel was standing half-full in the back kitchen. However, this possible source of infection we need not follow out, for it was sold to chance customers. The next yard to the one referred to, and separated only by a wall, bears the name of 2 Court, Darlington Street, or "Hancher's Yard." The Blackbrook sewer here runs so close to the surface, that it is said to have burst sometimes and flooded the house, so as to put out the fires! This has not happened for some months. In the middle of this yard, is an open grating communicating with the said sewer. Up to a short time ago, it was

trapped by a bell-trap (said to be broken), which has been recently replaced by a syphon-trap. Directly over the grating is a tap of Company's water, just high enough for the little children to put their lips to; and they stand upon the grating to do so. The families in the yard, too, speak of fair health up to the early part of August, when the privy, which is a well constructed one, required emptying. The men came early in the morning, and, to save carriage, took up the grating in the middle of the yard, and let the refuse or part of it run down a gutter direct into the sewer. We are informed, by eye-witnesses, that this is not uncommon in Wolverhampton. This occurred on August 9th, and since then there have been seven cases of fever in this yard.

The corner house of this yard is occupied by a respectable milk-vendor who keeps four cows on the premises, and whose milk-supply has been specially esteemed. His pump-well is within a few inches of the said sewer, which is of the old flat-bottomed brick construction; and, although since examined by authority and pronounced apparently sound, who is to guarantee that it did not leak? On August 11th, two of this man's children sickened with enteric fever; and the question here arises as to whether this was due to the mismanagement in uncovering the drain, or to the drinking of infected water from his pump. In the former case, the incubation would be of very short, but not unknown duration (Murchison, second ed., p. 469). In the latter, the incubation might have been of recognised duration, and the opening of the drain only a coincidence: the man attributes it to the nauseous odour of the former cause; others the contrary. From the time when this man's children sickened, the epidemic began to spread markedly in other quarters of the town. The evidence is as clear as private inquiry can make it, that, to a more than possibly accidental extent, it followed the course of the milk-supply. We may take the Cleveland Road cases, which occurred in a new well drained building half a mile away from the focus, as evidence of an imported cause; and we may take the lists of one practitioner only, which, out of eighteen cases, show fifteen supplied by this milk, as numerical evidence. In fact, the medical officer of health has publicly stated (BRITISH MEDICAL JOURNAL, September 13) that the epidemic has been traced to milk-contamination; but we think he omits to see the full importance of the original Brook Street outbreak, which occurred two or three weeks at least before what we may call the "milk-outbreak," and which appears as clearly as possible to have been the *fons et origo mali*.

At this point we are met by another question. Did the man add infected water to his milk, or did it contract infection from standing in a vitiated air? (The milk is said to have been analysed and found pure, but the value of the analysis is doubtful.) Science can already say that the latter supposition is possible; but the question is not of importance to our present proposition—which is, that the primary source of infection was in Brook Street, and a second means of spreading it was infected milk. Of this latter group of cases, the majority are persons well off, and living in good houses. The total number of cases, given officially, is 63; of deaths, 14: private and reliable information which we have before us makes the number of cases nearer 100. Many of the deaths have occurred under very distressing circumstances. Three of them took place at a distance, and illustrate probably what has been observed in other cases, viz., the tendency of a journey during the early or even incubative stage of typhoid to determine a fatal issue.

With regard to the present condition of the epidemic, it is said officially, and by many, though not by all the practitioners, to be now much better. As to why it is better, it is said, again officially, that it is because the milkman's water-supply and other possibly polluted sources have been cut off. It is thought by others, and with more reason, that the epidemic tends to die out because all the people that can have it in Brook Street have had it; or that the milkman's children have recovered, all his household gone away, and his custom much diminished. For these and other reasons, we may hope the epidemic has seen its worst. It is but just to say that the town authorities have within the last three years, at great expense, laid down an extensive system (38 miles) of sewerage (a single system with no separate surface-drainage), which has an outfall on a sewage-farm (Barnburgh) of 300 acres, where the material is treated partly by irrigation and partly by downward filtration. There is said to be much acid in the sewage, and it is not complained of as offensive on the farm; but the sanitary work is by no means complete. The surveyor has introduced into the Wolverhampton Sanitary Act (1869) clauses enforcing good traps and ventilation of closets. Whether they are carried out, is doubtful. The history just given shows there is grave want of good inspection and attention to detail, and without these things a sewer-system, otherwise good, easily becomes injurious. A large number of the houses in the town are not connected with the sewers; in those that are, many seri-

ous defects exist in the way of bad trapping, etc., and only now being remedied.

Some, though not a large quantity of, material still drains in the direction of Bilston, probably into the Tame; whether any drains now, as it formerly did, into the river Smeestrow, we were precluded from asking. Several cases have recently occurred near its banks at Compton, and two have proved fatal under unhealthy conditions of overcrowding, etc. Mention, at least, must not be omitted of a large number of open and foul smelling ditches and privies in "Sloppy Lane" and other parts, where, if typhoid be not already present, it will find at least a likely nidus.

We cannot conclude without a word as to "previous history." Some time ago, the then able and energetic officer of health, Mr. Manby, in conjunction with Mr. Turton and a Sanitary Committee, prepared with much care and labour a complete practical sanitary scheme. An opposition was raised to this scheme, and it was simply talked out. The two medical gentlemen resigned office in disgust. With all deference to the present officer of health, we regret extremely that they did so; not, indeed, for their own sakes, but for the sake of their townsmen, though they could hardly be expected to do otherwise under the circumstances. There could be no stronger comment on the folly of refusing attention to able and skilled advisers than the epidemics which have since occurred.

A paragraph reporting fourteen cases of typhoid fever as having occurred at Bilston, has appeared in the local press. On visiting the place, which is about two miles from Wolverhampton, and has an evil name from cholera times, we found little attention paid to it, and several gentlemen were unable to direct us to any cases. We naturally inspected first a part called Batchcroft and neighbourhood, but could hear only of three cases of scarlatina. In Bristol Street we found enteric fever in an epidemic form, upwards of twenty cases being reported to us in the one street. These, however, we were not able to inspect personally; but if, on further inquiry, there seem reason to do so, we will report further. There is no local board of health or health-officer, but there are town commissioners who have a medical referee. The inspection of nuisances is said to be deficient. The condition of the place is as bad as it can be.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Friday, the 17th instant, at 3 o'clock in the afternoon.

FRANCIS FOWKE,

October 2nd, 1873.

General Secretary.

* * In consequence of an error by the postal authorities in the transmission of a telegram, the above notice was omitted from the BRITISH MEDICAL JOURNAL of the 4th instant.—General Secretary's Office, 37, Great Queen Street, October 9th, 1873.

YORKSHIRE BRANCH.

THE autumnal meeting of this Branch will be held at the Church Institute, Wakefield, on Wednesday, October 15th, at 2.30 P.M. The members will dine together at the Bull Hotel at 8 P.M. Tickets (exclusive of wine), 6s. each.

Members intending to bring forward communications or join the dinner are requested to communicate with the Secretary.

W. PROCTER, M.D., Local Secretary.

York, September 30th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at Penrith, on Wednesday, the 29th October. The President, Dr. TIFFIN of Wigton, will take the chair.

Gentlemen intending to read papers are requested to give immediate notice to the Secretary.

HENRY BARNES, M.D.

Carlisle, October 1st, 1873.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, October 30th, at 7 o'clock P.M.; E. LONG FOX, M.D., President.

R. S. FOWLER, } Honorary Secretaries.
E. C. BOARD, }

Bath, October 1873.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

THE next meeting of this Society will be held on Thursday, October 16th, at 4.0 P.M., at Laker's Hotel, Redhill.

On the invitation of Dr. Grabham, the resident physician, an excursion will be made to the Earlswood Asylum.

The dinner will take place at 6.0 P.M., at Laker's Hotel, and Dr. Holman of Reigate will preside.

All members wishing to attend must give early notice to the Secretary, in order that a sufficient number of conveyances be provided.

HENRY T. LANCHESTER, M.D., Hon. Sec.

Croydon, October 1st, 1873.

REPORTS OF SOCIETIES.

MANCHESTER MEDICAL SOCIETY.

MAY 11TH, 1873.

D. LLOYD ROBERTS, M.D., President, in the Chair.

Coloboma Choroidæ et Retinæ.—Dr. SAMELSON related the result of a recent ophthalmoscopic examination of the child's eye which he had shown to the Society five years since (see BRITISH MEDICAL JOURNAL for 1868, p. 401) as affected with coloboma iridis. In continuance of the gap in the iris, the retina as well as the choroid is found to be absent over the middle portion of the lower half of the eye, up to within about two lines from the misformed and excavated optic papilla.

Persistent Hyaloid Artery.—Dr. SAMELSON showed two cases, and related a third, in which the ophthalmoscope revealed the presence of a structure unilaterally, presenting more or less distinctly the characters of the phenomenon described under the above name.

Deficiency in the Abdominal Walls.—Dr. EDWARDS mentioned two cases of congenital deficiency in the abdominal parietes. In one case, the whole of the abdominal contents were visible, the liver and intestines protruding. In the second case, there was only extroversion of the bladder.

Popliteal Aneurism.—Mr. A. BOUTFLOWER gave the history of a case of popliteal aneurism in which cure had resulted from ligature of the femoral artery. The case was shown as being peculiar in a young man of twenty-five, without atheroma or diseased heart. He had had, however, syphilis more than once; and it was considered not, at any rate, impossible that syphilis was the cause. He worked in a warehouse, and had no recollection of the tumour appearing, but only remembered what he described as rheumatic pains until he came under treatment.

Cancer of Femur.—Dr. LLOYD ROBERTS presented a case of cancer of the femur, which had attained enormous size, in a very young child. The diagnosis had been made out early, but it had not been considered advisable to interfere surgically.

Acute Pyæmia.—Dr. LEECH related the case of a lady aged 32, never pregnant, who nursed her husband, who suffered from pelvic abscess following an operation for external piles. The abscess broke externally, and discharged large quantities of pus, with which the hands of the lady were frequently soiled. For some days, the lady was exposed to a most impure atmosphere, the pus discharged being exceedingly offensive. She was seized with slight rigors on the day of her husband's death. Six days after this, acute pleurisy attacked her, affecting both sides. Two days after the advent of the pleurisy, she began to complain of pain in the knee-joints; and subsequently all the large joints became swollen and painful. On the eleventh day after the death of her husband, she died. At the necropsy, there was pus in nearly all the joints, and both pleurae contained turbid fluid. No trace of crack or sore of any kind could be found on the hands or any part of the body, either whilst nursing or during her illness.

Congenital Opacity of the Cornea.—Dr. LITTLE brought forward a child six weeks old with a uniform opacity over both corneæ, observed by the parents at the time of its birth. The opacity was so great, that with great difficulty the pupils could be seen. The perception of light was very good. The parents had a distinct syphilitic history. Dr. Little made some remarks as to syphilis being the most probable cause in such cases.

Artificial Eye.—Dr. LITTLE also showed a young woman with a well adapted artificial eye, possessing almost all the movements of a normal eye.

CORRESPONDENCE.

MEDICAL ANSWERS TO LAY CORRESPONDENTS.

SIR,—Your article on Medical Answers to Lay Correspondents, although essentially erroneous in its statements, is so far superior in courtesy to other anonymous comments on my conduct, that I consent to correct its facts, while I hold myself entirely free as to its opinions.

Like many pieces of special pleading, it proves far too much. If all you state, and one half of what your vulgar innuendos suggest, were true, it is time I shared the fate of the worst advertising quacks in London.

The fallacy of its argument lies in an erroneous assumption. Your major premiss, your very title, prejudices the whole case. I do not profess, and never did profess, to give advice gratis. If you had looked at the first number in which my name appeared, you would have seen this; and have been saved many vile insinuations, which, like all other untruths, will one day recoil upon you. What I am doing is as follows.

The editor of this excellent scientific paper, knowing me as an old correspondent on mechanical subjects, asked me to exercise a general supervision over the medical and semi-medical correspondence; of which he, though a good literary and technical critic, was comparatively ignorant. To this I willingly consented, on the understanding that it should be done openly and without remuneration. It would have been easy to carry on nefarious designs under a pseudonym, or even as you write, anonymously. A faint conception of this fact seems to steal over you in the course of your article. From the suspicion which you audaciously adopt as the basis of that article, I took care to guard myself at the very beginning.

So much for explanation. Now, as to the reasons which led me to do a new thing, and expose myself to misrepresentation from the nameless paid scribes of a jealous profession, I am of opinion that the first advances to a knowledge of the simple routine and process of the medical world are often difficult; that many, from mere ignorance, fall into wrong hands; that still more, by having certain names daily paraded before them in general prints, lose their health, their business, and their lives; nay more, they even diminish the gains of the medical man, of which you are so zealous a guardian, by expending them on quacks! There is a charmed line around our profession, which, by habit, seems nothing to us; but which is very real to those outside. The usual go-betweens being interested and unlearned, there is need of one or more, who, being above suspicion, may give the merest rudiments of advice, such as we, in our esoteric conceit, term "vague," but which prevent initial and fatal errors. Of this fact, also, you seem to have a dreamy cognisance.

But, as your not uncourteous article begins with "great bewilderment and astonishment bordering on incredulity," so it ends with "mystification." I will end by telling you the cause of this frame of mind. As the recognised organ of a large trades-union, you are bound to take a mercantile view of medicine. I do not. With the English law, I consider a medical as also a common witness, and I do not see that the belonging to a clique cancels my obligations to my other fellow men. I will keep my hands clean without your help, and in spite of your libellous calumnies. Those who know me will feel the truth of this; for you and the rest of the unknown multitude, I care not one iota.

I am, etc.,

WILLIAM H. STONE.

14, Dean's Yard.

ANÆSTHETICS.

SIR,—The report of the interesting discussion on anæsthetics which appears in this day's JOURNAL, states that I "remarked on the importance of keeping the room quiet while the patient was being anæsthetised." No allusion to this topic, important as it is, was made by me. My object in rising was to call attention to the discrepancy in the observations of Mr. Morgan, who introduced the subject, and those of Mr. Pridgin Teale, as to the effect of the inhalation of ether upon the colour of the blood, and to seek for some explanation upon this point. According to Mr. Morgan, the blood which flowed during operations under ether was even brighter than natural. Mr. Teale, on the other hand, continued the ether inhalation until the duskiness of the countenance warned him to desist. This, as was remarked at the time by the President of the Section, is an important consideration—at any rate in relation to the theoretical aspect of the question—and it is with the view of again directing attention to it, rather than correcting an unimportant error in the report, that I am induced to trouble you with this note.

I am, etc.,

GEORGE PADLEY.

Swansea, October 4th, 1873.

THE SANITARY STATE OF BRENTFORD AND EALING.

SIR,—Allow me to make a few remarks upon the conflict between the sanitary authorities of Brentford and Ealing, to which you allude in an editorial paragraph in the JOURNAL of September 27th.

Brentford is at present a Rural district, which is placed under the sanitary control of the Board of Guardians of the Brentford Union by the Public Health Act of last year. It has, up to the present time, no system of dealing with its own sewage, which is allowed to stagnate in cesspools, or to find its way, untreated by any deodorant, to the Thames, by the nearest channel.

Ealing, under the management of a local board, has for the last ten years had a system of drainage which has worked satisfactorily.

The sewage works of Ealing are situated about midway between Ealing and Brentford. The sewage is here defecated, and the effluent water, after passing over the filter-beds, escapes into a water-course, which naturally (but unfortunately) flows through Brentford in its course to the Thames. The effluent is generally clear and inoffensive, and contains a small quantity of free lime, the process lately used being that of General Scott, the first part of which process consists in precipitating all matters in suspension, by mixing with crude sewage a large quantity of lime. Shortly after leaving the works, the effluent water joins the said water-course, which flows first through market gardens and afterwards through the town of Brentford, in all a distance of about a mile and a half, the last third of its course being in a covered channel. Through its whole course it receives the drainage of many (considerably over an hundred) cottages, of pigsties, etc., and of a school of four hundred children, all which flows along it to the Thames, unpurified in any way, unless, perhaps, slightly benefited by the lime which remains in the water, coming from Ealing.

When the medical report, quoted by you, speaks of the "filthy ditch known as the Ealing water-course," it should in fairness and honesty be stated that its filthiness mainly arises from the Brentford sewage, with which Ealing has nothing to do.

As to the fever, it is now stated to be scarlet fever, and that there have been forty cases since the 12th of August (exactly six weeks), with one death from dropsy supervening, and that there remain under treatment by the three medical men, eleven cases in a population of between nine and ten thousand. When this official statement of facts is contrasted with the sensational announcement made at the meeting of the Brentford Sanitary Authority, on September 10th, it will be seen that they differ widely. That announcement, which has been copied into all the papers, and has caused much alarm, was to the effect that within three weeks there had been about thirty cases of scarlet fever within a very few yards of the Ealing outfall into the Thames, and adds that, within a short distance of the stream there were from twenty to thirty other cases. On inquiry, it is proved that the cases are not specially localised near the said stream, but distributed generally over the town, and that the number was greatly exaggerated.

The Ealing Local Board, on becoming aware of the above statements, held a special meeting, and, after receiving and considering a report made to them by their surveyor, after a searching examination of the stream and its tributary drains, in reply to a notice they had received "to abate the nuisance arising from the effluent water from their works within seven days," resolved unanimously to reply that they held to the opinion that no nuisance was caused by them, and, pointing out the fact that the Brentford sewage polluted the water-course, invited the Brentford Guardians to ask for a Government inquiry.

I hope, for the well-being of the inhabitants of Brentford, that there may be no delay in instituting such an inquiry. It is fortunate that the medical report can state that "there is no outbreak of typhoid fever"; for if that disease or cholera were to gain a footing in Brentford, a sanitary Hercules would not probably be able to prevent its rapid spread, and the loss of many lives.—I am, etc.,

Geo. D. BROWN,

Member of the Ealing Local Board.

Ealing, September 30th, 1873.

DISINFECTION BY HEAT.

SIR,—I was much struck with Dr. Ransom's able article in your issue of September 6th on the subject of disinfection by heat, and agree thoroughly with him in the belief that a high temperature is the most reliable and practicable method of disinfection.

But the question arises, How can we best apply this process in rural or urban sanitary districts?

The conveyance of infected bedding and clothes through streets or villages is undoubtedly dangerous, and might frequently be the cause of

disease spreading. The thought therefore struck me, if we cannot take the infected articles to the disinfecter, why not bring the disinfecter to them? Put a disinfecting closet on wheels—something like a cross between a hearse and a watering cart would do—fit it up with the necessary gas-burners, thermometers, etc., run it alongside the infected house, and connect it with the gas-supply of the house by means of a long India-rubber tube. While the bedding, clothing, etc., are undergoing the process in the machine, the whole house might be properly disinfected under the superintendence of the men in charge of the disinfecter; and thus in a few hours a house, previously dangerous to the neighbourhood, might obtain a clean bill of health.

In villages where no gas is to be had, the disinfecter might be adapted to burn paraffin.

Should chemists continue to disagree as to the best method of disinfection, the articles might be submitted to two or three processes without removal from the machine. It would come rather hard on any disease-germ that managed to withstand a temperature of 250 deg. for two or three hours, to then have to undergo exposure to strong chlorine or sulphurous acid fumes.

I am sure that, with these hints, Dr. Ransom is skilful enough to devise a machine that will prove as useful in epidemics as a fire-engine at a fire.

I am, etc.,

W. MACKERN, M.D.,

Medical Officer of Health, Shardlow District.

Long Eaton, Derbyshire, September 7th, 1873.

OBITUARY.

JOHN BISHOP, F.R.S., F.R.C.S.

MR. JOHN BISHOP died on Monday, September 29th, at Strangeways Marshall, Dorset, in the 76th year of his age.

Mr. Bishop studied at St. Bartholomew's Hospital. He became a member of the College of Surgeons in 1824, and was admitted as an honorary fellow in 1843. In the following year, a paper in the *Philosophical Transactions*, on the Physiology of the Human Voice, procured him the honour of fellowship of the Royal Society; while his articles, Larynx, Motion, and Voice, in Todd's *Cyclopædia of Anatomy*, gained for him, by the evidently careful observation and extensive reading upon which they were based, a high reputation as a skilful and scientific practitioner.

In 1851, Mr. Bishop was elected a member of the Council of the Royal College of Surgeons, and, in 1852, President of the Medical Society of London, of which he became a member in 1839; and held in succession the offices of councillor, trustee, orator, and Lettsomian lecturer. During ten years, Mr. Bishop devoted himself, with his accustomed energy, to the interests of the College of Surgeons, where he delivered the Hunterian oration in 1859. But in 1861, when the practice of re-election was first broken through, Mr. Bishop was displaced. Mr. Bishop, although during the contest he had abstained from canvassing for votes, took his rejection very much to heart. He had always been devoted to what he believed to be the best interests of the College, and enjoyed the friendship and confidence of his colleagues at the board. In this, as in all the other public offices which he held, he identified himself most thoroughly with the body he represented, and gave ungrudgingly his time and labour to its service.

Mr. Bishop's published works include, in addition to those already mentioned, a treatise *On Articulate Sounds, and on the Causes and Cure of Impediments of Speech* (1851); *Researches into the Pathology and Treatment of Deformities in the Human Body* (1852); *The Lettsomian Lectures on the Physical Constitution, Diseases, and Fractures of Bones* (1855); *On the Construction of Hearing and Speaking Instruments* (1856); *Observations made on the Movements of the Larynx, when viewed by the Laryngoscope* (1862). He was also the author of minor contributions and *On the Physiology of the Fifth Pair of Nerves*; *On the Influence of the Pitch of the Tuning-fork on the Mechanism of the Human Voice*; *On the Pathology of the Tinnitus Aurium, with Remarks on the Acoustics of the sense of Hearing*. During his career, Mr. Bishop held the offices of senior surgeon to the Islington Dispensary, surgeon to the Northern Dispensary, consulting surgeon to the St. Pancras Dispensary, and surgeon to the Drapers' Benevolent Institution. His most remunerative practice was probably in impediments of speech, in the treatment of which he was very successful. He was accustomed to tell, with much gusto, of a stuttering patient from the country, who, under the advice of his medical attendant, had come to London to place himself under Mr. Bishop's care. At his first visit, he inquired anxiously, "When the operation was to be performed?" "There will be no operation," was the reply. "But won't you cuck-cuck-cuck-cut some-

thing here?" said the countryman, pointing to his carotid artery; and, on being assured that it was not customary to cut patients' throats in order to improve their speech, he departed in evident disappointment.

Mr. Bishop was twice married, and leaves a widow but no children. Of late years his health had very much broken, his constitution having suffered from two severe accidents; one, the loss of an eye, and the other, the consequence of attempting to seize a pickpocket in Regent Street, when he was tripped up by a confederate of the thief, and thrown heavily to the ground. His arm was broken, and the shock to the system was considerable. At the commencement of the summer, his strength began rapidly to fail. Change of air was tried as a last resource; he was removed to Dorsetshire, where he lingered for a few months and died.

Of a somewhat diffident and retiring disposition, Mr. Bishop was comparatively little known to the general public or to the profession; but by those with whom he was more closely associated, he was sincerely esteemed. His judgments were ever well considered, while his patience and application were commensurate with his skill. His tastes led him to a consideration of the more scientific and abstruse branches of the profession, and his ambition was rather to know than to be known. While the majority of his neighbours left for more fashionable localities, he kept for nearly half a century to his old residence in Bloomsbury, and to the Library of the Russell Institution, of which he was one of the managers, and where he enjoyed the friendship of a large circle of acquaintances. He was not an eloquent or fluent speaker, and his writings owed nothing to flights of imagination or rhetorical embellishments, but everything he advanced was demonstrated with mathematical exactness, and all the established laws of physics were brought to bear upon his researches. Nor were those researches bounded by the limits of his profession, or subservient to his pecuniary gain. The progress of science in every department was carefully noted by him, and in all his writings full justice is done to the discoveries of his contemporaries, both at home and abroad. He was particularly interested in German scientific literature, and fortunate in the possession of private means that enabled him to pursue his favourite studies.

He has left no great work by which to be remembered, but his memory is endeared to his friends by the recollection of his uniform kindness, of the zeal with which he devoted himself to the discharge of every duty he undertook, and of the manner in which he added to his public reputation as a scientific and skilful surgeon, the private virtues of a gentleman, a scholar, and a Christian.

JOHN EVANS, M.D.

THIS member of the profession died suddenly on the 15th September, at Harrogate, aged 69. As a general practitioner, he was well known in Dublin, where he enjoyed an extensive and lucrative practice. Dr. Evans was a member of the Society of Friends, and was much esteemed and respected.

WILLIAM BARKER, M.D., Dublin.

It is with sincere regret that we have to record the death, on the 11th September, at his residence, 21, Hatch Street, of Dr. William Barker. His father, Dr. Francis Barker, for nearly half a century occupied the chair of chemistry in the University of Dublin, to whom he was for some years assistant. After the usual period of a highly creditable collegiate career, Dr. Barker graduated as B.A. at the spring commencement of that university in 1832; and, having completed the prescribed curriculum in medicine, and studied chemistry specially in the laboratory of Professor Rose of Berlin, he graduated as Bachelor of Medicine in the summer of 1835, and as Doctor of Medicine in 1842. Dr. Barker was also admitted a Licentiate of the King and Queen's College of Physicians in Ireland in 1840, and was elected a Fellow of that body in 1845. During his collegiate career he became the intimate friend of many men who since then have attained to considerable literary and professional distinction. With one of those, the late Rev. Chas. Stuart Stanford, D.D., he was associated in originating the *Dublin University Magazine*, to which periodical he was himself a frequent contributor. A memoir by him of Dr. Whitely Stokes was published in 1846. Dr. Barker succeeded Sir Robert Kane in 1848 as Professor of Natural Philosophy to the Royal Dublin Society, and was thence chosen by the Government as Professor of Physics in the Museum of Irish Industry, afterwards the Royal College of Science of Ireland. He was also Professor of Chemistry in the Royal College of Surgeons of Ireland, and was a Member of the Council of the Royal Dublin Society.

As a chemist and physicist Dr. Barker was eminently accurate and painstaking, whilst he will long be remembered as a highly instructive

and attractive public lecturer, his experimental illustrations being remarkable for their aptness and almost uniform success. His genial disposition, warmth of heart, and honesty of purpose, joined to a highly cultivated mind and refined taste, made him highly esteemed by a large circle of acquaintance, and specially beloved by all those who enjoyed his intimacy. During his illness, he had the satisfaction and comfort of the constant attention of one of his earliest and most attached friends, Dr. William Stokes, by whom, in common with many others, his loss is deeply felt and will be long deplored.

HENRY HUISH, M.D., SURGEON-MAJOR.

MANY old army surgeons will notice with regret the death of Dr. Huish, late Surgeon-Major of the 3rd Hussars, which event took place on September 1st. Dr. Huish entered the army in 1845, and immediately sailed for Tasmania, where he served continuously for ten years. On his promotion to full Surgeon he was ordered home, and thence sent to the Crimea, where he served during the winter of 1855. Subsequently he was Staff-Surgeon at Chatham, and also served in the 5th Lancers and 3rd Hussars, until forced by ill health to retire on half-pay in 1868.

Dr. Huish was of a most genial, amiable disposition, and deservedly popular among those with whom he served. He died of gout, to which he was a martyr for the last five years, and the sufferings of which he bore with exemplary fortitude and resignation. He was an ingenious mechanic; and it is somewhat remarkable that, at the exhibition for the *Northfleet* Relief Fund, his apparatus for lowering a boat at sea was one of the best contrived, and was highly commended. He leaves a widow and five daughters.

HENRY L. SAXBY, M.D.

It is with much regret that we record the death, at the early age of 37, of this accomplished and amiable man. His rare promise in his profession was evident from his occasional contributions to the medical literature of the day. His health was permanently affected by injuries received in an encounter with garroters some years ago, and further impaired by a severe compound fracture of the arm, while in the Shetland Islands, far away from surgical aid; but he worked so cheerfully, turning to account his skill as a draughtsman when unable to fulfil his duties as a practitioner, that few even of those nearest to him knew how keenly he suffered. He died at Inverary, on September 4th, only a few hours after the birth of the youngest of his five children. As an ornithologist, he was very widely known, his minute accuracy as an observer giving great value to the results of his work. We understand that his *Birds of Shetland* has been left nearly ready for press, and is about to be published by subscription, and that his large and valuable collections are being arranged for immediate disposal.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

DR. BRADBURY'S LECTURES.—The Linacre Lecturer in Medicine gives notice that he will lecture on Pathology, in the Old Anatomical Schools, on Tuesdays, at 10 A.M., during the Michaelmas, Lent and Eastern Terms, commencing on Tuesday, October 14th. In the Michaelmas Term, the lectures will be on the Pathology of the Respiration, of the Digestive Organs, and of Absorption.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 2nd, 1873.

Chambers, Eber, Ryde, Isle of Wight
Colman, Alfred Cockburn, 36, Elgin Road, W.
Vowell, Charles Martin, Cheltenham

MEDICAL VACANCIES.

THE following vacancies are announced:—

ANDOVER UNION.—Medical Officer for the Fyfield District: £65 per annum, and fees. Applications, 14th inst., to Thomas Lamb, Clerk.
BARNBOY UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballinamore Dispensary District: £90 per annum and fees. Applications, 5th November, to James McGovern, Clerk of Union.
BIDEFORD UNION.—Medical Officer and Public Vaccinator for the Bideford District: £60 per ann., and fees. Applications, 20th inst., to C. W. Hole, Clerk.
BRISTOL DISPENSARY.—Physician.

BURY ST. EDMUNDS.—Public Analyst: £10 10s. per annum; 10s. per analysis for the first fifty, and 5s. per analysis beyond. Applications, 20th inst., to W. Salmon, Town Clerk.

BURY ST. EDMUNDS URBAN SANITARY DISTRICT.—Medical Officer of Health: £52 10s. for one year.

CHELLENHAM URBAN SANITARY DISTRICT.—Medical Officer of Health: £300 per annum for three years. Applications, 11th inst., to E. T. Brydges.

CHELTSEY, EPSOM, REIGATE, and DORKING Rural and Urban Sanitary Districts.—Medical Officer of Health: £600 per annum for three years. Applications, 1st Nov., to F. H. Beaumont, Esq., Reigate.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon.

DULVERTON RURAL and other Sanitary Districts combined.—Medical Officer of Health: £500 per annum. Applications, 11th inst., to Rev. W. H. Karslake, Meshaw, South Molton.

ENNISCORTHY UNION, co. Wexford.—Medical Officer and Public Vaccinator for the Killann Dispensary District: £60 per annum, and fees. Applications, 14th instant, to Thomas Redmond, Hon. Sec.

GENERAL HOSPITAL, Birmingham.—Assistant Dispenser: £40 per annum, to commence. Applications, 18th instant, to Wm. T. Grant, House Governor and Secretary.

GUEST HOSPITAL, Dudley.—Honorary Surgeon. Applications, 31st instant, to E. Poole, Secretary.

HOUSE OF INDUSTRY HOSPITALS, Dublin.—Two Visiting Surgeons. Applications, 15th instant, to J. W. Hughes, Secretary.

KEIGHLEY URBAN SANITARY DISTRICT.—Medical Officer of Health.

LEEDS PUBLIC DISPENSARY.—Senior Resident Medical Officer.

MANCHESTER ROYAL EYE HOSPITAL.—Three additional Medical Officers. Applications, 15th inst., to P. Goldschmidt, Chairman of the Board.

MELTHAM URBAN SANITARY DISTRICT.—Medical Officer of Health: £20 for one year. Applications, 14th instant, to Henry Thomas, Clerk to the Authority.

METROPOLITAN FIRE BRIGADE.—Medical Officer for the Eastern District North of the Thames: 20s. per annum for each man. Applications, 21st inst., to J. E. Wakefield, Clerk to Metropolitan Board of Works.

NEW WINCHESTER UNION.—Medical Officer for the Twyford District: £105 per annum.

OUGHTERAD UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Lettermore Dispensary District: £110 per annum and fees. Applications, 13th inst., to H. Flanagan, Clerk of Union.

PETERBOROUGH UNION.—Medical Officer for the Castor District: 6s. per case.

POWELL DUFFRYN COLLIERY, Tirphill.—Assistant Surgeon.

RETFORD RURAL SANITARY DISTRICT.—Medical Officer of Health: £100 per annum.

ROYAL COLLEGE OF SURGEONS, Ireland.—Professor of Chemistry.

ST. PETER'S HOSPITAL FOR STONE, etc., Berners Street.—House-Surgeon. Applications, 20th instant.

SHEFIELD PUBLIC HOSPITAL and DISPENSARY.—Surgeon.

SHEPTON MALLET RURAL and URBAN SANITARY DISTRICTS.—Medical Officer of Health: £105 for one year. Applications, 15th instant, to John Nalder, Esq.

ST. GILES, Camberwell.—Dispenser.

SOUTH RONALDSHAY and BURRA, Orkney.—Parochial Medical Officer.

TARBAT, Ross-shire.—Parochial Medical Officer. Applications, 17th instant, to John Ross, Inspector of Poor, Stafford Street, Tain.

TURTON URBAN SANITARY DISTRICT.—Medical Officer of Health: £120 per annum. Applications, 29th inst., to Thomas Dawson, Clerk to Authority, Turton, near Bolton.

UNST, Shetland.—Parochial Medical Officer.

VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea.—House-Surgeon; Pathologist. Applications, 11th inst., to Capt. Scoones, Secretary.

WEST HAM, STRAFFORD, and SOUTH ESSEX DISPENSARY.—Resident House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 14th inst., to Thomas G. Tonge, Assistant Secretary.

WEST LONDON HOSPITAL, Hammersmith.—House-Surgeon: £70 per ann., furnished apartments, etc. Applications, 20th instant, to T. Alexander, Sec.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*DOUGLAS, J. G., M.B., appointed an Honorary Surgeon to the Bournemouth General Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

GRIFFITH.—On October 5th, the wife of Samuel Griffith, M.D., Portmadoc, North Wales, of a son.

MARRIAGES.

HEFFERNAN-FLECK.—On October 2nd, at the Parish Church, Stanley, near Wakefield, by the Rev. Richard Burrell, the Vicar, *Edward Heffernan, Esq., J.R.C.P., & S.E., of Spennymoor, Durham, to Jane Eliza (Jennie), only surviving daughter of James T. Fleck, Esq., of Stanley Lodge.

TAYLOR-FOSTER.—On September 24th, at St. Michael's Church, Aberystwyth, by the Rev. E. Owen Phillips, M.A., Vicar, Moses Taylor, Esq., Surgeon, of Cannock, to Elizabeth Howells, eldest daughter of the late Simon Foster, Esq., of Bloxwich (and late of Bentley, near Walsall).

A COTTAGE INFIRMARY has been established at Watlington, and Mr. John E. Boyton and Mr. Henry Dixon have been appointed medical officers.

PUBLIC HEALTH.—Dr. E. West Symes has been appointed Medical Officer of Health for the Skipton and Settle Rural and Urban Sanitary Districts in the West Riding of Yorkshire.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M.

THURSDAY.—Harveian Society, 8 P.M. Dr. A. Meadows, "On Pelvic Hæmatocele."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WATER-SUPPLY AND TYPHOID.

SIR.—I have seen it stated that there is danger of typhoid from an intermittent water-supply. Can you or any of your readers tell me on what grounds such an assertion is made?

I am, etc., A MEDICAL OFFICER OF HEALTH.

THE OPENING ADDRESSES.

THE Record says that, in former years, graceful and appropriate references to the beneficial influence of Christianity in the relief of human misery have not been infrequent in the opening address of the medical schools of the metropolis. But this year, with the sole exception of the address of Mr. Carter at St. George's Hospital, they appear to have been absent. It is remarkable, but perhaps no subject of surprise, that these addresses have been this year as much below the standard of literary excellence as they have been deficient in Christian sentiment.

CHLOROFORMING HORSES.

SIR.—The cases under the above head in your recent issues remind me of one which I had when in medical charge of Balasore, East Indies. A Cashmere pony became suddenly affected with slight diffused opacity of the cornea. On examining the eye closely, a very small thread-like substance could be seen through the cornea, floating first in one direction, then in another. This "worm," as it is termed in India, is not uncommon in country-bed horses. I appealed to my Syce, who of course knew a remedy; but as it consisted of some secret external application, I forbade the use of it, and decided to remove the "worm" by operation. Having cast the animal, I administered about three ounces of chloroform before sufficient anaesthesia was produced; then with an ordinary lancet I punctured the lower border of the cornea close to the sclerotic. The "worm" escaped on the point of the lancet, with a little of the aqueous humour. The wound healed quickly, and the opacity gradually disappeared.

The success of my operation on the pony's eye brought about an application from a still more novel patient—viz. an elephant, young, and, but for central opacity of both cornea, very valuable. An ambitious oculist might have attempted iridectomy under chloroform; but I thought discretion was (in that case particularly) the better part of valour.

I am, etc.,
JOHN DAVIES, late Bengal Medical Service.

Bath, September 1873.

THE following advertisement, which a correspondent informs us has been appearing regularly in the *Manchester Guardian*, deserves most unequivocal reprobation.

"DEAFNESS AND DISEASES OF THE EAR.

"Second edition enlarged, with a chapter on Medical Electricity. 2s. 6d.

"*Diagnostics of Aural Disease*. By S. E. Smith, Esq., M.R.C.S. Eng., Surgeon to the late National Ear Institution, London. London: Baillière. Manchester: Heywood.

"Notice.—Mr. Smith will close in Scarborough and commence practice in Manchester, 6, Victoria Street, about October 13th. Communications till that date to be addressed to his residence, Westborough Villa, Scarborough."

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE following handbill was put into the hands of a correspondent by a bill touter a few days ago.

"*St. George's Dispensary*, 32, Great Dover Street, Borough.—Resident Medical Officer, Mr. R. J. Gilhooly (Member of the Royal College of Surgeons, England; and Licentiate of the Society of Apothecaries, London). Hours of attendance: Week days—morning, 10 to 1; evening, 6 to 10; Sundays—morning, 11 to 1; evening, 7 to 9. Terms: One consultation and medicine at the Dispensary, sixpence; advice and medicine at the Dispensary, one shilling a week; home-visitation and medicine, two shillings and sixpence a week. Midwifery, from ten shillings and sixpence. Teeth skillfully extracted, sixpence each. The Resident Medical Officer will attend promptly to all urgent cases occurring during any part of the day or night. Bottles must be provided. All payments in advance. Vaccination every Wednesday morning, free."

THE USE OF GALVANISM IN LABOUR.

SIR.—In answer to Dr. Morris's letter, inserted in your last issue, page 390, in reference to the use of galvanism to induce abortion, he says: "If I understand Dr. Radford rightly, he only claims to have suggested that application of it." This statement was all that I thought necessary to make when I wrote my last letter, as my object was then to correct Dr. Morris's unintentional mistake as to Mr. Dancer having been the first to propose galvanism in cases of *post partum* floodings. But I can assure Dr. Morris I used this agent many years ago, not only to induce uterine action, *de novo*, in the early months of pregnancy, in cases in which it was essential to expel the ovum, but also in cases in which violent floodings have occurred in the early months, to increase the energies of the uterus, in which expulsive action has commenced, but was only languid. Galvanism will not only originate uterine action and increase its energies when feebly acting, but it produces a most beneficial effect on the vital powers when reduced by hemorrhage.

Manchester, Sept. 27th.

I am, etc.

THOMAS RADFORD.

SIR.—In answer to the query in your number of the 13th, by "J. M.," respecting earth night-stools, etc., I enclose a circular containing particulars of "Caffall's (of 75, Fleet Street) patent improved earth-closets and inodorous commodes." I am well acquainted with Mr. Caffall and with his various contrivances, and I am decidedly of opinion that his inventions are real improvements, and well worthy of an attentive examination.

Alton, September 26th, 1873.

I am, etc.

WM. CURTIS, M.R.C.S., L.S.A.

AN instance of the ludicrous results which sometimes follow the use of words not generally known in addressing patients, is given by Dr. Filippi in a recent number of *L'Imparziale*. A student, he says, was in his presence one day examining a patient in hospital, and asked him: "Are you addicted to onanism?" (*Ti dai all'onanismo?*) "No, sir," was the reply; "I am a shoemaker."

TITLES IN DENTAL SURGERY.

SIR.—In your issue of September 20th, I observe a letter signed "Dens," on the above subject. In reply, I beg to suggest that, if "Dens" will make inquiry of the Secretary of the hospital to which he refers, he will no doubt obtain the information he seeks.

I am, etc.,

M. O. S.

AUSTRALIAN MEAT.

SIR.—Will any of my brother professionals connected with workhouses or gaols, where Australian meat has been used, kindly give me their experience of it as to its nutritious powers, its fitness as an article of diet for the sick, and the relative amount of nutrition to be got from a six-pound tin, in comparison with fresh beef costing the same amount of money? I shall be very thankful for any information, either sent to my address or to the BRITISH MEDICAL JOURNAL.

I am, etc.,
CALEB GARGORY, Medical Officer Tonbridge Union, etc.
Pembury, Tunbridge Wells, Kent.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Sept. 24th; The Anti-Gam-Law Circular, Sept. 27th; The Northern Echo, Sept. 26th; The Daily Post, Sept. 30th; The Bedfordshire Mercury, Sept. 27th; The Students' Journal, Sept. 27th; The Crews Guardian, Sept. 27th; The Eastern Daily Press, Oct. 3rd and 4th; The Liverpool Weekly Albion, Oct. 4th; The Auckland Times and Herald, Oct. 3rd; The Croydon Chronicle, Oct. 4th; The Australian and New Zealand Gazette, Oct. 4th; The Reading Observer, Oct. 4th; The Daily Post, October 2nd; The Daily Press, Oct. 2nd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. S. A. Lane, London; Dr. D. Noble, Manchester; Dr. Watt, Ayr; Dr. Dyce Duckworth, London; Mr. Wm. Cadge, Norwich; Dr. Edgecombe, London; Mr. Peter Pring, Ironbridge; Dr. Cowie, Lerwick; Mr. Padley, Swansea; Dr. John Dougall, Glasgow; Dr. T. W. Hime, Sheffield; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. A. Jackson, Sheffield; M.R.C.S.E.; Mr. R. S. Fowler, Bath; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. J. Hughlings Jackson, London; Mr. Kellet, Newton-le-Willows; Mr. E. MacDermot, London; Mr. Walford, Reading; Mr. H. J. Heywood, Pendleton, Manchester; Dr. Lloyd Roberts, Manchester; Dr. Fitch, Kidderminster; Dr. MacCormac, Belfast; An Associate; Mr. W. J. Newman, Liverpool; Mr. Lakin, Leicester; Mr. Parkinson, Wimborne Minster; Mr. Caleb Gargory, Tunbridge Wells; Dr. Griffith, Portmadoc; Dr. Rumsey, Cheltenham; Dr. MacIntosh, Chesterfield; Mr. R. Pollock, Acton; Mr. Cowell, London; Mr. George Newstead, Eccleshill; Dr. C. M. Durrant, Ipswich; Mr. Atkinson, Fremantle; Dr. Thomson, Bournemouth; Mr. Callender, London; Mr. E. West Symes, Leeds; Dr. David Nicolson, Portsmouth; Dr. Eddison, Leeds; Dr. Charles Maclean, Applecross; Mr. Sidney Coupland, London; Mr. J. G. Douglas, Bournemouth; Mr. Moses Taylor, Can-nock; Mr. Heffernan, Spennymoor; etc.

ADDRESS

ON

THE MECHANISM OF LABOUR IN THE COMMON FORMS OF CONTRACTED PELVIS, WITH REMARKS REGARDING DIAGNOSIS.

Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

By OTTO SPIEGELBERG, M.D.,

Professor of Gynecology in the University of Breslau.

THE minor forms of contracted pelvis are much more common than is generally supposed, and they are rarely recognised by the general practitioner. Nevertheless, they are frequently the cause of abnormalities in labour which are regarded as of independent origin; for example, premature rupture of membranes, prolapsus of funis, irregular presentations and positions. I have, therefore, considered myself justified in taking up the time of the Association with an attempt to throw some light on this difficult subject.

The most common forms of narrowed pelvis we have to deal with are—

1. The simply flat pelvis [contracted only in the conjugate diameter].
2. The generally and uniformly contracted pelvis, *pelvis aequililiter justo minor*.
3. The generally contracted flat pelvis, a combination of forms 1 and 2.

Their diagnosis is very easy, although generally represented as very difficult. Leaving aside the signs furnished by inspection, anamnesis, etc., the measurement of the pelvis consists in defining by a *compas d'épaisseur*—

- a. The distance between the anterior superior spines of the ilia—[Sp. II.]
- b. The distance between the crests of the ilia—[Cr. II.]
- c. The external conjugate—[C. e.]
- d. The diagonal conjugate—[C. d.]

The measurements of the distances between the spines and the crests of the ilia may give one of the three following results.

1. Both distances are less than they ought to be, but the relation of one to the other [the distance between the crests being from two to three centimeters longer than that between the spines] remains unchanged.
2. The distance between the crests is not, or at most very little, diminished, but that between the spines is increased.
3. Both distances are diminished, but at the same time their mutual relation is not normal, the distance between the spines being as long as, if not longer than, between the crests.

The result No. 1 denotes an universally and uniformly contracted pelvis. The result No. 2 denotes a pelvis not small, but enlarged in the transverse and contracted in the antero-posterior diameter. The result No. 3 denotes a combination of 1 and 2; that is, a generally small pelvis with contraction in the antero-posterior diameter.

The measurement of the external conjugate is only reliable in cases of great deviation from the normal length. Only when it is found to measure under seventeen centimeters, it may be concluded that there exists a pelvis contracted in the antero-posterior diameter.

All the results obtained in the abovementioned ways are corroborated or corrected by the measurement of the diagonal conjugate. This is always done by the hand alone; and, while doing it, search may at the same time be made for other signs of contraction within the pelvic cavity. To estimate the length of the true conjugate [C. v.], you have to subtract from the length of the diagonal conjugate about one centimeter and a half. But, if in all cases this average of one and a-half be taken, there is risk of often falling into great error; for, as my observations have taught me, the difference may vary from one to three centimeters. How much is to be subtracted in an individual case, will depend principally on three points:

- a. The depth of the symphysis pubis;
- b. The direction of the anterior wall or the symphysis in regard to the posterior;
- c. The height to which the promontory rises above the anterior border of the pelvic brim.

The deeper the symphysis, the more vertically it is directed, the more elevated the promontory—the greater is the difference between the diagonal and the true conjugate, the more you have to subtract from the former to find the length of the latter. I need not mention that these relations may exist in different combinations.

The manner in which the head [and now I treat only of vertex presentation] passes the contracted brim of a flat pelvis, is quite different from that in which it passes in a generally and uniformly contracted pelvis.

While in a normal pelvis the head enters the brim with the occipito-frontal plane, the anterior and posterior fontanelles being on the same level, the sagittal suture being nearly in the transverse diameter—in simply flat pelvis the head enters with the anterior half of the vertex. The chin has become removed a little from the chest; the anterior fontanelle lies a little nearer to the examining finger than the posterior; the coronal suture runs near and parallel to the conjugate diameter; the biparietal diameter of the head lies in the conjugate itself; the biparietal to that side of the conjugate to which the back of the head is directed. The sagittal suture runs in a transverse direction and very near to the posterior wall, an exaggeration of Nægele's obliquity; the anterior fontanelle is found in the neighbourhood of the promontory on the side to which the forehead is directed. This is what I call *Vorder-scheitel-Einstellung*.

In this position the head passes the brim in the following manner.

1. The posterior parietal bone, which is situated above the promontory, is flattened and depressed against the latter by the powers of labour, and is thereby forced more and more down, and the sagittal suture comes nearer the true transverse diameter; that is, to the anterior margin of the brim.

2. The whole head descends, but not in the axis of the brim; the biparietal diameter does not descend in the conjugate, and the biparietal on the side of it, but the head is pushed in an oblique direction towards that side where the forehead lies, so that the biparietal diameter, while it only approaches the antero-posterior diameter, reaches a parallel plane below the brim. That the movement downwards is truly so described, is shown by the course of the depression caused by the promontory on the posterior parietal bone, running as it does from the parietal protuberance towards the inferior anterior angle. During this movement the head becomes a little more flexed, the anterior fontanelle rises higher up, the occiput comes down, and now can easily be felt.

The mechanism, therefore, is composed of two rotations of the head, the one on the occipito-frontal axis [the sagittal suture leaves the posterior border of the brim], the other upon the transverse axis [the occiput comes down].

By observation of these rotations, you recognise the progress of labour; if both be completed, then you may conclude that the contracted plane is passed, and the labour now goes on as a natural one. But, as long as the rotations are not completed, we ought not to interfere—the case is a *noli me tangere* for forceps. If interference be demanded on account of danger to the life of the mother, then craniotomy, and in some single cases version, is to be used.

Quite in another way does labour go on in generally and uniformly contracted pelvis. Here the head meets already in the brim obstacles from all sides, in the same manner as it meets them in ordinary labour when it has arrived near the outlet. In consequence of this, the occiput, like the shorter arm of a lever, moves downwards; the head is flexed in the highest degree; the occipital protuberance forms the lowest part of the head. Here you find the posterior fontanelle near the promontory, the head being in an exaggerated Nægele's obliquity; the sagittal suture runs from this point nearly vertically to the anterior fontanelle, which is not to be reached at all by the finger, or, if so, is found above the linea innominata and pressing against it; on the opposite side the squama occipitis is felt, and the neck is pressed against the linea innominata—the suboccipito-bregmatic plane fills the brim. This position I call the *Hinterhaupts-Einstellung*.

In it the head is driven like a wedge into the pelvis; and if the cavity of the latter become progressively wider, the obstacle may be overcome by the natural forces. But if this be not the case, if the contraction increase progressively, no advance of labour will take place, the head remains wedged in the brim [paragomphosis vera]. In such cases, the only rational aid consists in the performance of craniotomy. The most dangerous of all instruments here is the forceps, because it can overcome the obstacle only by rupturing the genital passage, the soft as well as the bony, or by breaking and moulding the child's head. Therefore, the progress of the labour must not be interfered with as long as the mother's state will allow; but when her symptoms become urgent, then the child's head is to be broken up.

In generally narrowed flat pelvis the *Vorder-Scheitel*, or the *Hinterhaupts-Einstellung*, may be found, according to the preponderance of the antero-posterior, or of the general contraction. But in some cases we meet with lateral flexions of the head towards the shoulder, which deserve special notice. Of these, the inclination to the posterior shoulder is the more frequent, as it is a very exaggerated state of Nægele's obliquity; the sagittal suture lies upon or above the promontory, the an-

terior parietal bone covers the inlet of the pelvis—presentation of the anterior ear—*Vordere Scheitelbein-Lage*. This is met with principally in cases of high elevation of the promontory, and it is rectified as already described under No. 1, if it be rectified at all.

The reverse inclination of the head, that to the anterior shoulder, is rarer, and at the same time more dangerous; here the sagittal suture is found close to the upper border of the pubes, the posterior parietal bone covers the plane of the inlet, the anterior looks to the fundus uteri—presentation of the posterior ear—*Hintere Scheitelbein-Lage*. It is met with usually when the promontory is not elevated and the anterior wall of the pelvis has a nearly vertical direction, which does not allow of the anterior os parietale rolling down into the inlet. When, in the course of labour, the anterior parietal bone comes more and more to be felt, and the sagittal suture moves from the anterior border of the brim towards the transverse diameter, then we may infer a lucky progress. But ordinarily this will take so much time that we cannot wait for it, the soft parts of the mother running the risk of being torn, or of suffering mortification from the pressure of the head against the sharp anterior margin of the brim.

If these positions be recognised very early in labour, and if then we find that spontaneous rectification will take too much time, we do best to perform podalic version, as by this operation we produce a position much more favourable than the primary one. These anterior or posterior lateral flexions of the head in contracted pelvis alone constitute for me a strict indication for early version; in all other cases of narrowness, the indications for version vary according to the talent and judgment of the individual operator. But when the performance of version in the cases in question does no longer appear likely to be easy, or if it be injudicious to do it, then we must perform craniotomy, and the earlier that is done the better for the mother.

The foregoing general notions are the most important which I have to communicate about mechanism of labour in contracted pelvis. To give more details, want of time forbids, as well as want of sufficient experience of the rarer varieties of pelvic anomalies and presentations. The above remarks are based upon more than five hundred personal observations of labour in the three named varieties of abnormal pelvis.

FALLACIES AND FAILURES IN ANTISEPTIC SURGERY.*

By EDWARD LUND, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

I PROPOSE in this paper to consider, very briefly, some of the more common fallacies and sources of failure which are entertained with regard to antiseptic surgery, and the consequences which follow from their adoption.

That the antiseptic method of treating wounds, large abscesses, and such like surgical cases, when correctly carried out, is right in principle and successful in practice, no one can deny who has seen the plan in full operation, from day to day, in any large hospital; and the more evident will the good results be rendered, where this practice can be contrasted with the ill effects of previous hygienic conditions.

I will first enumerate some few of the erroneous notions which are entertained by surgeons on this subject, and then I will proceed to consider them in detail, so as to prove their fallacy, and the tendency which such notions have to lead to the entire rejection of the system, or to its certain failure in practice.

FALLACIES.

1. It is a fallacy, or an erroneous doctrine, in the practice of antisepticity, that it is the agent employed, and not the result produced, which must be closely watched.

2. It is a fallacy to assume that the success or failure of the system is to be measured alone by the absence or presence of suppuration.

3. It is a fallacy to look upon the secretion and expulsion of pus as so much broken down tissue produced by the removal of previous induration, the reduction of swelling, and the clearance of the general system of some peccant matters.

4. It is a fallacy to regard the admission of air to wounded portions of the body, unless the air be filtered and disinfected of its septic particles, as a matter of light importance, and to omit to note the subtle influences which travel with unmeasured rapidity along the atmospheric wave.

5. It is a fallacy to ignore the possible contagion of septic matters from one wound to another, from one person to another, from tainted instruments and soiled dressings, and thus to neglect the most scrupulous cleanliness in the treatment of wounds, by quick removal, from within their range, of the minutest portions of the products of putrefaction.

6. It is as fallacious as it is inconsistent, to attribute on the one hand to atmospheric causes the presence of pyæmia, septicæmia, erysipelas, and the like, and yet to take no precautionary measures which can be proved to be efficient to neutralise these ill effects in the treatment of wounds.

1. Returning, now, to the first fallacy, the common error is to say, "I have used carbolic acid, and yet the wound has not done well, therefore carbolic acid is useless in the treatment of wounds." Now, it is clearly not the carbolic acid with which we have to do, but it is it or any other agent which we like to use, which shall prevent putrefaction in the excreta of the wound. It is the prevention of putrefaction, and this alone, which we seek to obtain. Carbolic acid is the first and chief agent we have thus far employed, and we still use it, because there is much to recommend it; but to say that it has any special power beyond its antiseptic properties is, indeed, a fallacy.

2. With regard to the second of these fallacies, I may say that in the early stages of antiseptic practice it was thought that this plan would lead to the total abolition of suppuration; but, as suppuration is to be regarded only as one of the stages or conditions of inflammation, all that antisepticity can do is to control that process, and to a corresponding degree moderate the excretion of pus.

3. We next come to the third fallacy. Nurses are very apt to say, "Ah! sir, if you don't have it mastered now, it will show itself afterwards," referring to suppuration in wounds, under the semi-popular, yet erroneous notion, that pus must be formed during the process of healing, either at the seat of the wound, or, if not, elsewhere. Now, this surely is a fallacy. Again, with regard to the necessity for suppuration as a means of reducing previous induration or abnormal growths, it is true that in the stream of pus which escapes from an abscess or a wound we may find flakes of lymph, broken down blood-clots, and little spicula of bones; but these are merely held in mechanical suspension in the pus, which is still only an excretion from the surface, a product of inflammation, not liquefied or disintegrated tissue.

4. If we take the fourth fallacy, we may say that where unlooked-for results have occurred in the healing of wounds, without any special treatment to exclude the impurities of the air, the causes must be sought for in the fact that the air, when it surrounded them, was very pure, or there must have been great constitutional vigour on the part of the patient. These are exceptional cases; and it is not for such as these, but for the more ordinary conditions, that the dressings we now employ are used, as "air-filters" and "wound-covers", to correct external influences.

5. The fifth fallacy, it will be remembered, is the practically ignoring the possible contagion of septic matters. Mr. Howse very recently, in a clinical lecture on erysipelas, made the remark that, in watching the progress of cases treated antiseptically, he had found that, while septicæmia might often occur, it rarely, if ever, passed on to pyæmia, but remained only as local mischief, with loss of tissue, but not blood-poisoning. One of the great provocatives, but not the only cause of suppuration in wounds, is the irritation induced upon their surface by the products of putrefaction generated in the serous and other discharges which rest upon them. Remove these quickly, as soon as formed, or, still better, avert or prevent their formation entirely; and the whole aspect of the process of repair is changed. Either perfect primary adhesion results, or granulations form, fill up the chasms of the wound by daily advance, and, themselves unirritated, do not produce that redundancy of cell-development which we call pus (useless in its office, unless as a safety-valve to excessive inflammatory action); lymph is excreted in the place of it; and the wound is healed.

6. In reference to the sixth fallacy, Dr. Macleod reports that Mr. Holmes has observed that, with little to encourage him in his earlier cases, when he proceeded to dress the more recent ones himself or under his own immediate inspection, success took the place of failure, and he became an advocate of the system. Dr. Macleod has even gone so far as to say that the time occupied in dressing wounds upon this principle is one of the chief objections to its general employment. This would seem to be a fallacy; for, if proper preparations be made, and the plan be carried out each time on a good pre-arranged system, I find that the dressing of an amputation or any similar wound can easily be performed in from five to seven minutes with positive certainty. Compare this with the time occupied in former days in the preparation of that time-honoured luxury of ancient surgery, the bread-poultice à la Abernethy, and we can have, on this question of time, a gain rather than a loss.

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

FAILURES.

Now, as to the sources or causes of failure which may vitiate the ultimate results of any operation conducted on antiseptic principles, I would mention—

1. Non-attention to the needful preparations before the operation is commenced, in reference to the part to be operated upon, the instruments to be used, and the assistants who are to take part in it. This applies as much to the treatment of abscesses as of wounds properly so called, for the entrance to the abscess must be most carefully guarded at the time of incision.

2. Defective arrangements during the progress of the operation, from its commencement until its entire completion, so as to preserve the wound from septic influences. Professor Lister's old remark, that in these cases it is essential that we should have the perfect co-operation of our assistants, and that they should be at one with us in all the precautions we strive to take, is very true; for, if they be indifferent, or there exist a disbelief on their part of the necessity for such measures, failure is almost sure to occur; for at the time of the operation there will be inevitably a certain laxity or even carelessness in protecting the newly exposed tissues from injurious contact with noxious matters in the atmosphere.

3. The third cause of failure may be described as faulty adjustment of the dressings after the operation is finished. It is important to remember that putrefaction, once set up, is far more difficult to check and to correct effectively than to stop its advent in the first instance. Prevention here is indeed better than cure. The greatest care must be taken, in adjusting the first dressings, to see that they cover ample space, to provide for the escape of serum and other matters from the wound, the accumulation of which within the cavity either of wounds or abscesses is sure to jeopardise the result. It is very necessary to adjust the dressings so as to filter the air which penetrates them, and yet not to allow any puckering up of the dressings to exist, whereby channels would be left so capacious that a stream of air would pass along them too large to be disinfected by the antiseptic vapour thrown off from the dressings in any given time. One source of failure in the management of amputations near to the wrist and ankle is, that suppuration occurs along the sheaths of the tendons here found, causing abscesses at some distance up the limb. Now this is occasioned by suppurative inflammation of the lining of the sheaths from the serous discharge or the blood being there retained and undergoing putrefactive change; hence the great necessity, in dressing wounds at the time of the operation, to syringe out the cavity well with the antiseptic solution, and especially to direct the stream along the lining of the sheaths of these tendons. Another source of failure is this, that the dressings, either immediately after the operation or subsequently, are so placed over the wound or stump of an amputation that they are apt to shift or become displaced downwards, leaving a cavity between them and the face of the stump, in which more air collects than the vapour generated from the resin cloth or gauze can disinfect; and putrefaction, once established, goes on to an advanced degree.

4. The fourth source of failure is injurious delay in re-dressing the wound for the first time after the operation. It is a common source of failure to use antiseptic preparations as dressings to wounds which are not persistently antiseptic, or which, from their very nature, cease to exert an antiseptic influence after a very short interval—to allow dressings to remain on too long without being guided solely by the presence of discharge upon their surface, which, having exuded through layers of material employed (whatever that may be), have reached the air, and there becoming putrid, have carried their septic influence backwards to the wound.

5. We come now to the fifth source of failure—viz., carelessness in the special method of removing the old dressings and applying new ones, even where the atmosphere is assumed to be rendered innocuous by antiseptic vapour.

Want of care in the removal and re-application of the dressings in three particulars may lead to failure.

a. Where the spray is used on one side only, and the dressings are lifted off from the whole surface of the wound, the vapour may not cover the exposed surface. To correct this, it is necessary to raise the dressings up only from one side at a time, and to follow up the stream of spray at the angle thus formed between the dressings and the wound until the whole surface has been exposed and again covered over.

b. Failure may result from removing the guards of cloth or lint which are laid over the wound in the same manner, or replacing them without taking care to do so against the stream of vapour, so that it may well overcloud the surface which is the last to be exposed.

c. The resin cloth or gauze which may be applied may of itself become contaminated with septic matter just before the operation, by lying upon

some soiled or dirty surface. To remedy this, I now find the best plan to be always to damp with the carbolic solution the portion of the resin cloth which is nearest to the wound; or even sometimes I treat the material in the same way, and apply all the dressing damped with the antiseptic lotion. In dressing abscesses for the second, or, indeed, any of the subsequent times, it will occasionally happen that the drainage-tube which we have inserted has become blocked up by a fibrinous clot detached from the sides of the sac of the abscess; or even, some days after the tube has been taken out, such a coagulum may block up the opening and cause detention of serous secretion within the cavity, which, by accumulation and distension, will act as a foreign body and set up secondary suppuration. It is therefore of the greatest importance to avoid this one source of failure in the management of abscesses; to be quite certain that, either from the size of the aperture of exit for the matter in the first instance, or by its continued patulence, there shall never be any impediment to the free escape of that serous secretion from the lining membrane of the cavity which is sure to occur for several days after a large abscess has been opened. My usual plan now is to change the dressings in a severe wound or amputation each day for the first five days; to remove the drainage-tube on the third day, and the first of the sutures on the fifth. After this, the dressings are generally replaced on each alternate day for about six more days, during which time, as a rule, all the sutures have been taken out, and primary adhesion has been effected.

As to putrefaction in the excreta of wounds, I believe there are many degrees of it, and it is desirable, if possible, to have some test by which to identify them. The smell is one which is most usually had recourse to; and if no very positive smell be detectable, it is supposed that little putrefaction exists. We also look to the colour of the oiled silk protective that lies next to the wound. If, by chance, it should retain for more than twenty-four hours its green colour, it is positive that no putrefaction exists. If it be slightly bleached or blanched, I believe, from the presence of sulphurous acid as the result of oxidation of the sulphur of the albuminous compounds of the serum, that is a condition which need by no means excite alarm. But, if here and there on the oiled silk protective we find brown, reddish-brown, or even black spots, they can alone be caused by the sulphuretted hydrogen—also a consequence of a more advanced condition of albuminous putrefaction acting on the lead in the oil with which the silk has been treated. But here I may state that I believe, if chemistry would serve us, there are products yet to be discovered in the earlier stages of putrefaction, before the offensive gaseous products, sulphuretted hydrogen and ammonia, are evolved, which are far more dangerous for systemic inoculation. It is so with the dissection-wound; it is acknowledged by all that to receive a wound from a scalpel used on a body recently dead, and when the putrefactive changes are just beginning, is a condition of things far more likely to be followed by dangerous constitutional symptoms than if the same wound had occurred when the subject was highly putrid. The latter might cause septicæmia with excessive local disturbance, but the former would show little immediate results at the spot wounded, though far graver symptoms in the general system would inevitably follow. And so, perhaps, it may be that the older surgeons, who utterly despised all attempts in this direction, used at times to indulge in some such expressions as these with regard to the state of a wound which I should call grossly putrid. "Ah! well, all right; a fine stink; I like a good smell; go on with your poultices." It may be, I say, that blind experience had taught them that here, with the more advanced signs of putrefaction, there was really less danger of blood-poisoning than if there had been evolved from the wound merely a faint, indescribable sickly smell; yet the one condition involves the other. To reach the second stage you must needs travel through the first; the one, to a certain degree, produces the second, the first being the more hazardous. Your patient thus far may possibly have escaped the Scylla, but he may yet sink in the Charybdis of profuse suppuration and pyæmic inoculation. That the inodorous products of putrefaction are really more dangerous than those attended with powerful smell, is also well proved in the curious, yet serious, conditions produced by cheese-poisoning and sausage-poisoning, of which we occasionally hear. Both are extremely subtle in their nature, both are attended with most serious symptoms, and both are but little amenable to treatment. Compare these cases, where the food which has been eaten has but little smell of putrefaction, with the use of high game and other articles of food in which the sense of smell is stimulated to no ordinary degree, and yet, beyond a passing diarrhoea, the person so indulging may suffer but little.

It is here worthy of remark that the site of putrefactive change on the surface of a wound may often be localised entirely for several days to the little spots where sutures are placed; and if these have been made of silk or thread which, although protected by a mixture of wax, resin,

and carbolic acid, do not retain their antiseptic powers, but allow the secretions of the wound to collect within their fibres and there to putrefy, they cause detached marks of a black or reddish brown colour on the oiled silk protective which cannot be washed off; and when such marks are to be seen, all the sutures should be removed immediately.

6. The sixth and last cause of failure is, being needlessly alarmed at certain complications which often arise; these being regarded as the harbingers of evil, the system is followed out less exactly, as if the case were hopeless, or it is forthwith discarded altogether.

The most common of these complications is the sudden appearance of redness in the skin near to the wound, which seems to forebode the advent of erysipelas; yet this rarely goes beyond the condition of severe erythema, and it is generally most easily subdued by using freely the oiled silk protective already referred to. This seems to moderate the irritation which the carbolic acid had occasioned, and the skin quickly recovers its healthy state. Even, likewise, where the pulse has become very rapid, the temperature very high, and some constitutional disturbance has been set up, these symptoms will eventually subside, and not advance to any very serious degree if the conditions of antisepticity be again secured.

The summing up of the whole matter is this: "*when you ask for Glenfield starch, see that you get it*"; and when you propose to conduct a wound or an abscess to a successful and speedy issue by the antiseptic method, if you seek for antisepticity, "*see that you really have it*"; from the very first moment in which you adopt the treatment to the last, see that you watch with scrupulous and suspicious care every possible inlet for sources of fallacy and failure, before you condemn or reject a system upon which judgment should not be held until it has been rigidly and fairly tried in all its details.

ON A DIGITAL IMPRESSION PRODUCED BY THE ACCOUCHEUR IN THE CRANIUM OF A FŒTUS DURING BIRTH: ITS HISTORY AND RESULTS.*

By J. MATTHEWS DUNCAN, M.D.

Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the School of Medicine, Edinburgh.

I NARRATE the following case, only partly on account of its own interest and importance, having for a chief object to use it in order to make some remarks on a point in obstetrics which, I am convinced, does not receive due attention and consideration. It is well known that, in reporting results of medicinal or operative treatment or interference, a very common, if not the regular, mode of narrating the most favourable for the child is by such phrases as "*Born alive*", or "*Born alive and survived*". Such phrases give neither a complete statement, nor do they indicate what were the ultimate results of the treatment or interference. Conditions and results are omitted which are of the gravest importance—of an importance only less than that of life itself.

Many individual observations and the researches of Dr. Arthur Mitchell have shown that difficult labour, and especially operative interference, is occasionally the cause of insanity in various forms. Injuries of the physical frame of the child during labour may lead to permanent corporeal disabilities, as is well known; but it should not be forgotten that the soft and rapidly growing head of the child may be the subject of injury producing irremediable and awful results, even when the child is born alive and apparently in good health, without visible injury, and even although it may for many months appear to be in every way a proper child. The delicate brain may sustain irreparable damage even from the compression and shearing it undergoes, in what would be called a common moderately severe labour which terminates spontaneously. Paralysis, epilepsy, imbecility, insanity, may thus be produced; and there can be no doubt that more definite physical injury by instruments is still more likely to have such baneful consequences.

It may, indeed, be difficult in many cases to bring these ulterior results in surviving children home to their real cause; but the subject is still novel, and very much may be expected from continued careful investigation of the matter.

It is plain that all these results to which we have referred subtract from the reputed success of operations and interferences; and that, in

future, they cannot with propriety be neglected in forming judgments as to the value of them—inquiries in which the present race of obstetricians are warmly interested and actively engaged.

In the case to be narrated, the injury was inflicted by the finger of the accoucheur producing artificial rotation of the head in a case of narrow pelvic outlet, which the head was affronting in a slightly unfavourable position. The injury was a persistent digital impression on a parietal bone, such as the index finger would produce on the flat surface of a mass of dough into which its terminal phalanx was pushed to the depth of about half the finger's thickness. The result was slight, short, but very frequently repeated epileptiform seizures, which lasted for some time after the digital impression had become cured or disappeared, and which at last were gradually modified, becoming less and less, till now they are gone, being replaced by slightly awkward movements somewhat choreic in appearance.*

Mrs. C., married late in life, had her first child in England, in 1871. It presented the breech, and, after much time had been spent and much difficulty experienced, was extracted dead. The perinæum was extensively torn, the sphincter being completely divided. In her second pregnancy, she came to Edinburgh, and was confined under my care. The propriety of inducing premature labour was urged upon me, but I decided not to interfere with the course of the pregnancy. At the proper time, labour came on, and advanced naturally and quickly till the head was arrested at the outlet of the bony pelvis. The vertex presented in the second position at the outlet, lying nearly transversely. The pains were powerful, and for about two hours did not move the head in the least from its position. Owing to the absence of perineal obstruction, the head was easily felt, and its condition examined. It was jammed in its position. Manipulation of it was easily effected; and I proceeded, in the absence of pains, to rectify its position by pressure on the left parietal bone in front of the parietal protuberance. The bone was felt to yield under the pressure, which had, however, some beneficial effect—the head rotating slightly, so as to bring the occiput more directly under the arch of the pubes. Repeated examination showed me at the time that a digital impression was produced and persisted; but for three days I took no further notice of it, not expecting any notable evil to arise from it. The child was born alive soon after the attempts at rectification, and did well. It is now alive, plump and happy.

On the third day after the child's birth, the monthly nurse attracted my attention to twitchings of the face and superior extremities. She had then noticed them for the first time; and for about three weeks they grew gradually worse, occurring frequently during night and day, but not greatly interfering with efficient sucking, and little with sleep. The nurse alleges that the spasms at first affected the right side only. After three weeks or thereabout, the twitchings were not so severe, but they continued distinctly till the child was six weeks old; they then gradually disappeared, and now the child, being 4½ months old, has only some occasional awkward movements of the upper limbs, as already said. Bromide of potassium was given irregularly, four grains being generally administered during the day. The irregularities in its administration led to the mother and nurse observing a coincidence of lessened severity and frequency of the fits and the regular use of the medicine, as well as the reverse.

At the end of a fortnight after birth, the impression had distinctly flattened out; and it rapidly became less and less marked till about six weeks after birth, when its previous site could no longer be made out.

SHORT NOTES OF A CASE OF IMPERFORATE HYMEN:

IN WHICH UPWARDS OF ONE HUNDRED OUNCES OF RETAINED MENSTRUAL FLUID WERE EVACUATED.†

By D. LLOYD ROBERTS, M.D., M.R.C.P. Lond.,

President of the Medical Society, and Physician to St. Mary's Hospital, Manchester.

MARIA S., aged 20, single, was admitted into St. Mary's Hospital on April 30th, 1873. She stated that the abdomen had been gradually enlarging for some years without much discomfort, until the last few months. There had been no hæmorrhages. The abdominal cavity was occupied by a tumour which sprang from the pelvis, fluctuated freely, was dull on percussion, and extended centrally above the umbilicus, and laterally into the flanks. She voided her urine on her hands and knees with great difficulty. She suffered from constant

* The child is now perfectly well.

* Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

† Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

backache, and shooting pains in the pelvis and down the thighs. The bowels were much constipated, and after an evacuation she suffered severe and prolonged pain. She had constant headache. The vulvo-vaginal aperture was occluded by a congenital fibroid-like and unyielding hymen. A semi-purulent discharge issued from the urethra, which was red and inflamed, and so patulous that the little finger could be easily passed into it. Through the hymen fluctuation was distinct, especially during straining or coughing. A rectal examination conveyed the impression that the vagina was filled with viscid fluid, which exercised considerable pressure on the gut.

On May 17th, 1873, after chloroforming her, a small exploratory trocar was pushed through the centre of the imperforate hymen, and a dark treacly fluid showed itself at the external orifice, too thick to flow through the cannula. The small cannula was withdrawn, and a larger trocar was introduced through the orifice already made; the fluid now slowly passed through the tube, aided by gentle but firm pressure, until the fluid, becoming more inspissated, almost ceased to pass. On withdrawing the cannula, a bandage with pads above the pubes was applied firmly to the abdomen, and the patient placed in bed. The fluid removed measured eighty-four ounces, and it was estimated that twenty ounces more oozed away during the subsequent fortnight. She progressed favourably until May 21st, 1873, four days after the operation, when she became very restless and uneasy with symptoms of general pyrexia, with abdominal pain and tenderness. It was found that the fluid had ceased to pass, although the parts were regularly cleansed with an antiseptic fluid. However, at the next syringing, the fluid, which had become intensely offensive, freely escaped; and then the feverish symptoms, and the abdominal and pelvic pains, which had continued for twenty-four hours, quickly subsided.

On June 14th, 1873, a probe was passed into the orifice already made in the hymen, and the opening was enlarged with bougies. The membrane was then divided obliquely downwards on each side of a bougie, and the aperture was still further enlarged by the introduction of the finger; very little hæmorrhage occurred. During the passage of the bougies, about two ounces of yellow purulent matter passed. The os and cervix uteri could not be made out by a digital examination. A second examination, made on June 24th, revealed the large and patulous cervix. The body of the uterus could be felt *per rectum*.

On June 25th, she commenced to menstruate; the flow lasted several days, and was of good colour. She left the hospital on June 28th.

For the following report of the fluid removed, I am indebted to my friend Dr. Mann. The fluid was of a chocolate colour, about the consistency of treacle, without odour, and of neutral reaction; specific gravity, 1055.

Microscopic Appearances.—Red corpuscles were present in various stages of disintegration; some were shrivelled, and assuming a granular appearance, as though undergoing fatty degeneration; others were almost of normal character. A number of highly coloured bodies were seen, which consisted of aggregations of red corpuscles matted together. On addition of acetic acid, they were resolved into individual discs; some of these bodies were spherical, reaching 1-1200th of an inch in diameter; others were of irregular outline. Epithelium was but sparingly represented; a few specimens from the vagina, in a state of fatty degeneration, being the only ones seen. White corpuscles and free fat-granules complete the list.

Spectroscopic Appearances.—A portion of the fluid being diluted with distilled water gave the absorption-bands of oxyhæmoglobin and hæmatin; the reaction was but slight, even when the solution was highly coloured. On adding a little of Stokes' protosulphate of iron solution, the bands of reduced hæmatin were developed with much more distinctness than the original bands displayed. A portion of the fluid being treated with acetic acid and extracted with ether, gave the bands of hæmatin with great distinctness. The oxyhæmoglobin reaction was produced by the fresh blood which had been poured into the uterus at the last menstrual period; whilst the hæmatin reaction proceeded from that portion of the blood which had been pent up in the uterus for some time, this being the condition which the colouring matter of blood assumes in old blood-stains and in blood extravasated in the body and thus removed from the circulation.

These cases are always interesting not alone for their rarity, but likewise in consequence of the mortality attending the operation for the evacuation of the pent-up fluid. As to the treatment: in making the aperture, the incision, in the first instance, should be sufficiently large to enable the fluid to pass easily, the more complete division of the membrane being delayed until after the evacuation of retained fluid. After the withdrawal of the cannula, care should be taken to keep the opening patent for the free passage of the fluid, as the discharge, inodorous, when first passed, soon becomes decomposed; it may develop symptoms of blood-poisoning. This fact was illustrated in a

small degree by the severe constitutional symptoms set up in consequence of the discharge having ceased to pass for a few hours, and the rapid disappearance of these ominous symptoms on the re-establishment of the flow. Some difference of opinion exists as to the advisability of making abdominal pressure to favour the passage of the fluid. I fail to see any objection to a gradual and increasing compression on the abdominal swelling during the passage of the bulk of the fluid. Pressure ought afterwards to be kept up by an abdominal bandage and pads. By this means a flaccid and over-distended uterus may thus the more readily contract upon its contents, so inducing a more regular and continuous discharge of the fluid, and perhaps a more rapid involution of the enlarged uterus.

A word in reference to the cause of the mortality in these cases. From observation of the causes of death after pelvic and abdominal operations, I would venture the opinion that the high death-rate in these cases is due to septicæmia, and not, as is generally supposed, to metritis or peritonitis.

HÆMATOMA AURIS.

By C. W. S. COBBOLD.

As this subject has lately been brought forward in the JOURNAL by Dr. Yeats, I think it a fitting opportunity to record the following case, which occurred in the Metropolitan Asylum at Leavesden, under the care of Dr. T. Claye Shaw; together with the result of an examination of the ear after death. One point of interest in the case is, that it occurred in an idiot; whereas hæmatoma aurium has been spoken of more in connection with forms of unsoundness of mind other than idiocy and imbecility. Dr. Grabham, of Earlswood, however, has told Dr. Shaw that he has seen othæmatoma in three idiots (boys) under his care.

R. C., aged 27 years, was an idiot, quite unable to speak, understand the simplest questions, or attend to himself. A hæmatoma developed itself in the left ear about four years ago, in the usual way of an effusion in the fossa of the antihelix, and was in no way to be traced to injury or violence. After passing through the stage of effusion, absorption set in, resulting in the firm thickened structure which is familiar in these cases. The patient lately died from phthisis; after death, the cartilages of the nose and eyelids were found to be unaffected. The weight of the brain was 48 ounces, and its chief defect was in the posterior cerebral lobes, which, when *in situ*, failed to cover the upper surface of the cerebellum. At the *post mortem* examination, Dr. Shaw removed the external ear, and afterwards gave it to me to examine.

The usual thickening and unevenness of the cartilages were present, with an especially hard nodule in the position of the fossa of the antihelix. On section, the cartilage was seen to be split irregularly into two layers over a portion of the ear; these were separated, for the most part, by a fibrous structure; and at one place there was a small bony mass between them, about the size of a small pea, but flattened. This was the hard substance which had been plainly felt before the ear was cut into. I have made sections through this body, with the layers of cartilage on each side of it. Under the microscope it is distinctly seen to consist of true bone, with well-formed Haversian systems. The bone is very vascular and soft, owing to the large number of its Haversian canals; these run irregularly in all directions, so that no section of the bone could be said to be longitudinal or transverse, except with regard to particular systems. Its softness is sufficiently indicated by the fact of my being able to cut very tolerable sections with a large scalpel. Beside this bony development, there were, irregularly scattered about in the tissue between the two plates of cartilage, small isolated portions of cartilage, quite resembling in structure the normal cartilage of the ear.

I do not find, in the essays by Dr. Stiff and Dr. Nicol, any account of the *post mortem* examination of hæmatomatous ears. The observations of Dr. Fischer, in his essay, seem to be based upon such examinations, although it is not expressly so stated in the translation given in the *Asylum Journal*. He says: "Both cartilage plates (the old and the newly formed) are indurated and present ossific points." Dr. Yeats says, in his paper, that sometimes the cartilages are left "hard, as if they were ossified, although only very little thickened." Ossification of yellow fibro-cartilage, if it ever occur, must be extremely rare; this substance is not one of those from which bone is naturally developed, and I do not regard the present case as an instance in which it has been so formed. My sections do not present the appearances usually seen in ossifying cartilage; there is no arrangement of the cells in rows; and, in fact, the bone is nowhere continuous with the cartilage, without the interposition of a layer of fibrous tissue, from which the bone seems to be developed by a process similar to that of ossification in membrane.

Further on, in Dr. Fischer's essay, he speaks of a "tough, fibrous mass" connecting the two layers of cartilage and "sometimes presenting cartilaginous and osseous deposits." This is precisely what I have found in the present case.

The conclusions to which the appearances point are briefly these. In the first instance, when effusion takes place, there is separation of the perichondrium from its cartilage; the former then develops fresh cartilage from its inner surface, and thus there come to be two layers of cartilage, containing between them the products of effused material; these, after a time, seem to consist chiefly or entirely of fibrous tissue. It seems to be a question whether this tissue may not be regarded as forming a new perichondrium upon the inner surface of the cartilage; at all events, in the present case, this is the tissue from which the bone has been developed; and at other parts it contained new cartilaginous deposits. I cannot help doubting whether the bone that is sometimes found in these cases is ever developed from the fibro-cartilage. The ear now described was certainly affected with true hæmatoma, as it was observed throughout its course by Dr. Shaw, who has kindly supplied me with the notes given above. In examining the ear, I did not find any blood-crystals, such as are often seen in old apoplectic clots.

With regard to the suggestion of Dr. Needham in the JOURNAL of July 5th, Dr. Shaw wishes me to say that the only case of recovery after hæmatoma that he has met with was one of short duration. It occurred in a man who was in a county asylum, and the subject of "recurrent mania." He had once been discharged cured, but was readmitted in a state of considerable excitement. After a few months, and whilst he was still in a maniacal condition, a hæmatoma of the left ear appeared, which lasted about three months, and then shrivelled. The acute symptoms of brain-lesion disappeared, and he was discharged, being able to gain his livelihood. But after twelve months he was readmitted, and died shortly afterwards.

This would make it interesting to know whether the patient, whose case is related by Dr. Yeats, may not suffer a relapse. Dr. Needham has most certainly supplied a case of recovery for ten years; and all these three cases tend to show that the occurrence of hæmatoma is not of such immediately bad prognosis as some have believed.

RETROSPECTIVE JOTTINGS.*

By C. M. DURRANT, M.D., F.R.C.P.,

Physician to the East Suffolk and Ipswich Hospital.

SPINAL AFFECTIONS (*continued*).

I REFERRED in my former paper to the paramount importance of securing, so far as is possible, a correct diagnosis in all cases of spinal diseases; and for this purpose, it may not be amiss to pass briefly in review the more prominent symptoms which help to distinguish spinal meningitis from myelitis.

We may notice, first, the comparative absence of head-symptoms in lesions of the cord, both meningeal and myelitic, unless these attack quite the upper part of the structure, when, of course, we may have phenomena which are more or less common both to cerebral and spinal disturbance. If head-symptoms, such as severe vertigo, convulsions, coma, etc., obtain, in addition to the more direct spinal ones, we have probably co-existing cerebral as well as spinal meningitis, rather than simple myelitis of the cord itself. As a rule, spinal meningitis more frequently attacks the upper part of the cord, while inflammation of its substance is more commonly seated in its lower dorsal and lumbar portions.

While noticing these conditions, we must not forget that symptoms of a cerebro-spinal character may, and do occasionally occur, having an entirely different origin. I particularly refer to those cases depending upon an extrinsic cause, whether arising from injury or poison; for example, the result of Bright's disease. A recollection of these facts is, perhaps, of more importance in reference to treatment than to diagnosis.

Another distinguishing symptom between spinal meningitis and myelitis is pain, the character of the pain, and its locality. Severe pain is a common result of spinal meningitis; and this is seldom confined to the spine itself, but shoots down the extremities, and is often aggravated to an almost unbearable degree by the slightest movement. In myelitis, on the other hand, pain is by no means a prominent symptom; and when it occurs, it is rather as a dull aching, referred to the seat of lesion; and increased by sharp percussion, but neither extending to the extremities, nor greatly influenced by muscular move-

ment. The constrictive band-like sensation around the waist which constantly accompanies myelitis, is described as a feeling rather of discomfort than of pain. When the membranes only are affected, this symptom is not complained of.

Paralysis is an important distinguishing feature between pure uncomplicated myelitis and spinal meningitis. In the latter, there is sometimes an appearance of paralysis; but on close investigation we shall find that it is the extreme fear of exciting pain by the slightest movement that renders the patient seemingly paralytic, while he possesses, if his resolution permit him to make the attempt, full motive powers over his extremities. In myelitis, on the contrary, the paralysis may exist to any extent from a slight dragging of one leg, to a complete paraplegic condition of both. The paralysis is attended by numbness and other disagreeable tingling sensations; and if the origin of the disease be traceable to intemperance, either in drinking or sexual intercourse, or any other cause especially producing spinal exhaustion, it may be preceded by uncontrollable restlessness and jactitation of the lower limbs.

Tactile sensibility and reflex function vary much in different cases of paraplegic disease. As a rule, reflex excitability is considerably weakened; but if the structure of the cord be entirely destroyed locally by a new connective tissue cementing its nerve-fibrils into a dense white mass, such as is seen occasionally after chronic disease, both in the brain and spinal cord, reflex action may exist in a normal degree, showing that the portion of cord below the diseased spot is free. This complete destruction of nerve-tissue commonly advances gradually, and consequently the loss of motion and sensational function in the limbs will be equally progressive, and, *pari passu* with the anæsthesia, become more or less complete.

The bladder and rectum are affected both in spinal meningitis and in myelitis. In the latter especially, imperfect control over the bladder is a marked and early symptom, and increases as the paralysis becomes more developed. When this is incurably established, increased exhaustion sets in, with difficulty of breathing, wasting of muscles, swelled extremities, and bed-sores, which latter are often an early and very troublesome indication of imperfect nutrition.

Among the causes of paralysis having a spinal origin, we must not overlook the fact of paraplegia occasionally having a reflex source, and arising from peripheral disturbance; yet it is sometimes admittedly difficult to determine at first whether some forms of paralysis have a centric or an eccentric origin. In the latter, or reflex variety, the nerve-excitator will be either an inflamed pus secreting bladder, or some organic uterine affection attended with unhealthy discharges. The chief diagnostic difference between reflex and myelitic paralysis, will consist in the incompleteness of the paraplegia, and the absence of those general symptoms of myelitic degeneration of the cord already enumerated. The amelioration or subsidence of the paraplegia, on the removal of the peripheral exciting cause, will further help to confirm the diagnosis.

The precise pathological condition of the cord and its membranes in those cases of contracted limbs, when the knees rest upon the abdomen and the heels are in close contact with the buttocks, has not yet been satisfactorily defined. It has hitherto been supposed that the spasmodic contraction was due to an exalted excitation of the anterior column of the cord, passing subsequently into structural change. More recent investigation would tend, however, to the belief that the excitator of the contraction is in the nerve itself, and that a portion of its fibrils have become degenerated in structure (sclerosed). It is not improbable that in some cases of chronic permanent rigidity and contraction of the lower limbs, a mixed condition may obtain, viz., thickened membranes from meningitis, a myelitic degeneration of the cord, and a local change in the structure of some portion of the nerves themselves. Further and extended minute investigation of the exact condition of the nerve-texture in those cases is still required.

Hysterical Paraplegia.—A woman, aged 30, the mother of three children, who was suffering from debility, the consequence of long continued gastric disorders, became suddenly and totally paraplegic in the lower limbs. She was in the ward of a hospital where was a patient also partially paralysed, but hemiplegic from cerebral disease. On examination, she stated that her limbs felt numb, and that she was totally unable to raise them in the slightest degree, and which appeared to be the case. There was in this case no tenderness over the spine, nor local nor general anæsthesia, and galvanic contractility of the lower limbs was unimpaired. The intellect was clear, and there was no muscular wasting. The catamenial functions were healthy, and there was no paralysis of bladder or rectum. The interrupted galvanic current was directed to the lower part of the spine and to the extremities on alternate days. Strychnia with steel and quinine were prescribed as medicine; and a firm injunction that she should herself make some daily effort to move her limbs, was insisted on, and well seconded by the firmness of the nurse. For a fortnight she remained with but very

* Continued from page 427 of last number.

slight improvement, when intelligence of the sudden illness of her husband was brought to her. From this period the lost volition was rapidly regained, and she made speedy and uninterrupted progress towards recovery, and returned home to nurse her husband fairly well.

There can be no doubt that the above case was simply one of perverted volition, excited, in all probability, by imitative impressions. Had the peculiar nervous predisposition of this patient been known, she would, of course, have been rigidly kept from what proved to her a source of excitement and subsequent irritation. There was no uterine disturbance in this case, and the symptoms supervened too suddenly, without proportionate nervous disturbance, pain, or other distress, to be attributable to an embolic clot. The paraplegia from the first was regarded as hysteric, and this was fully and most satisfactorily corroborated by the subsequent rapid recovery on the supervision of an antagonistic moral excitant. There are few cases more unsatisfactory to treat, more trying to the moral courage of the practitioner, or more likely to interfere with the confidence reposed in him by the friends, especially if the patient be in the higher rank of life, than hysteric paralysis.

This affection occurs, I believe, quite independently of the existence of any uterine or ovarian irritation. The exact condition of the intimate nerve-structure in this and kindred affections will become increasingly a subject for interesting investigation. The great influence exerted upon the capillaries through the vaso-motor nerve-filaments, and the effect which it may produce even upon volition, and some other moral phenomena, may help to explain by degrees many of the eccentric freaks which are now included under the unsatisfactory designation of hysteria. The diagnosis between real and ideal paralysis is not always easy, especially if the patient be seen for the first time after some weeks' or months' duration of the malady.

I need not say how important is a clear definition between the two; for, while on the one hand it would be cruel to accuse the real sufferer of fabricating a serious complaint, it would, on the contrary, be most highly improper and injurious to treat the simulated malady as real. In a recent number of *Guy's Hospital Reports*, Dr. Wilks has shown that there is a nervous influence constantly passing from the centres to the muscles during life, producing tension of their fibres; and that in real paralysis this tension becomes destroyed, and muscular power is lost. In feigned paralysis, on the contrary, muscular tension is preserved, while the will to exert the power of motion is more or less in complete abeyance. The knowledge of these different conditions is of considerable value as an aid to the diagnosis between real and feigned paralysis, and the extent to which the supply of blood is regulated in its passage to the nerve-centres by vaso-motor nerve-influences, and its power of contracting or relaxing the capillaries, will, when more fully investigated, throw increased light upon the condition of the molecular structure of the nervous centres generally in hysteria and other so-called nervous diseases.

More or less spinal irritation is generally associated with hysteric paraplegia; and some tenderness, or, it may be, acute local sensitiveness, is complained of in percutting the spine, together with flying pains in the legs and pelvis. Numbness of the lower limbs frequently obtains, and the bladder and rectum may temporarily lose their power. A peculiar dragging of the leg has been pointed out by the late Dr. Todd as characteristic of hysteric paralysis, in contradistinction to the semicircular swing of the affected leg seen in real paralysis. This suggestion is applicable rather to hemiplegia than to paraplegia. A carefully conducted series of experiments with the galvanic current in reference to electro-sensibility, electro-contraction, and muscular tension, with a view of testing their relative amount both in real and feigned paralysis, would prove a valuable aid in forming a differential diagnosis.

On the treatment of hysterical paralysis, in whatever form it assumes, there is but little to be said. The malady is essentially one of weakened or lost volition, and it is to moral measures that we chiefly must look to overcome this condition. Hence, the far greater benefit which results to a patient treated in a hospital, where all is regulated with firmness and method, as compared with the management of a similar case in her own home, especially if the patient be subjected to the baneful influences of the false kindness and exaggerated sympathy of unwise friends. In the one case, the lost volition will become restored in a comparatively short time; while in the other, as is too frequently the case, the patient remains in fair health, but with the affected limbs perfectly immobile, notwithstanding the attendance of a succession of doctors, special and otherwise; and she is perhaps ultimately doomed to months of mechanical fixedness for a supposed spinal disease.

As a rule, the general health in these cases remains fairly good; but should it be otherwise, general principles must be adopted, and especially cod-liver oil given if it can be digested. Galvanism, inasmuch as it will tend to direct attention to the limbs, and thus perpetuate an

ideal malady, had better, as a rule, be avoided. As already hinted, however, moral measures must be chiefly relied on, and so far as possible, the constant attendance of a medical man should be discontinued. To effect this, however, is by no means easy, and it is only by the firm co-operation of sensible friends with the medical attendant that this can be attained. The patient must be treated firmly and kindly, and told with all honesty that, unless she be determined to remain a permanent paralytic, a visible improvement, however slight, and that effected by her own efforts, must be perceptible at the end of each week.

The allowance of a simple unrestricted diet, and the avoidance of all unnecessary, and especially periodical medication, will prove additional auxiliaries to completing the moral cure.

CASE OF CUT-THROAT WOUND OF INTERNAL JUGULAR VEIN: LIGATURE: RECOVERY.

By JOHN WOODMAN, F.R.C.S. Eng.,

Consulting Surgeon to the Exeter Dispensary; Honorary Secretary of the South Western Branch; etc.

On August 14th, 1873, between 5 and 6 P.M., I was hurriedly called to see Mrs. Henley, the matron of the City Workhouse, aged about 30, who, I was informed, had been attacked and nearly killed by an inmate, called Thomas Snelgrove (who was seized in the act). On my arrival, about ten minutes after the occurrence, I found her seated in a chair in the kitchen of the infirmary (to which she had run from the ward in which she was assaulted), her clothes saturated with blood, her head supported, and pressure being made over the wounds with an apron. Finding that the hæmorrhage had for the time ceased, I had her carefully removed in the chair to her own apartment. On examination, I found she had three slight cuts on the face, six wounds on the neck, and three cuts on the fingers of the right hand (caused in the struggle); all these wounds were such as would be inflicted by a razor, the instrument said to have been used. Of the wounds in the neck, two were slight, three severe but not dangerous, whilst the principal one was situated two inches and a-half below the left ear, and extended three inches across the throat to the cornu of the hyoid bone. I was putting sutures in the other wounds, and had nearly finished, when suddenly an alarming gush of venous blood took place from this wound, which I controlled by pressure with my finger. Feeling sure that the internal jugular vein must be wounded, I sent for assistance, and in the meantime examined the wound, and found that the external jugular vein, the auricularis magnus nerve, and the sterno-mastoid muscle, were completely divided, and that with my finger I could feel the anterior spinal muscles; the external and internal carotid arteries were also to be felt uninjured. On the arrival of Mr. Roper (Senior Surgeon to the Devon and Exeter Hospital), we had some difficulty in finding the exact spot from which the hæmorrhage came, as when I moved my finger the bleeding was very alarming. I managed, however, to get my finger higher up in the wound, still compressing the vein, and then, on carefully sponging it out, I saw a distinct slit in the internal jugular vein, about half an inch in length, in the direction of the course of the vein, and at a right angle to the external wound; we were then able to move the descendens noni nerve out of the way, and to pass a ligature around the vein below the wound, but now the difficulty was to pass one above, as moving my finger threatened fatal hæmorrhage. This was met by seizing the wound in the vein with a pair of broad torsion-forceps, and holding the lips together. This nearly stopped the bleeding. We were now able to pass a ligature with an aneurism-needle above the wound. On tying both these, which Mr. Roper and I did simultaneously, the venous hæmorrhage was stopped.

Some arterial bleeding from a deep source now gave us considerable alarm in her weak state, but fortunately pressure and ice stopped it also. Besides the two ligatures on the vein, only one small artery was tied, the others being treated by torsion. The external jugular vein did not give any trouble, and was not done anything to. Mrs. Henley appears never to have quite fainted, or to have entirely lost her consciousness; which is surprising, considering the quantity of blood she lost and the shock to the nervous system.

I and my pupil, Mr. H. Baber, remained all night with her, but there was no return of hæmorrhage; she vomited several times, but else she passed a favourable night, and rallied considerably for thirty-six hours after the accident. One of Mr. Roper's or my pupils was constantly in attendance, in case of a return of the bleeding.

Mr. Roper saw her in consultation with me for some time afterwards. At first she was very weak, but calm and collected; but on the fourth day (August 18th) she suddenly became feverish and troubled with pain in

the head; this, however, passed off under treatment in a few days. Lymph was soon effused in the wound, and shortly became organised; the wounds all healing in a very rapid and satisfactory manner. She complained, on getting better, of loss of sensation in her left ear.

August 28th. The ligature round the small artery came away.

September 2nd. On this (the nineteenth) day the lower of the two ligatures of the internal jugular came away.

September 10th. To-day (the twenty-seventh day) the last ligature, and the most important, came away safely, but required some traction. This wound had nearly healed, and with the exception of the fingers, the other wounds were healed.

September 26th. The wounds were all healed. She could walk a short distance, but had difficulty in holding her head straight for any length of time. There was considerable induration round the wounds in the neck, and a depression where the sterno-mastoid was divided.

October 11th. She is very much better; can hold her head up well now; and the hardness round the wounds is much less. She has gone away to Exmouth for change of air to-day to recruit her strength.

The principal points of notice in this case are, the large quantity of blood lost; the singularity of the wound in the vein being at right angles to the external wound, showing that the razor must have been turned in the wound; and the fact of pressure stopping for the time hæmorrhage from so serious a wound of the jugular vein. This I attribute to the wound being in the direction of the vein and not across it, the clot formed closing the opening and allowing the blood still to flow in the vein. The next point is the very little disturbance to the patient that the occlusion of both the external and internal jugular veins of the left side caused: the external jugular of the other side was never fuller than usual (at least to be noticed). The pain in the head was slight, and not more than would be expected from the loss of blood alone; and the circulation appeared to have at once adapted itself to the altered circumstances.

I have gone somewhat into detail in reporting this case, as I can find no record in any of the works on Surgery of a similar one; and conclude, therefore, that no one has previously been fortunate enough to arrive in time to save life when this vein has been so seriously injured.

ABSCESS OF THE BRAIN IN AN INFANT.

By FRANCIS WARNER, M.B.Lond., F.R.C.S.Eng.,
Royal Surrey County Hospital, Guildford.

THE following case is, I think, worthy of record, on account of the comparative rarity of the disease, though the clinical history and *post mortem* examination are necessarily incomplete, owing to want of opportunity for making due and careful examination. On referring to Sir William Gull's table of "76 cases of abscess of the brain," I find that the youngest age there recorded is four years; but the present case shows that this disease may occur in infancy. The case further illustrates how large an amount of mischief may exist within the cranium without an equivalent of objective symptoms; for, from the results of the *post mortem* examination, it is clear that the abscess was of some duration.

On March 6th, I was requested to go to a cottage to see an infant, aged 14 months, who had been convulsed for three hours the day before. The mother said that this was the first fit the child had suffered from, but that, without being able to assign any definite reasons for her opinion, she had thought for some months that the child was suffering from its head; it had, however, always appeared perfectly intelligent. For a few days previously to the fit the child had been rather fretful, and "had not taken the breast well." There had been no vomiting.

On examination, I found the head generally enlarged, the anterior fontanelle patent and strongly pulsating synchronously with the pulse, 180 per minute. The face was pale; the limbs were slightly contracted. The child was generally restless, but at times was very quiet, as if exhausted. The pupils were dilated and equal; ophthalmoscopic examination showed the disc in each eye normal. The bowels had not acted to-day. A grain of calomel was ordered.

March 8th.—The bowels had been moved freely. A strong convulsion came on last night, and lasted half an hour. To-day the child seemed more lively, and noticed its mother.

March 10th.—The child was strongly convulsed for ten minutes in the right arm and leg only, and the mother said "the eyes were drawn together during the convulsion." At the time of the visit, there was no strabismus, and the pupils were of normal size.

March 13th.—Yesterday, the child was twice strongly convulsed in all its limbs. To-day the pupils were moderately dilated; the child

noticed nothing, though its eyes were open; it was apparently blind in both eyes, for sudden movements in front of its face caused no winking. The child would not take the breast. There was no vomiting. At night, it was strongly convulsed in all its limbs for three hours, and then died.

A necropsy was made twenty hours after death. The head only was allowed to be examined. The convolutions were slightly flattened on both sides. Thick greenish inodorous pus was found at the base of the brain, about its central parts, more towards the right side; it extended on to the pons and cerebellum. The pia mater of other parts was healthy. Removal of the pus left the subjacent pia mater dull and thickened. No tubercle was discovered anywhere. On slicing the brain, about four ounces of pus were found, apparently encysted in the front part of the right ventricle, and bulging into the anterior lobe. The membrane lining this cavity was thick, tough, and vascular, and could be handled and spread out, showing that it was organised and of some duration. The corpus striatum and thalamus were flattened. The other parts of the brain were healthy. There was no softening.

THERAPEUTIC MEMORANDA.

PHOSPHORUS IN NEURALGIA.

IN October of last year I wrote a letter to the BRITISH MEDICAL JOURNAL, calling attention to the value of phosphorus in the treatment of neuralgia. Since this date I have given it a somewhat extensive trial, the general result of which is to confirm the favourable report I made of it in my first letter. I have prescribed it in various neuroses, in melancholia, in impotence, in mercurial tremor, in locomotor ataxy, etc., but have come to the conclusion that its value is most conspicuously and constantly seen in cases of nerve-pain, accompanied or caused by asthenia: indeed, while it has appeared to me quite inert in most of the separate diseases I have mentioned above, it has rarely disappointed me, when properly administered, in true cases of anæmic or asthenic neuralgia, amongst the remedies for which disorders I believe it will ever hold a high and secure place. Its mode of administration is, however, of importance; and while in many respects agreeing with Mr. J. Ashburton Thompson in his remarks upon this remedy, which appear in the *Practitioner* for July, I cannot indorse his statement as to the wisdom, or even the safety, of beginning with a dose of one-twelfth of a grain every four hours. M. Gubler, in a recent number of the *Bulletin Général de Thérapeutique*, is more correct, I think, in urging great caution in the administration of this powerful remedy: indeed, in the seventeen cases treated by Mr. Thompson, one suffered from serious and alarming symptoms, as the result, we may fairly presume, of the phosphorus, which was administered in the dose of one-twelfth of a grain. My custom is to commence with one-hundredth of a grain, and gradually increase this by one-fiftieth of a grain at a time, until, if necessary, one-tenth of a grain is taken with each dose. Beyond this quantity I do not go; as I think that, if the remedy be of use, relief will be attained by this dose equally with a larger. After trying several preparations, I now use a formula which Mr. Potts, dispenser to the Manchester Royal Infirmary, hit upon, and which seems to answer every purpose, in being tasteless, transparent, and readily prepared. He dissolves ten grains of phosphorus in two ounces of ether, agitating the solution from time to time; and of this solution, one minim (containing one-hundredth of a grain) is administered in an ounce of water with half a drachm of glycerine. The glycerine suspends the phosphorus so perfectly that a transparent mixture is the result. The addition of a little bitter infusion entirely removes any *souçon* of lucifer-matches which may hover about the medicine.

S. MESSENGER BRADLEY, Manchester.

THE ADMINISTRATION OF PODOPHYLLIN.

As podophyllin in some combinations produces considerable pain without corresponding benefit, any plan for increasing the certainty of its remedial action is likely to be interesting. I venture to call attention to a powder which I have used for some time, and which has proved extremely useful. The following is my formula. R Podophyllin gr. i. vss; extracti elaterii gr. i. vss; pulveris jalapæ comp. 3vj. M.—Half a drachm of the above powder in half a pint of warm water acts most effectually, and the cholagogue effects of the podophyllin seem to be assisted by the hydragogues, the latter washing out the bile in a most satisfactory manner.

The immediate effects of this powder are somewhat as follows. In half an hour, there is free diaphoresis, followed by vomiting, and after-

wards copious liquid and bilious stools. This has not, in my experience, been followed by the constipation which frequently occurs after free purging—perhaps on account of the increased flow of bile not ceasing with the primary cathartic effect. In cases of ascites, with defective secretion from the liver, its power of reducing the amount of the effused fluid is most remarkable. The bulk of the powder, in dividing such active drugs as elaterium and podophyllin, is a decided advantage. Grimston, Lynn. ALFRED E. BARRETT.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. GEORGE'S HOSPITAL.

MULTIPLE SUPPURATING HYDATID CYSTS IN THE LIVER; TAPPED IN THREE PLACES: RECOVERY: CLINICAL REMARKS.

(Under the care of Dr. FULLER.)

THE patient was a stoutly-built gamekeeper, aged 47. The symptoms were only of four months' duration. In December last, he was attacked with jaundice and pain in the abdomen, especially in the right hypochondrium; the jaundice only lasted a few days; but he noticed at the same time a fulness in the hepatic region, and this increased steadily up to the date of his admission into St. George's. On admission (March 5th), he was much emaciated; face flushed, expression worn and rather anxious. The liver was considerably enlarged in all directions, and just below the false ribs on the right side was a large rounded and elastic tumour, evidently projecting from that organ. A grooved needle was inserted into it, and brought away a little pus. A good-sized trocar was next passed into the most prominent part of the tumour, and the cannula was left there, having been carefully secured by strapping to the abdominal wall. A considerable quantity of thick pus was evacuated at the time of its insertion, together with a number of hydatid cysts, and a considerable number escaped during the few following days. The patient was greatly relieved; the pain and sense of weight were much diminished, but the size of the tumour was not as much lessened as might have been expected. In the course of a few days, it became apparent that there was a second large cyst a little to the right of the first. On March 19th, this also was tapped in the same manner, the cannula being left in and secured as before, and about an equal quantity of pus escaped with some more cysts: on each occasion, the discharge drained away slowly for several days after the operation, and could not be accurately measured. The second puncture was at once followed by a marked reduction in the size of the tumour. At the end of a week, the cannulae were withdrawn, and a drainage-tube was passed in at one opening and out at the other; this the patient wore for a month; the amount of discharge and the fulness in the hypochondrium both steadily decreased until, towards the end of April, the drainage-tube was removed, the wounds closed, and there were no signs of the tumour, except the scars. In fact, on April 30th, the patient appeared quite convalescent; but, about ten days afterwards, he had a return of fever, with repeated rigors and some albuminuria. Dulness at the base of the right lung was next discovered, together with coarse crepitation and tubular breathing. The febrile symptoms continued, and, after a short time, a prominent tumour appeared in the lower dorsal region, on the right side; this was tapped, and a quantity of thick pus evacuated, but no hydatids. After this, the dulness at the right base cleared off, and the patient made a slow but steady recovery. In July he was sent to the Convalescent Hospital at Wimbledon; he returned thence without any signs of further mischief, and was sent home cured.

CLINICAL REMARKS.—Dr. Fuller observed, respecting this case, that happily the tendency of modern practice was in favour of earlier and more decisive treatment of hydatids of the liver than was the rule even a few years since. Considering how tedious and painful was the old method (Récamier's) of opening these cysts by means of caustic, it was scarcely to be wondered at that the evil day was postponed as long as possible, sometimes even at the expense of the patient's life. Simple paracentesis by trocar was certainly very successful in the case of small hydatid tumours, and probably less dangerous than the caustic in the case of large ones—certainly it was much less barbarous. Dr. Fuller strongly urged the advisability of employing a large-sized trocar and leaving the cannula in the tumour as long as any discharge continued. A case in the York Ward, in which he adopted this treatment

a twelvemonth ago, recovered without an untoward symptom, and in the present instance the symptoms following the operation were not more urgent than were to be expected after opening any large abscess.

HABITUAL OBSTINATE CONSTIPATION IN A CHILD.

(Under the care of Dr. FULLER.)

The patient was a boy aged 6. His father said that, from two years old, the child's bowels had always been most obstinately constipated; he had been in the habit of giving him, at frequent intervals, a large purgative dose, and of following this by several bulky enemata; unless this was done, the boy would go two or three weeks without passing a motion. The truth of this statement was fully proved whilst the patient was under observation. When first admitted, his aspect was heavy and tongue furred. His abdomen was very large and hard; there was some tympanitis, but it was evident that the enlargement was chiefly due to solid fecal accumulation: the course of the distended colon could be distinctly traced; there was no tenderness anywhere.

Purgatives were first administered in full and increasing doses; castor oil, compound senna mixture, and scammony and colocynth, but without effect. After some days, however, he passed, as the result of a large enema, an enormous quantity of feces, completely filling an ordinary chamber-pot; it consisted of pale, clay-coloured stuff of the consistence of thick mortar, and quite homogeneous; no scybala. After this, the same difficulty continued: he took belladonna, iron, aloes, and nux vomica in full doses every four hours without the least benefit; faradisation over the abdomen was also tried, but without effect. A full dose of scammony and colocynth, followed by a good enema, was given about once a week, and this seemed to be the only means of moving him.

When he had been some weeks in hospital, he, in some way or other, got an attack of typhoid fever. He had a considerable amount of pyrexia, his temperature reaching 104 deg., and the other symptoms were well marked, except that constipation persisted throughout—the bowels acted twice only after enemata.

After the fever had subsided and the boy's temperature had remained normal for more than a week, Dr. Fuller ordered him to take half an ounce of castor-oil. This produced no action of the bowels, which had been confined for ten days, but was at once followed by restlessness, slight wandering, and his temperature rose during the day to 105 deg.; a relapse of the fever appeared certain. Next day, however, the pyrexia subsided, and the boy recovered without further accident. When we last saw him, the bowels had not acted for three weeks; yet, except that he was somewhat anæmic and weak from the typhoid, one would not have thought that there was much the matter with him; his tongue was perfectly clean and his appetite good—not alternately capricious and voracious, as it is often in such cases—and there was little or none of the heaviness of expression often present; yet the prominent and hard abdomen showed that there was already reaccumulation to a considerable extent.

CLINICAL REMARKS.—Dr. Fuller remarked that chronic or habitual constipation, especially in young subjects, was of commoner ailments. one of the most unsatisfactory to treat. On the one hand, the disease, if left to itself, has a great tendency to become more confirmed; on the other, too active treatment may do more harm than the original malady. In judging of the amount of treatment necessary, we must be guided by the general state of the patient's health; the mere feel of the pulse and the state of the tongue are often very fallacious indications. Some people with excellent digestions and in perfect health, have habitually a furred tongue, whilst in other cases the tongue may continue to present the appearance of health in spite of the existence of very decided dyspepsia and constipation; so long as there is evidence that the processes of nutrition are properly performed, mere constipation should be treated as gently as possible.

This case showed also the intimate relation which exists between the local anatomical lesion of typhoid fever and the general constitutional disturbance. There is no doubt that relapses of typhoid fever are not unfrequently due to errors or excesses in diet; in this case, irritation of the unhealed ulcers by a purgative produced at once an amount of pyrexia greater than the patient had shown during the regular course of the fever, though fortunately it did not proceed to an actual relapse.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

AMPUTATION AT THE HIP-JOINT.

(Under the care of Mr. WARREN TAY.)

A CHILD, whose right lower extremity was amputated at the hip-joint on May 31st, was sent down to Margate from this hospital nine weeks afterwards. The operation was performed for disease of the hip-joint

of long standing, and destruction of the tissues at the back of the thigh, leading to irremediable contraction of all the structures in that locality. The case was under the care of Mr. Waren Tay. Mr. Hutchinson, who kindly saw the case in consultation, agreed that amputation seemed the only remedy available. The more or less anterior flap was cut from without inwards in such a way as to avoid scars which were present. The wound healed well, and there was not a single bad symptom. The child was out of bed at the end of a fortnight.

BOOTLE BOROUGH HOSPITAL.

CASE OF RUPTURE OF THE HEART BY VIOLENCE: DEATH AFTER EIGHT HOURS.

(Under the care of Dr. SPRAKELING).

FOR the notes of this interesting case we are indebted to Mr. T. M. Wills.

William Parry, aged 45, was carried to hospital on Wednesday last, October 8th, at 7 P.M., in a state of collapse, having received some injury. A constable, who accompanied him, informed me that the man had been knocked down by a butcher's spring cart which was being driven furiously. On examination, Mr. Wills found a contused wound, about three inches in diameter and swollen, on his chest a little to the left of the sternum, and corresponding to the fifth rib, which was fractured. His head and limbs were free from any injury, his lips and hands were blanched, and the surface was deathly cold and clammy, and I could not detect any pulse-beat at his wrist; in fact, he was suffering from shock after a severe injury.

He had some warm stimulants—brandy and ammonia—to drink, and hot water and blankets were applied to his feet, etc., but without the slightest effect. Mr. Wills sent for Dr. Sprakeling, the visiting surgeon of the day, whose prognosis was very unfavourable; and he ordered the stimulants, etc., to be continued. The patient was very restless, and asked to see his children, as he felt that he was dying. He frequently put his hand to his left breast, saying, "It is all here;" and he complained of the slightest touch at the seat of injury. Mr. Wills endeavoured, with the stethoscope, to detect the impulse of the heart; but what little remained was lost in the troubled respiration and heaving of the chest, which the patient could not control for a moment. He had some slight hæmoptysis.

He was seen several times up to 1 A.M. on Thursday morning, when his symptoms continued to grow gradually worse. Nothing could stimulate the circulation, and his extremities continued cold and clammy in the midst of the surrounding artificial heat. At 2:30 A.M. he died.

POST MORTEM EXAMINATION.—The tissues covering the sternum, and some inches to its left, were infiltrated with blood. The fifth rib was fractured about three and half inches from the sternum, and its cartilage was also detached from the latter bone. The pericardium, on being exposed, was seen to be greatly distended, and, on opening it, a large quantity of blood and clots was found completely enveloping the heart. After a very careful examination to discover the source of the hæmorrhage, a small laceration, partly closed by a clot, was discovered at the apex of the left auricular appendix, which freely admitted the introduction of a blow-pipe to the cavity of the auricle. The walls of the auricular appendix seemed unusually thin between the muscoli pectinati, and there was a large deposit of fat on the surface of the heart, which, in other respects, seemed normal. The brain and other organs of the body appeared healthy. The pericardium was not torn by the rib, and the point of injury was far behind the seat of fracture, etc., so that the rupture must have been caused by the violence of the contusion.

The situation of the rupture clearly explains how it was possible for the man to live so long—about eight hours—after such an injury; the laceration being remote from the main current of the blood, the force of which, at the laceration, must have been greatly diminished by the *orifice of the auricular appendix*, and also by the *shock*—hence the gradual leaking of blood into the pericardium, which, in its turn, still further impeded the action of the heart, in proportion to the amount, until it ceased to beat.

Dr. RICHARD LORD has been appointed Medical Officer of Health for the Crewe Urban Sanitary Authority. Salary, £50. Area, 1,318. Population, 17,810.

NOTES ON BOOKS.

The Philosophy of Evolution. By B. THOMPSON LOWNE, M.R.C.S.E., F.L.S., Lecturer on Physiology at the Middlesex Hospital Medical School. London: John Van Voorst. 1873.—The present volume is one of the successful essays for the Actonian prize of one hundred guineas, given every seven years by the Committee of the Royal Institution of Great Britain. Mr. Lowne does not attempt to convert his readers to a belief in evolution, his chief aim being to "reconcile the theory of evolution with the highest aims of human thought." The first part of this work treats of "Evolution and Creation," "The Nature and Evidence of Evolution," and "The Relations of Organic and Inorganic Matter." The short chapter on creation and evolution is clearly written. Mr. Lowne not only thinks that the theory of evolution is in no way antagonistic to religion, but believes it affords to the unbiased mind "the firmest basis on which religion can possibly rest." In favour of the direct evidence of evolution, the author quotes the well-known chain of connecting links between the tapir-like palæotherium, anchitherium, hipparion, and horse; and to render this comparison more interesting, figures of the limbs and skulls of these animals are given. The mention of the palæotherium will recall to many readers the immortal labours of Cuvier, who founded the genus by restoring several distinct species from mere fragments of fossils, discovered in the celebrated gypsum quarries of Montmartre. The geographical distribution of animals and plants is next discussed, in its relation to evolution. Much more treacherous ground is broken when the author speaks of the evolution of organic from inorganic matter. Although admitting that the weight of evidence is at present against his view, he still believes in the possibility of a structureless material, "capable of undergoing organisation," being artificially produced. "Indeed," he says, "we may confidently anticipate that such material will eventually be formed, just as sugar, alcohol, valerianic acid, and a multitude of similar organic bodies have been formed by the chemist, which were formerly believed never to originate except by the action of vitality." Space will not permit us to do more than briefly glance at the remainder of this book. The chapter "On the Nature and Origin of Structure," is very suggestive. Natural selection, which the author speaks of as "Darwin's Law," is carefully explained, being followed by chapters on "Variation," "Inheritance," the doctrine of "Pangenesis," "Nutrition," etc. The third part deals principally with the origin of types and the higher vertebrates. In conclusion, we find two chapters, one on "The Evolution of Man," which is far too short to do justice to the subject; and a concluding one on "Divine Wisdom and Benevolence." The type is of a good readable size, and the volume throughout is carefully and clearly written. Mr. Lowne is already favourably known to the scientific world by his *Monograph on the Blow-Fly*. The essay before us, treating as it does of a most interesting, and, at the present time, absorbing topic, will, we doubt not, have a wide circle of readers. To those who wish to gain a general knowledge of evolution without consulting the voluminous works of Darwin, Spencer, and others, the present essay will, we think, be very acceptable.

Vermi: Serie di Letture sulla Elmintologia Pratica. Per T. SPENCER COBBOLD, M.D., F.R.S. Tradotta dall' Inglese ed annotata col permesso dell' Autore, dal DOTT. TOMMASO TOMMASI. Pp. 168. Milan: 1873.—This is a translation into Italian of the course of twenty lectures on Helminthology, delivered by Dr. Spencer Cobbold at the Middlesex Hospital two or three years ago. Dr. Tommasi justifies the course he has followed in making the translation by remarking that, while works on the subject are numerous and classical, they are too large for the ordinary use of the general practitioner or student, and that the information given even in recent systematic works on medicine is but scanty. A book which should give in a brief and clear form the symptoms, diagnosis, and treatment of parasitic diseases, was a desideratum, and this, Dr. Tommasi says, has been supplied by Dr. Cobbold. The translation has been performed with the consent and approbation of the English author; and Dr. Tommasi has increased the value of the work to his countrymen by adding an account of Hydatids (derived principally from the French Dictionary of Medical Sciences), and the history of a case of Echinococcus of the Spleen, complicated with heart-disease. The work is of a very handy size, and neatly got up. It is published at the low charge of two lire (1s. 8d.), and is sold in Milan, Florence, Turin, Rome, Verona, and Ancona.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS of the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 18TH, 1873.

SURGERY AT THE BAR.

MR. ERICHSEN has published the address which he delivered at the opening of the session of University College Medical School. It is almost superfluous to say that there is much that is interesting in it. He deals exclusively, it is true, with surgical topics; but this is done in a way which is, to us at least, novel and interesting. He divides modern surgery into two schools: the practical or anatomical and the scientific. He takes as types of the former such men as Hey, Cline, Cooper, Aston Key, Liston, Crampton, and Syme, and regards their labours as issuing mainly in perfecting "the mechanical and manipulative departments" of surgery. This school of surgery, he hints, finds its modern representative in Sir W. Ferguson; while the scientific school, represented in the past by John Hunter, Bells, Abernethy, Travers, and Brodie, has culminated in the present day in Sir J. Paget. The first school, he believes, has pretty well "had its day." It has elaborated the operative department of the art to a height which, in Mr. Erichsen's opinion, cannot be far exceeded; and our hopes for the advancement of surgery must rest on the scientific school and mainly on the study of hygiene. All this may be true, or may, at any rate, contain some truth; but it is, perhaps, too thoroughly technical greatly to interest the public.

The address, however, contains one passage which will not fail to fix the attention of hospital surgeons, and which ought equally to occupy the general public; for the matter is one which is as important to the lay as to the medical reader. Mr. Erichsen alone, as far as we know, among hospital surgeons, accepts in their entirety the statements made four years ago by Sir J. Y. Simpson, as to the unhealthiness of our general hospitals, and quotes Simpson's statistics as undeniable proof that the mortality of amputations in hospital practice is four times as great as the mortality of the same operations would have been in private practice. To all the objections which were made at the time against Simpson's facts and method of arguing, Mr. Erichsen attaches no value whatever; he allows only that "it is quite possible that Simpson's figures may not be absolutely but only approximately correct, and that certain sources of fallacy have introduced themselves into his tables"; but the main fact, viz., that amputations are four times as fatal in hospital as the same amputations would have been in private practice he holds as certain; and he believes that a similar (though a less) disproportion exists in mortality after ovariotomy, which, he says, is three times as great in hospitals as it is in private practice. He even quotes and endorses the almost incredible statement of Simpson, that amputation of the forearm is more than thirty times as fatal in hospitals as in private practice; the cases, of course, being assumed to be similar. And he concludes thus, addressing the students of the hospital: "Here, then, is a vast and fertile field to which you who are commencing your studies may direct your attention with the greatest advantage, and which you who after this session will go forth into the world to practise, may cultivate with a double advantage to humanity and to yourselves."

We confess to having read these statements and their conclusion with astonishment not free from pain. Here is one of the most eminent surgeons, both in hospital and private practice, in London, telling his pupils that three out of four deaths after amputation in his hospital

are, as he believes, preventable; that what is true of amputations is doubtless true of graver operations; but that the contrast between public and private practice never struck him till it was pointed out four years ago by a series of figures, which to other people appeared of very dubious accuracy and of very doubtful significance; that he does not know at all on what this great loss of life depends, but must wait till some student finds it out for him. He seems to have paid no attention at all to such facts as those produced by Mr. Callender from the largest hospital in London, and the one which ought (if Sir J. Simpson's reasoning could be trusted) to be, therefore, the most unhealthy; but in which, by the simplest methods, merely by sagacity in selecting cases and careful attention to the well-known essentials of treatment, a success has been attained equal to or even beyond what Simpson ever claimed for private practice. He produces no evidence, derived from his own ample experience, to support Simpson's figures. He does not say that he has in any way modified his own hospital arrangements, or done anything to stop the waste of life which he deplores. And yet if it were really true that the alleged difference between the results of public and private practice exists, to whom are the public to look for guidance as to its cause and remedy, except to men in Mr. Erichsen's eminent position? What guarantee have we that the pupils will succeed where the master has to confess that he has failed in this wise? We cannot but regard the publication of this address as being most unfortunate; as being calculated seriously to impair the confidence of the public, alike in the practitioners of surgery, in the art which they exercise, and in the institutions founded to promote it.

No doubt Mr. Erichsen may say that he regards it as his duty to speak the truth; and so it is. And it is no doubt the truth that the mortality after great operations in hospitals is very high. But it is by no means true that this high death-rate is accepted by surgeons as a necessity, as Mr. Erichsen asserts; nor is it correct to put forward the very dubious figures of Simpson as if they were of admitted authority, and to reason on them as representing undoubted facts. The cause of science cannot be advanced except by caution in reasoning and care in experimenting, and we turn with much relief from Mr. Erichsen's address, with its "startling facts" and its uncompromising indictment against hospitals and hospital surgeons, to the practical refutation of them contained in Mr. Callender's paper in our last week's issue. The very title, "Hospitalism", is a *petitio principii*, and led its distinguished inventor far away in all probability from the paths where true improvement is to be sought. Impressed with the idea that there was a great difference between the mortality of operations in hospitals where the patients were aggregated, and in private houses where they were solitary, he leaped rapidly to the conclusion that the difference depended on their aggregation only, and that the remedy was to be sought in scattering them. He shut his eyes to the weakness of the evidence on which he relied to prove the fact, and he seemed not to see the utter impotence of the conclusions to which he brought his readers. That hospital air is to some extent contaminated even in our best hospitals by the necessary aggregation of patients may doubtless be admitted; but that such contamination is worse than the abominations which are met with in poor men's cottages and lodgings (where most of our private practice in amputation must be carried on), has never yet been shown. Nor has it ever been shown by any testimony which is worthy of credit, what the difference is between the mortality of similar cases treated in and out of hospitals. Still less has any attempt been made to show how far any difference which may exist may depend upon the greater care and more personal attention of the surgeon in one case and in the other. Mr. Lister asserts the entire immunity of his wards from pyæmia and other so-called "hospital" diseases; which, however, are rife enough, as Mr. Erichsen must know, in private practice in this city. Whether this is due, as Mr. Lister believes, to the neutralisation of the forms of disease by antiseptics, or, as Mr. Callender believes, to care in selecting and in treating his cases, it, as well as Mr. Callender's own experience, shows what may be done to improve the results of hospital operations by personal care of the cases. We have heard enough of the

question of "Hospitalism" to know that it cannot be settled merely by an undigested heap of figures. Most of us know enough about operations in private to be very sceptical as to their immunity from danger.

But if operations in private are really so much more successful comparatively to those in public, the fact can only be proved by the publication of some complete series of cases similar in themselves, in the locality in which they are treated, and in all other important particulars. Simpson's figures were rejected at the time, because they satisfied none of the conditions which a series of statistics should have fulfilled. But a statement by Mr. Erichsen, or any one of similar position, that he has really observed something like the same difference between operations in public and in private would command attention if supported by other persons of equal opportunities of observation. As far as our own inquiries have extended, they seem to show that pyæmia, erysipelas, sloughing, and the other complications of wounds, are not by any means unknown in private practice in this city, and that they should have been so very rare in the experience of Simpson's correspondents is usually taken as showing one of two things—either (as is the more probable) that such experience did not fairly represent the real results of general practice in the districts from which the information was drawn; or, that the patients or their cases were of a different kind from those dealt with in large city hospitals. When we remember that much of Simpson's information seemed to rest on the memory of his informants, or on books, for the completeness of which there was no guarantee and that a great part of his table was composed of single favourable cases, while there was a very suspicious absence of single fatal cases, the former supposition will not seem improbable.

THE ARMY MEDICAL SERVICE.

WE have received from "The officers of the Army Medical Department" a "Memorial Statement," bearing date August 1873, originating in India. The expression of opinion from so large and influential a body of men as those who represent our military medical brethren in the East, deserves very attentive study and consideration.

Under nineteen separate headings, the memorialists examine the various clauses in the now famous warrant of March 1873, and record minutely and clearly the objections which appear to require removal. In these they go over much of the ground hitherto traversed by ourselves, and we are gratified to find that the various arguments laid before our readers from time to time, now receive thorough and independent confirmation from this carefully constructed report. The discomforts of staff *versus* regimental life are graphically described, and the opinion expressed, that a good deal of the comfort of the service is destroyed by recent regulations; the questions of relative "rank, forage, promotion, and hospitals," are discussed, and a strong protest entered against the large increase of labour and responsibility lately thrown upon the Army Medical Department. In addition to this and other points brought under rapid survey, paragraph No. 4 tells us of the "great dissatisfaction caused by the non-recognition by the Government of India of the financial clauses of the late warrant, while reaping the advantages it offers in facility of working and economy of numbers." In conclusion, a draft warrant is submitted "which it is believed would remove most if not all the grievances under which medical officers suffer."

Our space does not allow us to refer to this document at length, but, as special novelties, we have noted that relative rank is recommended to carry all precedence and advantages attaching to the combatant rank with which it corresponds, only the officer commanding the regiment being always and necessarily senior; that no contributions shall be paid on appointment to regimental funds; that medical officers promoted for special service shall remain supernumerary of their rank until absorbed; and that fifteen years' service shall invariably carry promotion to properly qualified men.

It may not be out of place to refer at this time very briefly to the disappointment which is universally felt at the absence of the announcement of Mr. Cardwell's intentions with reference to the future of the Department, which he promised to our Association should be given with the least possible delay. The sickness of deferred hope is gradually stealing over our brethren, and in the meantime their minds are disquieted by various and contradictory reports. Some time ago the rumour was widely spread that every thing had been conceded, and that all obnoxious clauses were at once to be struck out of the March warrant. Now, the retailers of gossip tell us on good authority that the extra 2s. 6d. *per diem* after fifteen years' service is to be restored, but that any indication of necessary promotion after that date is withdrawn, whilst on all other points the document is preserved intact, except a possible concession in matters of forage to those officers who entered the service prior to March, 1873. We shall look forward very anxiously for the promised official utterance at no distant date, and we hope we may be able to congratulate the Department on some substantial results from the vigorous battle they have recently fought in defence of their rights.

POISONOUS ALCOHOL.

IN a recent letter to the *Times*, Dr. Edgar Sheppard has done good service to the public by pointing out the fact that whereas poisoning by adulterated milk has excited the terror and indignation of the public, poisoning by adulterated alcohol is probably producing much more disastrous effects without any suspicion of their real cause being aroused. The Chancellor of the Exchequer's returns show only too clearly that the use, or rather the abuse, of alcohol is rapidly extending in this country, and its prevalence among the working classes threatens serious injury to the commerce on which our national prosperity depends. A man who works three days in the week and gets drunk during the rest of it, does only half the work he ought, and thus diminishes his value as a productive member of society by one-half; he brings upon himself premature decrepitude, and having spent in sensual indulgence the money which ought to have supported him in his declining years, he falls a burden on the parish, and thus helps to drain the scanty purses of many whose habits have been more provident, though their incomes may have been smaller than his own. Nor, as Dr. Sheppard points out, is this all. His example induces others to enter on the same evil ways; he brings poverty and distress on those dependent upon him, rendering them liable to be attacked by any malady, and ready to succumb to its power; and he transmits to posterity not only various forms of disease, especially derangements of nerve-tissue, but a proclivity to drink, which is established by competent authorities to be as hereditary as insanity itself. Few are so well able to judge of the effect of alcohol in producing insanity as the superintendent of a lunatic asylum, and after twelve years' service in this capacity Dr. Sheppard estimates that no less than from 30 to 40 per cent. of the cases are due either directly or indirectly to alcoholic drinks. It is evident that alcoholic excesses not only ruin those who indulge in them, but render every succeeding generation less able for work, more liable to disease, and more ready to yield to the seductive influence which had proved the bane of the preceding one. The taste for alcoholic drinks seems to be deeply ingrained in all classes of society, and neither civilisation nor Christianity seems able to remove it. Dr. Sheppard believes it to be ineradicable; and as he has over and over again seen the most hopeful promises and the most solemn protestations of a new and non-alcoholic life, made after dreadful calamities, collapse upon the first exposure to temptation, he has come to the conclusion that the craving for alcoholic drinks is invincible, and only very partially to be met by educating the working classes and giving them new interests. Such being the case, he inquires what it is that is alluring and destructive in alcoholic drinks, and whether it is not possible to deprive these beverages of their injurious ingredients without diminishing the needed sense of their stay and strength. He quotes the statement that the liquors, such as whiskey and gin,

which find so much favour with the lower orders, are pernicious, not so much on account of the alcohol they contain, as by reason of the poisonous matters associated therewith; and ascribes the miserable consequences of sottishness, the headache, vitiated stomach, undue thirst, and dipsomaniacal craving, not so much to the alcohol itself, as to the amylic alcohol or fusel oil with which it is flavoured.

Everyone who has given any attention whatever to the subject knows that the effects of alcohol depend very much on the substances with which it is mixed; and a man will awake bright and active on the morning after moderate indulgence in good wine, while a much less quantity of bad wine, or highly-flavoured brandy, would have incapacitated him for work, giving him a racking headache and an almost invincible craving for more alcohol to remove the state of misery into which his previous potations had brought him. The researches of Marcé and Magnan, too, have shown that the liqueur absinthe, so much drunk by the French, produces trembling, stupidity, and epileptiform convulsions, which alcohol alone does not occasion, and which must, therefore, be ascribed to the oil with which it is flavoured in the liqueur. Some have even gone so far as to ascribe the defeat of the French by the Germans to the nervous disorganisation caused by the habitual use of absinthe among the former people; and, though this is probably an exaggeration, there seems little doubt that it produces the most disastrous results.

It is worthy of consideration how far the injurious effects of the use of alcohol in England are due to the fusel oil with which it is habitually flavoured. It may be that Dr. Sheppard somewhat overestimates the influence of this, for drunkenness and its attendant evils may follow the use of wines totally innocent of amylic alcohol. The analogy of absinthe in France, however, gives great weight to Dr. Sheppard's suggestion, that the legislature ought to appoint a commission of inquiry into this subject; and where such enormous interests are at stake any method which affords the least hope of lessening the drinking customs of this country and their direful consequences, ought to be eagerly adopted.

PROFESSOR VIRCHOW delivered last Saturday, in the Vienna Exhibition building, an address on the importance of International Exhibitions and their influence on the progress of science.

THE first meeting of the Medical Society of London will take place on Monday next, in the handsomely decorated new rooms of the Society. Dr. B. W. Richardson, F.R.S., will read a paper on Organic Stricture of the Oesophagus.

AFTER attacking a large number of persons—amounting up to September 1, to 104,000—the cholera has decreased in Hungary; but in place of it pernicious fever has occurred and has threatened to prove formidable. It has therefore been suggested to retain for the present the services of the medical men who were sent into the various districts to attend the cases of cholera.

DR. PONFICK, Professor Virchow's assistant in the Pathological Institute of Berlin, has been appointed Ordinary Professor of Pathological Anatomy at Rostock, in the room of Professor Ackermann, who has accepted a similar post at Halle.—Dr. Franz-Boll, *privat-docent* in the University of Berlin, has accepted an invitation to the professorship of Comparative Anatomy and Physiology in the University of Rome.

THE LONDON MEDICAL SCHOOLS.

WE understand that the registration at the Royal College of Surgeons of students in the London Medical Schools shows a gross number of 1,850 now actually pursuing their studies in London. This is an increase over the numbers registered in any year during the last decennium. Of new or first year's students, the numbers registered at the College from the different schools are approximately, we believe, as follows: St. Bartholomew's, 100; Guy's, 88; University College, 63; St. Thomas's, 53; King's College, 45; Middlesex, 38; London, 36; St. George's, 35; St. Mary's, 23; Charing Cross, 13; Westminster, 10.

THE BLIND IN PRUSSIA.

FROM official inquiries, it appears that in the year 1871 there were in the Prussian dominions 22,143 blind persons, or 89 blind persons in each 100,000 of the population. The highest numbers were in the provinces of Posen and Prussia, where there were respectively 107 and 106 blind per 100,000; the lowest number, 7, was found in Hohenzollern. These remarkable differences appear not to depend alone on the geographical position of the several provinces; for Pomerania shows a smaller proportion than any of the southern provinces except Hohenzollern. The number of blind in proportion to the population has greatly increased in the last ten years; in 1859 there was one blind person in 1649 of the population; while in 1871 there was one in 1111. In the sixteen institutions for the blind in Prussia, there were only 549 pupils.

THE ASHANTEE EXPEDITION.

IN the absence of very recent information from Ashantee, it is believed that everything is progressing favourably there, and, meanwhile, the Army Medical Department is pressing on its special preparations with great energy. The hospital ship, *Victor Emmanuel*, which will afford ample accommodation for more than two hundred sick, is now being fitted up at Portsmouth, on a very complete scale, and the scientific observation, as well as treatment, of disease, will be most materially aided by the liberal manner in which Government has sanctioned the issue of every modern instrument and appliance. A numerous and experienced medical staff will co-operate with their brethren in the field, and the supply of men of the Army Hospital Corps will be sufficient to enable their occasional detachment on board transports with bad cases. To relieve the strain which the *Victor Emmanuel* may not improbably experience in the event of a full contingent of English troops being actually engaged, arrangements have also been made by which convalescents may be drafted to England at frequent intervals, and in such numbers as the exigencies of the service may require. It is not unlikely that trial may be given to the sanatoria which have been established from time to time at Ascension and other elevated regions. Dysenteric cases, which it is not considered advisable to land in England during the winter months, will probably be sent elsewhere. From this it will be seen that the authorities have wisely determined to reduce their land hospitals to a minimum, and only to establish such dépôts at Coomassie or Cape Town Castle, as will be sufficient to receive the sick and wounded from the interior, and treat them until they can bear the journey on board ship. Every means will thus be taken to reduce the unhealthy influences of the climate to a minimum; and we are glad to hear that a dose of quinine will be daily served out to each soldier. Sir Garnet Wolseley is well known to be a thorough sanitarian, and, in conjunction with Dr. Home, the able Principal Medical Officer, will do all that human power can to support the health of the men under his charge; but we must hope that the course of events may not render it necessary to send out many European troops. Significant testimony was given to the deadly effects of the climate, by the recent appearance at Haslar of one hundred marines, after a very short period of service in these latitudes, and whose condition and general state of health was described as being pitiable in the extreme. The health of Dr. Home, V.C., is now re-established, but, in the event of any unfortunate break down, by which the country may be temporarily deprived of his valuable services, we understand that Staff Surgeon-Major Mackinnon, C.B., has been ordered to hold himself in readiness to proceed at once to the scene of action.

SIR EDWIN LANDSEER.

WE cannot allow the death of Sir Edwin Landseer to pass, without some brief expression of the sincere affection and respect with which he was regarded by a very large circle of medical men with whom he was in intimate relation. Sir Edwin was essentially, as so many great painters have been and are, a friend of the doctors. His was a well known face and a well known voice in many a medical circle. His in-

terest in biological science and his taste for medical society were integral parts of the character of his mind. The close association of friendship, which lasted through his life, with Jacob Bell, and subsequently with his successor, T. Hyde Hills, favoured this alliance. For many years he was habitually present at the Friday evening lectures at the Royal Institution, and at many a social scientific *r  union* before and after the lectures. He was scarcely less remarkable as a close observer of the zoological and vital characters of all the *fera natura*, than as their accomplished delineator. He was wont to discourse at length on this favourite subject, and to propound many a puzzling question as to changes of colour and shape, variation of habits, and biological peculiarities, of the creatures which he observed so closely and loved so well. He was greatly indebted to medical men for long and assiduous attentions, and highly appreciated the friendly services which were always at his disposal. One of the few portraits which he painted was that of his friend Jacob Bell, which is now in the possession of the Pharmaceutical Society. A portrait of himself by his own hand he presented to Mr. Hills.

TYPHOID IN MARYLEBONE.

ON October 8th, there were twenty-five cases of enteric fever (fourteen males and eleven females) in the Middlesex Hospital. Of this number, six are attributed to milk-infection (the last of such cases having been admitted on September 13th). The cases are furnished from the following parishes:—St. Marylebone, 11; St. Pancras, 7; St. Ann's, Westminster, 3; St. James, 2; Paddington, 1; St. Mary, Lambeth, 1.

WANKLYN ON THE ANALYSIS OF TEA.

MR. WANKLYN, in a recent number of the *Chemical News*, records some results of interesting experiments in the analysis of tea. He thinks there is no doubt that tea is sometimes adulterated with iron-filings and other preparations of iron, but he wishes to call the attention of public analysts to the importance of investigating the ash of samples of tea, for he points out that, as tea-ash contains naturally 4 per cent. of oxide of iron, it is manifest that the mere qualitative detection of oxide of iron is no valid proof of adulteration. Z  ller found the ash of tea-leaves to be 5.63 per cent. in pure tea, about which there could be no doubt; Mr. Wanklyn finds a very similar result—an average of 5.92 per cent. with ordinary commercial tea, absolutely dry. The method of investigation is very simple. "I am in the habit," he says, "of employing about two grammes of the dried leaves for the experiment. These I burn in a small platinum dish, and, when the resulting ash has become grey, I allow the dish to cool, and weigh it together with its contents. The ash is then heated to boiling with a little water, and the solution filtered, and the filtrate evaporated to dryness in a small platinum dish; the resulting residue is then ignited, cooled, and weighed. Thus I get determinations of 'total ash,' and 'soluble ash,' the 'insoluble ash' is found by difference." Treated in this manner, the ash of Paraguay tea is the only ash capable of being mistaken for the ash of tea; the total percentage of itself excludes all others. As an incidental circumstance, Mr. Wanklyn has been led to notice the great fragrance of a decoction of beech-leaves, and its possible use as a beverage.

CLEANLINESS *versus* CHOLERA.

THE Vienna *Centralblatt* notices a statement made by Dr. Bock regarding the cities of St. Louis, Boston, and Baltimore, showing the connection between cleanliness and diminished mortality from cholera. In Boston and Baltimore, sanitary regulations were carried out with all energy on the approach of cholera, and a large amount of money was spent in cleansing the streets, squares, and courts. In St. Louis, nothing was done by the public authorities, and very little by private individuals. Boston lost only 327 from cholera in a population of 140,000, the total mortality for the year being 5,000; in St. Louis, with 65,000 inhabitants, there were 6,000 deaths from cholera. In Baltimore, 40,000 dollars were spent on sanitary measures on the approach of cholera; the deaths from the disease were only 853 in a population of 160,000.

THE ABUSE OF NARCOTIC PRESCRIPTIONS.

AT the quarterly meeting of the Rhode Island Medical Society, held in Providence, September 7th, the following resolution, introduced by Dr. Alexander R. Becker, was, after earnest remarks by several of the leading members, unanimously passed.

"Resolved: That, in view of the disastrous effects occasionally arising from a continued use of powerful remedies without due medical authority, the Rhode Island Medical Society earnestly requests the dispensing apothecaries of the State to positively decline renewing prescriptions containing toxic or narcotic remedies, without fresh authority from the prescribing physician."

The Secretary was also directed to forward a copy of the resolution to the State Board of Pharmacy. The abuse of prescriptions by patients and druggists is carried to much greater extent in our own than in any other country. A prescription is an order given by a physician to a druggist to compound a special and often potent series of substances on a particular date, to be used under particular circumstances, which he has reason to believe will make their use salutary. The law prohibits an English druggist from furnishing such toxic substances to the public indiscriminately without order and warranty from a skilled medical man. A signed and dated prescription is, indeed, only a warranty for the one occasion for which it is furnished, and it is none for subsequent occasions when the patient has not seen the medical man, and has obtained no sanction to the renewal of the purchase. There is some reason to doubt, therefore, whether the practice which is common with all English druggists, of retaining a copy of the prescriptions passing into their hands, and renewing the supply of medicines *ad libitum* on subsequent occasions without authorisation, is accordant with legal or with equitable right. We published last week a paper from a medical man who, without raising the question which we now suggest, had to deplore the mischief resulting to patients under his care from the unrestricted renewal by druggists of medicines prescribed with a special object on special occasions.

UNUSUAL DOSES.

AT the Pharmaceutical Conference at Bradford this year, the following report was unanimously adopted.

"That this Conference, having duly considered proposals for the use of special signs to mark unusual doses on prescriptions, and the great advantages to be derived from them, considers that the bracketed initial letters of the prescriber's signature, written immediately after the unusual dose, is the best suited for the purpose.

"This Conference also respectfully urges upon medical men the importance of the prescriber's full name and address being written on *all* prescriptions, to facilitate communication between the prescriber and dispenser.

"That this Conference likewise considers it desirable for the dispenser to retain all prescriptions in which initialed unusual doses are prescribed."

The first two paragraphs embody propositions which we have already recommended to our readers in discussing this subject; and the report, as a whole, has our entire approval.

DR. RUMSEY ON THE STATE MEDICINE QUALIFICATION.

THE valuable *Remarks on the State Medicine Qualification* by Dr. H. W. Rumsey of Cheltenham, read in the Section of Public Medicine at the meeting of the British Medical Association in August 1873, have been reprinted as a pamphlet. They mark, we believe, the commencement of a new epoch in British medicine, in which the special cultivation of the branches of knowledge which fit men for the functions of health-officer, and for all the duties of public medicine, will be recognised as a worthy and necessary study. Very many of our brethren now appointed to such functions must feel, and as we know do feel, very strongly the want of such a special preliminary training. Dr. Rumsey has rendered manifold services to sanitary science and legislation. None of his labours will be more fruitful and secure in good results than that which is here inaugurated, and which it will be the part of our Association to bring into active working form, and to press upon the acceptance of the state. We can foresee many obstructions, but none which may not be overcome.

THE LATE MR. DALRYMPLE, M.P., AND THE HABITUAL DRUNKARDS BILL.

AN injustice has been done to the memory of an able and philanthropic public man, and a mischievous misrepresentation has been made of the purport of a public measure of some prospective importance, by the wide circulation recently given in the press to an obituary notice of the late Mr. Dalrymple, M.P. for Bath, in which he is spoken of as "chiefly to be remembered by his Habitual Drunkards Bill, which proposed to place habitual drunkards in a lunatic asylum." A writer in the *Scotsman* truly and accurately states that—

"Whatever may have been the views held by Mr. Dalrymple in regard to the mental unsoundness and unfitness for full personal liberty of that class of habitual drunkards who have lost the power of self-control, and who have become a burden on society, a torment to friends, and a curse to themselves—which views are now maintained by thousands of thinking men, and by *all* who have had any personal contact with such cases—Mr. Dalrymple's Bill was framed strictly on the recommendations of the Select Committee of the House of Commons of 1873 on Habitual Drunkards. The various clauses of his Bill, therefore, most specially provide that all the arrangements necessary for the care, and, if possible, cure, of dipsomaniacs—or habitual inebriates, or by whatever name they may be called—should be carried out independently of, and distinct from, a Lunacy Law, Commissioners of Lunacy, or *lunatic asylums*; and these clauses, too, were carefully framed with every possible check to any undue interference with what might reasonably be considered as the liberty of the subject.

"The unfortunate Government embroglio on the Irish University question, occurring at the commencement of last session of Parliament, hitched Mr. Dalrymple's Bill out of its assigned place, thus preventing it, according to the rules of the House, from being taken up, unless at a period so late in the session when it could not have been successfully carried through the forms of the House. This heavy blow and discouragement to Mr. Dalrymple, together with family afflictions, must have told much on his strength of constitution, and probably has contributed to its inability to contend with the invasion of a sudden and serious illness.

"Mr. Dalrymple was a man of great shrewdness, thorough integrity, tenacious devotion to any cause or matter which convinced his understanding or affected his heart. He was also a man of no small intellectual grasp and attainments, and had the power of expressing his opinions easily and forcibly, as all who heard him address the meeting in Edinburgh in February last can testify.

"It is earnestly to be hoped that the cause to which Mr. Dalrymple so far successfully devoted the few last years of his life, at much personal expense and labour, and in spite of many discouragements from quarters where his views were misunderstood, will not be seriously retarded by his—humanly speaking—untimely removal. Surely some one of his late Committee, who went along with him warmly into the various questions connected with habitual drunkenness, will take up the fallen mantle, and prosecute with energy the settlement of the matter—to which it is believed Government is not indifferent—and carry forward in next meeting of Parliament, if not the Bill of Mr. Dalrymple, at least something akin to it."

AID TO THE SICK AND WOUNDED IN WAR.

IN response to an invitation issued by Dr. Wittelschöfer and Professors Billroth and Mundy, a number of gentlemen of various European nations who have taken an interest in the subject of the treatment of the sick and wounded in war, assembled on October 6th, 7th, 8th, and 9th, at a "private conference" in the "Sanitäts-Pavillon" of the International Exhibition in Vienna. The form of a "private conference" was chosen in preference to that of a congress, because, as Dr. Wittelschöfer explained in his opening address, official delegates to conferences are liable to lose their impartiality and to unduly prefer the institutions and regulations of their own countries. Professor von Langenbeck of Berlin was chosen President; and, on taking the chair, delivered a brief address, in which he remarked that, while those who had witnessed the international exhibitions from that of London to the present one, could not but be struck with the vast progress made in all departments of art and science, that department of knowledge which they were met to consider—the care of the sick and wounded in war—could not boast of such advance. It was only since the establishment of the Geneva Convention that the subject had become one of international

discussion. The speaker referred to the loss which had been sustained this year in the deaths of the Grand Duchess Helena of Russia, a principal promoter of the organisation for the care of the sick and wounded, and of Nélaton, "whom," he said, "surgery has to thank for much enrichment." Dr. von Langenbeck then nominated as Vice-Presidents Lieutenant-General Baumgarten of St. Petersburg, Professor Baron von Dumreicher of Vienna, Professor Esmarch of Kiel, and M. Ricord and Count Serrurier of Paris. Among others who attended the meeting were, Professor Billroth, Dr. von Mosetig, Baron Mundy, and Dr. Neudörfer, of Vienna; Professor Virchow of Berlin; Mr. Mac Cormac, Dr. Becher, Captain Furley, Abdullah Bey (Constantinople), Dr. Appia (Geneva), Dr. Bertani (Genoa), Dr. Czerny (Freiburg), M. Demarquay (Paris), Surgeon-General von Frichte (Stuttgart), Dr. Fischer (Breslau), Dr. Frölich (Dresden), Dr. Gori (the Hague), Dr. Heine (Prague), Dr. Holsbeck (Brussels), Dr. Lummitzer (Pesth), Dr. Ritter (St. Petersburg), Dr. Simon (Heidelberg), Dr. Socin (Basle), Dr. Volkman (Halle), Staff-Surgeon Dr. Wywodzoff (St. Petersburg); etc.; besides several engineers and carriage-builders. Letters apologising for absence were read from Colonel Loyd Lindsay, Professor Longmore, Inspector-General Gordon, Count Flavigny, Professor Pirogoff, and others. A letter addressed to Dr. Wittelschöfer by the Empress Augusta of Germany was also read, in which Her Majesty expressed the deep interest which she felt in the subject of the conference. Professor Billroth addressed the meeting, and declared the object of the conference. The idea of calling the meeting had been suggested to him and to his colleagues Baron Mundy and Dr. Wittelschöfer by the experience afforded in the great wars of the last ten years. "Whoever," he said, "has taken part in these wars, must have become convinced that it has often proved very judicious for private assistance to take the initiative; and that, indeed, this has not only received the warmest recognition on the part of public authorities, but these have soon become accustomed tacitly to give it the preference. We are fully convinced that, in a new war, every government would be extremely perplexed if private aid did not co-operate, if it did not from its own initiative prepare, manage, and support ambulance-trains and hospitals. The great result which voluntary aid had in the last wars was due in the first place to the large amount of material which the generous public contributed for the use of every one wounded in the field, whether friend or enemy; and also to the circumstance that the management and care of the means thus afforded were undertaken by intelligent and devoted men and women of all ranks, so that even princesses wore on their arms the band with the red cross. Yet all this would not have had such great practical results, had not a number of men of skill in science and art been, through the system of voluntary aid, induced to take an interest in military affairs; for the number of such skilled men which—even within the utmost limits of army organisation—the state can employ and have at its disposal, after great battles, for the care of the wounded, must always prove too small. To bring together such men, who made extensive observations in the course of the late war, in company with leading men of art, officers, and military surgeons, was our object when we issued our invitations." Among the subjects discussed in the conference were, the means of improving the lighting, ventilation, and fitting up of the railway-carriages used for the transport of the wounded; the form and fitting up of transport-wagons; and the question whether the litters should be fixed or suspended. It was agreed, *inter alia*, that it is not necessary to always have special carriages ready for the conveyance of the wounded in war, but that it is desirable to have the means of rapidly converting railway stock into ambulances. The various ambulance-wagons, cooking-wagons, stretchers, etc., were examined and tested practically—as far as was possible with sound men—by the members of the conference. On one of the days of the conference, about seventy of the members were entertained at dinner by Professor Billroth, at Vöslau, about fifteen miles from Vienna, to which place they were conveyed in a "sanitary train". The visitors were also hospitably entertained on other days by the Archduke William, Baron Mundy, and Dr. Wittelschöfer.

WESTMINSTER HOSPITAL.

ON Tuesday, October 14th, 1873, Mr. Legge Pearse resigned his office as Surgeon to the hospital. Mr. Richard Davy, the Senior Assistant-Surgeon, has applied for the post; consequently a vacancy occurs for an Assistant-Surgeon. The nomination is fixed for October 28th, 1873.

THE CHOLERA IN GERMANY.

THE numbers of new cases of cholera in Berlin, on the days from September 29th to October 3rd, were 9, 6, 8, 5, and 10; and the deaths were 6, 2, 3, 2, and 1. From the beginning of the epidemic to October 7th, the number of cases in Berlin was 879; of these, 209 recovered and 588 died, 82 remaining under treatment.—There is a severe epidemic of cholera in Spier. Up to October 9th, there were 274 cases and 134 deaths; on the day abovenamed, the number of new cases was 23, and that of deaths 20.

THE METROPOLITAN SICK ASYLUMS.

THE Metropolitan Asylums Board has issued its statement of receipts and expenditure for the last half-year for the Poor-law Asylums for imbecile patients at Caterham, Leavesden, and Hampstead, and the fever and small-pox asylums at Homerton and Stockwell. The parishes and unions in the metropolis had contributed £53,707 : 3 : 3, which with the balance in the hands of the treasurer at the commencement of the half-year, and other receipts made a total of £92,808 : 11. The expenditure for the five asylums for provisions showed that meat cost £5,326 : 5 : 3; preserved meat and extract, £2,727 : 12 : 7; flour and bread, £4,100 : 3 : 3; vegetables, £1,020 : 10 : 2; grocery, £2,418 : 18 : 10; milk, £512 : 5 : 11; ale and porter, £2,232 : 4 : 9; wine and spirits, £484 : 9 : 4; corn chandlery, £87 : 6 : 2 fish and sundries, £629 : 3 : 6. The items which applied only to Leavesden and Caterham Asylums are:—Farm account, £1,093 : 14 : 10; wages to farm labourers, £454 : 14 : 10; and bakers' wages, £54 : 6. Under the head of "necessaries," coal cost £4,421 : 15; soap, soda, etc., £1,131 : 4 : 10; tobacco and snuff, £239 : 8; gas and water (including cost of labour at Caterham and Leavesden in the making of gas and pumping of water), £764 : 13; clothing, including wages of tailors and shoemakers, £3,572 : 5 : 8; furniture, £3,170 : 19 : 8; repairs and building, including wages of labourers where the Board does the work, £7,003 : 19 : 8; the medical account, £278 : 19 : 11; funerals, £373 : 11 : 2; stationery, etc., £375 : 18 : 3; salaries of officers, £7,521 : 9 : 5; uniforms, £392 : 16 : 14; incidental expenses, £285 : 19 : 10; being a total of £53,329 : 19 : 9. The law expenses of the year came to £480 : 9 : 3, and the offices to £1,511 : 13, the interest on loans to £4,894 : 0 : 2, and there remain in balances at the various asylums £360 : 4 : 6. The cost of funerals seems to indicate that the patients who die as paupers in these asylums are buried by relatives, who, though they feel no compunction at their friends being maintained at the cost of the rate-payers, shrink from the idea of a pauper funeral. The managers in the imbecile asylums not unfrequently find persons whose friends and responsible relatives are capable of maintaining them passed as paupers by the relieving officers, and still less care is shown in this respect in regard to persons who come into the fever and small-pox asylums.

THE HOUGHTON-LE-SPRING MEDICAL ASSOCIATION.

At a general and well attended meeting of the qualified medical practitioners of the Houghton-le-Spring District (comprising a radius of nearly six miles, and an area of about 100 square miles), held on September 11th, R. P. Edger, Esq., in the Chair, the following resolutions were adopted. 1. That this Association be called the Houghton-le-Spring District Medical Association. 2. That those of our number who have clubs, and are commonly styled "Colliery Surgeons," charge not less than 9d., instead of the 6d. a fortnight hitherto accepted. 3. That the minimum fee for ordinary midwifery cases be 15s.; and when called in after midwives or unqualified men, that our fees be in proportion to the gravity of the case and the responsibility incurred. 4. That for those of our number who do not accept fortnightly clubs, and those who do,

and are called to attend non-subscribing patients, a scale of fees for visits and mixtures, etc., be adopted; but this to be further considered at a future meeting. 5. That all medical "extra" certificates of a sick or benefit nature (that is, such as by our contracts we are not obliged to give) be charged for, and that the minimum charge for each certificate so described be one shilling. 6. That at our next meeting, the very illegal but very common practice of unqualified men (sometimes three or four such practising under one man, and spread abroad over a large area), signing "medical certificates," be fully discussed, with the object of terminating this and all such illegal practices. Besides the foregoing, it is proposed to consider at the next meeting the prevalent system of gratis vaccination. The circular issued states that it is proposed that the Association be in every respect a friendly one; that its members aid their brothers as far as possible in any misfortune occurring to them; that, in cases of jealousy or misunderstanding arising between professional neighbours, arbitration and conciliation be sought through the Association; and that, in short, opportunity be always taken to do whatever good can be done.

THE CHOLERA IN VIENNA.

THE report on the progress of the cholera in Vienna on the 9th instant, showed that, after the daily numbers of new cases had fallen from 28 to 2 since September 26th, there had been an increase of 12 and 11 on the last two days (the 7th and 8th instant). On the 8th instant, the number of deaths was 9; the numbers for the six preceding days having been 4, 2, 4, 7, 3, and 3. These returns somewhat disturb the anticipation of a speedy disappearance of the epidemic. In the suburbs of Vienna, as well as in the Austrian low lands, the reports are encouraging. The disease has disappeared from most of the places where it prevailed, and there have been no new outbreaks.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

At a meeting of this Corporation, held on the 6th inst., the following office-bearers were elected for the ensuing year; viz.—*President*: Eben Watson, M.D. *Visitor*: Andrew Fergus, M.D. *Treasurer*: John Coats, M.D. *Honorary Librarian*: J. D. MacLaren, M.D. *Vaccinator*: Hugh Thomson, M.D. *Councillors*: The President, *ex officio*; The Visitor, *ex officio*; J. G. Fleming, M.D.; H. R. Howatt, M.D.; James Steven, M.D.; James Morton, M.D.; George Buchanan, M.D. *Board of Examiners*: William Lyon, M.D., Surgery and Surgical Anatomy; Eben Watson, M.D., Anatomy and Physiology; James Morton, M.D., Surgery and Surgical Anatomy; Robert Perry, M.D., Chemistry; P. A. Simpson, M.D., Midwifery and Medical Jurisprudence; James Stephen, M.D., Medicine and Materia Medica; Alexander Lindsay, M.D., Chemistry; George Buchanan, M.D., Anatomy and Physiology; R. Scott Orr, M.D., Medicine and Materia Medica; J. G. Wilson, M.D., Midwifery and Medical Jurisprudence. *Clinical Examiners in Medicine*: The Physicians of the Royal Infirmary. *Clinical Examiners in Surgery*: The Surgeons of the Royal Infirmary. *Examiners in Arts*: James B. Russell, M.D.; John Pirie, M.D.

SUBURBAN BABY-FARMING.

ONE result of the working of the "Infant Life Protection Act" in the metropolis and its relative neglect by local vestries appears to be that persons who take in children to nurse by hand now take up their abode in the suburbs beyond the jurisdiction of the Metropolitan Board of Works. Mr. J. Oakeshott, Medical Officer of Health, has reported to the Hornsey Local Board that the deaths in the Hornsey district during the past month included eight cases of diarrhoea, most of which were cases of young children under six months old, and being registered within a very limited area of the district, he made a special inquiry into each individual case. The result of the inquiry was so far satisfactory, he states, "that not one case could be referred to those local causes to which diarrhoea is so often due, and which gives it a place in the class of diseases called zymotic, but the inquiry also disclosed this fact that the whole of these were children who from one cause or other were not receiving their natural food."

PUTRID TEA.

At a recent meeting of the City Commissioners of Sewers, Dr. Letheby reported that he had received information of the arrival in this country of about 370 chests of putrid tea, and he was informed that 90 of these chests had already been sold and delivered to the purchaser, and the remainder, amounting to about 280 chests, of 100 lb. each, was lodged in a bonded house in the City. He had obtained a sample of the tea, which he submitted to the Commissioners for examination. It was entirely composed of decayed and putrid tea-leaves. He recommended that, in case the remainder of the tea was offered for sale in the City, the solicitor be instructed to take the necessary proceedings against the dealer. The Commissioners passed a resolution to that effect.

DESTRUCTION OF LIFE IN INDIA.

THE numbers of people destroyed by wild beasts constitute an extraordinary feature of Indian life. Rewards are offered by the Government for the killing of these animals, but still the loss of life is very great in some districts, and in others it is less only because goats are abundant, and the wolves prefer kids when they can get them. No fewer than 14,529 persons lost their lives by snake-bites in 1869, and in 1871 there were 18,078 deaths reported as caused by dangerous animals of all classes; but Dr. Fayer is of opinion that systematic returns would show that there are more than 20,000 deaths annually from snake-bites. The inhabitants of the border lands between jungle and cultivation are killed and eaten by tigers in such numbers as to require the serious attention of the Government. A single tigress caused the destruction of 13 villages, and 256 square miles of country were thrown out of cultivation. Another tigress killed 127 people in 1869, and stopped a public road for many weeks. A third killed 108 people in the three years 1867-69. In Lower Bengal alone 13,401 human beings were killed by wild beasts in six years, and 40 in South Canara in the single month of July 1867. The Chief Commissioner of the Central Provinces has to report 946 persons killed by tigers in three years ending with 1869. There are difficulties in the way of extirpating tigers; the natives regard the man-eating tiger as a kind of incarnate and spiteful divinity whom it is dangerous to offend, and it is the desire of a few in India actually to preserve tigers for sport. Mr. Frank Buckland has suggested an organised destruction of the tiger-cubs in the breeding season, and the attraction of full-grown tigers to traps by means of valerian, of which these animals, like cats, are exceedingly fond.

EDIBLE AND POISONOUS MUSHROOMS.

SOME useful advice on the subject of mushrooms, says the *Pall Mall Gazette*, was lately given by Mr. Justice Denman in the Central Criminal Court on the occasion of the grand jury throwing out a bill of indictment against a gardener who was charged with murdering a fellow-servant by giving her poisonous mushrooms to eat. Although there was no reason to suppose that the prisoner had any felonious intention in giving the deceased the mushrooms, yet three persons were dangerously poisoned by them, and one of them actually died; the fungi being so much like mushrooms that even a skilled witness saw nothing in them to distinguish them from those articles of food. Mr. Justice Denman thought it was desirable that these facts should be thoroughly well published and known. It appeared that mushrooms growing under trees were dangerous. That being so, added the judge, "let everybody beware of eating mushrooms which grow under trees." So many persons have from time to time come to an untimely end through eating poisonous fungi bearing a close resemblance to mushrooms, that perhaps the most prudent course would be for those who are unwilling to risk their lives to abstain from eating mushrooms altogether. In the meantime, however, as there are many people who infinitely prefer the chance of a painful death to the certain anguish of denying themselves any luxury on which they set their hearts, it may perhaps be as well to call attention to the following tabulation by Professor Bentley of the general characters by which the edible and poisonous species of fungi may, as a rule (but not an unerring one), be distinguished. Edible

mushrooms: 1. Grow solitary, in dry airy places; 2. Are generally white or brownish; 3. Have a compact brittle flesh; 4. Do not change colour, when cut, by the action of the air; 5. Juice watery; 6. Odour agreeable; 7. Taste not bitter, acrid, salt, or astringent. Poisonous mushrooms: 1. Grow in clusters, in woods and dark damp places; 2. Usually with bright colours; 3. Flesh tough, soft, and watery; 4. Acquire a brown, green, or blue tint when cut and exposed to the air; 5. Juice often milky; 6. Odour commonly powerful and disagreeable; 7. Have an acrid, astringent, acid, salt, or bitter taste. It is best to avoid all fungi which have arrived at their full development or show any signs of change; and by soaking doubtful fungi cut in slices for about an hour in vinegar and afterwards washing them in boiling water, they may, it is stated, be rendered harmless. (*Brit. med. Journal*)

IRELAND.

HEALTH OF DUBLIN.

FROM the report of the Registrar General for Ireland for the quarter ending September, we learn that the births registered in Dublin during that period amounted to 2,181, being equal to an annual ratio of 1 in 36, or 28 in every 1,000 of the population; and the deaths to 1,639, affording an annual ratio of 1 in 48, or 21 per 1,000. The principal causes of death were the following diseases, viz.: Fever caused 58 deaths; whooping-cough, 66; diarrhoea, 83; scarlet fever, 27; croup 21; convulsions, 123; bronchitis, 139; pneumonia, 37; heart-disease, 94; liver-disease, 36; whilst phthisis caused 242, or 1 in 6.8. of the total deaths.

LECTURES ON SANITARY SCIENCE.

DR. CAMERON delivered in the Exhibition Palace, Dublin, on the 7th instant, the first of a series of Lectures on Health. The subject was "The Atmosphere." Its composition and the changes produced in it by the respiration of animals were alluded to. When the percentage of oxygen sank to less than 20.5, the air was impure, and would contain organic matter, and an increased quantity of carbonic acid gas. The absence of ozone showed that the atmosphere was not pure. The lecturer next referred to the influence on health and disease produced by diminished atmospheric pressure. At a height of from 3,000 to 4,000 feet, those suffering from dyspepsia, gout, scrofula, and rheumatism were much relieved. On Friday, the 10th instant, the second lecture was delivered, the subject being "Ventilation." The more important modes of ventilating were explained by means of diagrams, models, and experiments. It was shown that the air which is breathed contains about four parts of carbonic gas in 10,000 parts of air; whilst that which is expired from the lungs contains about 4 per cent. An adult inhales about sixteen cubic feet of air in the hour, and, therefore, requires about 2,000 cubic feet per hour, in order to have the carbonic acid gas down to 0.04 per cent.

THE PRIZE LISTS OF THE MEDICAL SCHOOLS.

MANCHESTER ROYAL SCHOOL OF MEDICINE.

AFTER the introductory address by Dr. Arthur Gamgee, the following scholarships and prizes for the session 1872-73 were distributed by Mr. Southam.

Third Year's Scholarship (£40), H. M. Lightoller, Chorley. *First Prize* (£5 5s.), W. Smith, Ashton under Lyne; *Second Prize* (£3 3s.), F. Newsham, Great Eccleston; *Third Prize* (£2 2s.), C. E. Smith, Preston. *Second Year's Scholarship* (£15), T. Amington, Burnley. *First Prize* (£5 5s.), J. J. K. Fairclough, Northenden; *Second Prize* (£4 4s.), F. H. Grosholz, Altrincham; *Third Prize* (£3 3s.), H. Burton, Manchester; *Fourth Prize* (£2 2s.), no award. *Certificate of Merit*, T. Gallimore, Rusholme. *First Year's Scholarship* (£10), S. Harris, Higher Ardwick. *First Prize* (£5 5s.), H. Tomkins, West Gorton; *Second Prize* (£4 4s.), J. H. Wylde, Stretford Road; *Third Prize* (£3 3s.), E. Jackson, B.A., Whalley Range; *Fourth Prize* (£2 2s.), J. Newton, Heaton Chapel; *Certificate of Merit*, A. K. Ludlam, Salford. *Dumville Prize in Surgery* (£30), F. W. Jordan, Manchester. *Platt Exhibition in Physiology* (£25), C. E. Richmond, Manchester. *Certificates of Honour*.—J. Buxton, W. H. Clarke, G. F. Coles, J. J. K. Fairclough, G. Fitton, F. H. Grosholz, J. Hampson, J. W. P. Hosking, G. Kisby, G. L. Lennon, J. E. Looker, W. S. Merriman, J. Priestley, G. T. Schofield, W. W. Settle, J. B. Stelfox, H. Tomkins, W. H. Vickerstaff, W. Walker, V. A. Wartenberg, J. T. Watts, W. Whitaker, W. Wood, F. H. Worswick.

ANÆSTHETICS.

XIX.—ETHER AS AN ANÆSTHETIC IN OPHTHALMIC OPERATIONS.

It is charged against ether, in its quality as an anæsthetic, that it is tedious in producing its effects, troublesome by the excitement which it causes, and slow in its evolution from the patient's system. That your readers may form a judgment whether these objections stand good when the ether is administered by Mr. Morgan's method, I beg to report that I, yesterday, extracted two cataracts, made two artificial pupils, performed dissection of a soft lens, and two operations for entropion—seven operations on six patients—the whole occupying exactly forty-seven minutes, or an average of nearly ten minutes each patient. In each case ether was administered by Dr. Morgan, and the patient, before removal from the table, was sufficiently recovered to walk to the ward. In no case was there any inconvenient degree of excitement or other embarrassing symptoms. I think this statement, representing as it does my usual experience of the administration of ether by this method, may serve as an assurance to your readers that Mr. Morgan's method of administration is not open to the objections to which I have referred.

In the course of the debate on anæsthetics (BRITISH MEDICAL JOURNAL, October 4th, p. 401) Mr. T. Pridgin Teale gave expression to his "general impression" that there appears to be in anæsthesia by ether a considerable amount of asphyxia, as evidenced by the blueness of the countenance and dark colour of the arterial blood. My experience of ether administration is entirely at variance with Mr. Teale's. I have occasionally seen the same flushing of the face as one sees in chloroform anæsthesia, but I am firm in the belief that I have not, in any single case, seen either the venous congestion of asphyxia, or the darkened colour of the blood of which Mr. Teale speaks.

Although the exclusion of air by Mr. Morgan's apparatus has led me to watch for evidences of blood-carbonisation, I have not found such symptoms, and their absence compels me to assume that there is some uncomprehended chemical change in the ether vapour which provides the necessary oxygen for the blood. I am, etc.,

A. H. JACOBS, M.D., F.R.C.S.

79, Harcourt Street, Dublin.

XX.—DEATH FROM CHLOROFORM.

A LATE number of the *Canada Lancet* gives the report of a coroner's inquest, from which we learn that on Thursday, May 1st, chloroform was administered to a Mr. Rice of London, Ontario, for the removal of some tumours of the eyelids. During the operation, the chin was observed to drop and the face to become deathly pale. On examination, it was found that respiration was suspended, and that the pulse could not be felt at the wrist. He was immediately placed upon the floor (we believe he had been sitting on a chair) and about fifteen minims of spirits of ammonia diluted with eight or ten parts of water were poured into his mouth. This was not swallowed. Artificial respiration was then commenced, by mouth to mouth inflation, and after two or three inspirations and expirations it was suspended, and more of the ammonia mixture was poured into his mouth. In about a minute and a half respiration and circulation were fully re-established, and the operation was concluded. In an hour or two after the recovery from the chloroform, the patient began to complain of soreness in the throat, and in about four hours after the operation, he was found to be suffering from his throat; respiration very difficult and thirty-four to the minute; pulse over 130. He died about thirty-six hours afterwards; the report of the *post mortem* examination was not given. The jury returned a verdict to the effect that the deceased came to his death from congestion of the lungs, caused by spirits of ammonia diluted; and, without attaching any blame to the surgeon, recommended that, in all cases of chloroform administration, at least one additional physician or surgeon be present.

MANCHESTER SCHOOL OF MEDICINE.

THE Introductory Lecture was delivered in the Chemical Theatre of Owens College, by Dr. ARTHUR GAMGEE, Lecturer on Physiology.

Dr. GAMGEE said that, in looking forward with hopefulness to the future of the Medical School in its connection with Owens College, he would be the last to refrain from offering a tribute of praise to the founders and promoters of what might now be called the old medical

school of Manchester. It was to the honour of the teachers of medicine in this city that they succeeded in establishing in Manchester the first of the numerous provincial schools of medicine; that, in the face of obstacles of all descriptions, often at great personal sacrifices of time and money, they laboured with very considerable success to further the spread of medical education. Now that the older was being merged into the newer and larger institution, it would be ungraceful and unjust on his part were he not to refer to a few of the men whose names were most honourably associated with the past teaching of medicine in Manchester. First to be named was the late Mr. Jordan, who very early in the century became a teacher of anatomy and physiology in Manchester, and whose lectures were first delivered in the provinces, and were recognised by the medical corporations as qualifying for examination the students who attended them. In 1825, Mr. Turner organised the Pine Street School, and gathered around him teachers, amongst whom were the illustrious Dalton, Sir J. Bardsley, and many others of distinction. In 1850, the Cheetham Street School, among whose teachers were the late Mr. Dumville, Dr. Watts, and Mr. George Southam, was established; and in 1858 the two schools were amalgamated. To the energy and devotion of one of the teachers in particular (Mr. Southam) the success of the Manchester school had for many years past been greatly indebted, and but for him the union of the Medical School with Owens College might not have been effected. Dr. Gamgee proceeded with a review of the progress of medicine from the time of Hippocrates, in order to show that the study of medicine had at all times been influenced by the study of science. Glancing, towards the conclusion of his paper, at the present and past history of the famous medical schools of modern Europe, he said the system of centralisation which had been pursued in France since the days of the First Empire had produced as marked an effect in stifling the scientific ardour as in enervating the political energies of the nation. Enforced dependence had been fatal to progress, and the attempt to centralise the intellectual power of France in Paris, for the glory of the capital, had proved as fatal as would be an attempt to concentrate in one focus the commercial enterprise of this or any other country. The Germans had perceived the mistake of centralisation, and in many departments of science had clearly asserted for themselves the right to hold the first place. The first cause of their progress was to be found in the very perfect system of education pursued in the Gymnasia of Germany, which, as a consequence, led to the average medical student possessing a greater amount of both literary and scientific knowledge than was the case with us. The second and most potent cause lay in the fact that, in the numerous universities of Germany, learning met with opportunities of development which did not exist elsewhere. The most ardent enthusiasts of the German unity must admit that the intellectual success of this country was greatly owing to the jealous fidelity with which the elements of German greatness had been developed in the separate centres of the fatherland, and pre-eminently in its universities. In them the greatest encouragement had always been given to the most intellectual men to devote themselves to the acquisition of learning; not merely to become acquainted with what was already known, but to lead in the path of scientific discovery. It was the scientific knowledge acquired in the physiological laboratories of Germany which had chiefly led to the pre-eminence which we were obliged to acknowledge. German physicians had, in these laboratories, learned the methods of inquiry which, when applied to medicine proper, tended every day more and more to raise it from the condition of an art to that of a science. If facts had compelled the cheerful admission that we had much to learn from abroad, it was none the less true that contemporary British physicians had good reason to reflect with pride on the success with which they had sustained the heritage of fame transmitted by Linnæus, Harvey, and Sydenham. With the instinctive sense of the useful and the industrial acquisitiveness which characterised our countrymen, the best fruits of foreign investigators had been gathered up and assimilated by British physicians, who, in science and practice combined, were, he was inclined to think, still not second to the physicians of any other country. What we did want, and what we were happily growing day by day more alive to, was a wider development of schools of science, wherein competent men should have the opportunities essential for research, and young men might be trained in those tastes and habits of mind which were of the very essence of successful intellectual pursuit. Now that the wealth of such great industrial centres as this city was being utilised for the highest educational purposes, it was not too much to hope that, on the scene of the labours of Dalton and Joule, that school might grow to exemplify once more that happy combination and adaptation of resources which had so often placed Englishmen in the van of literary and scientific progress as of manufacturing and commercial enterprise.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE members of the British Pharmaceutical Conference held their usual meeting in Bradford, on September 16th and 17th, under the presidency of H. B. BRADY, F.L.S., F.C.S. The growth of the society has been very remarkable. It was inaugurated ten years since at Newcastle-on-Tyne, by a meeting of twenty-five members, and it now numbers about two thousand.

One of the principal topics of the report had reference to the disposal of a gift from Mr. Thomas Hyde Hills in aid of original—especially pharmaceutical—research. The sum available during the next three years will be about £80; and it was announced that the committee are prepared to receive applications for grants in aid of any original research which members may desire to initiate or elaborate on subjects of permanent interest and value in connection with pharmaceutical science. It is thought that many published statements in reference to pharmacy and materia medica need verification, and that some part of the fund may be applied to cover the expense of repeating experimental work where corroboration may seem desirable. A list of two hundred subjects has been issued by the conference, and several others have since been suggested.

The President's Address was very interesting. Commencing with a sketch of the history of the conference during its first decade, he recounted some of the principal changes that had affected the pharmaceutical world during that time. The Pharmacy Act of 1868, gathering together into a compact body all who had at that time had any pretence to be called pharmacists, had separated men by a hard and fast line of registration from general dealers, who, to the detriment of pharmacy and the danger of the public, added a trade in medicines to their more miscellaneous calling. The spread of commercial enterprise and the facilities and increasing inclination to travel, have suggested the desirability of forming an universal *Pharmacopæia*, which shall be adopted in all civilised countries. Notwithstanding that there is little prospect of the early accomplishment of this object, two important steps have been taken towards it in the merging of the three pharmacopæias of London, Edinburgh, and Dublin into the *British Pharmacopæia* of 1864, and those of Prussia, Hanover, Saxony, Hesse, Hamburg, Schleswig-Holstein, Baden, Württemberg, and Bavaria into the recently issued *Pharmacopæia Germanica*. Mr. Brady next referred to the introduction of new remedial agents. Of those which experience has shown to be valuable additions to the materia medica, hydrate of chloral—originally suggested as a medicine by Dr. Liebreich in a paper read before the Berlin Chemical Society—is a prominent example. Four years since a specimen was exhibited by Mr. D. Hanbury at the Conference Meeting at Exeter, and on that occasion was looked upon as a chemical curiosity; and there could have been little idea that within so short a time it was to become an article of commerce on an enormous scale. The antiseptic system of surgery, based upon the modern germ theory, has greatly increased the importance of carbolic acid, and to some extent of chloride of zinc, boric acid, and other similar substances. The use of the various phosphates and phosphides, and recently of phosphorus itself in medicine, has considerably increased. Several instances were quoted where possibly we are searching at a distance for medicaments to the neglect of those within easy reach of our own doors. Thus the common male fern (*Aspidium Filix-mas*) was reintroduced by Professor Christison in place of the foreign remedies for tape-worm, so popular a few years ago. The rhizome of the bog-bean (*Menyanthes trifoliata*) has been stated to be superior to the root of its ally the official gentian; and the dried leaves of the common raspberry (*Rubus Idæus*), used in some parts of the country in domestic practice in the place of ergot, yield by no means the inert infusion that might be expected. The use of the expressed juice of the common periwinkle (*Vinca minor*) in uterine hæmorrhage; of the rhizome of the couch-grass (*Triticum repens*) in irritable bladder; of the red clover (*Trifolium pratense*) in hay-fever; of one of our brown sea-weeds (*Fucus vesiculosus*) in obesity; of a species of bedstraw (*Galium aparine*) in some cutaneous affections; of the rhizome of the burdock (*Lappa minor*) in syphilitic eruptions, have all given results that, if not sufficient to establish the claims made for them, at least show a *prima facie* case in their favour. Some experiments made by the speaker, in conjunction with Professor Michael Foster, upon the alcoholic extract of hound's tongue (*Cynoglossum officinale*), although by no means confirming the statement of a Russian physiologist that it had all the properties of curare, showed that the plant nevertheless produced certain very peculiar effects upon the nervous system. A concise history of the efforts of the English and Dutch Governments in the cultivation and acclimatisation of cinchona plant was then given. Hydrate of croton-chloral and propylamine, or trimethylamine, were next referred to. In his fur-

ther researches on bodies more or less related to chloral, Dr. Liebreich discovered that croton-chloral, or dichlorocrotonic aldehyd, the substance represented by the same term in the allyl (C^3H^5) series, that chloral is in the ethyl (C^2H^5) group, possessed very singular physiological properties. It may be prepared by passing chlorine gas into allyline, or by acting upon dichloroallyl and formic acid with alkalis. Propylamine was first used in acute and chronic rheumatism by Dr. Awenarius of St. Petersburg, and has recently been strongly recommended by Dr. Dujardin-Beaumez of Paris. There are three isomeric substances, each having the ultimate composition C^3H^9A , namely, propylamine, ethylomethylamine, and trimethylamine, having widely different boiling points. The latter is the substance used by the French physicians. It exists in several plants and also in herring-brine, but in consequence of its variability it is recommended that a definite salt—the hydrochlorate—should be used. Mention was also made of guarana and oleate of mercury. Reference followed to Mr. Hanbury's paper, recently published in the *Pharmaceutical Journal*, in which he demonstrates that the substance now commonly known as *pareira brava*, and hitherto looked upon as the root of *Cissampelos Pareira*, is not produced by that plant, and the true *pareira brava* is the same as *Chondodendron tomentosum*.

The first paper was read by Mr. HAMPSON, on a Proposition for a Sign to be used by Medical Men to mark Unusual Doses in Prescriptions. Recently, a druggist was censured by a coroner's jury for declining to dispense a prescription ordering what he considered to be a poisonous dose of tincture of digitalis, which was many times larger than that given in the *Pharmacopæia* as the maximum dose. The general feeling of the meeting, embodied afterwards in a resolution based upon the report of a committee, was that, where a medical man wished to prescribe such unusual doses, he should affix his initials to the dose, as a guarantee to the dispenser that it was not an oversight, the dispenser in such cases to retain the prescription. It was also agreed that, in cases where the dispenser still felt the responsibility to be too great, he was at liberty to refuse to dispense.

A paper on Urinary Examinations in General and the Tests for Albumen and Sugar in particular, by Mr. LOUIS SIEBOLD of Manchester, was next read. In the testing of urine, if the percentage of urea, phosphates, chlorides, sulphates, etc., is to be ascertained, the common practice of examining a single sample of urine, which does not represent the chemical composition of the entire renal discharge of twenty-four hours, is highly objectionable, since portions of urine passed by the same person at different hours of the day or night vary very considerably in their composition. [This has been long ago insisted on by writers on the subject.] The author also described two delicate tests, one for albumen and the other for sugar.

Mr. ATTFIELD followed with a note on the Amount of Calcic Oxalate excreted in Oxaluria, the proportion of this deposit not having yet been determined. In the case noted, two-thirds of a grain were excreted in twenty-four hours.

Mr. ALFRED PAYNE contributed a paper on Ammoniacal Salts and their Usual Impurities, referring more particularly to the ammonia produced from gas-tar.

Mr. J. J. NICHOLSON read a paper on the Composition of the Air of Sewers and Drains. Mr. Nicholson had been employed by the Health Committee of Sunderland to report upon the sewage ventilation of that town; and from his numerous experiments he inferred that, as sewer-gas will pass more or less through water-traps into a house, it was advisable to reduce, as much as possible, the pressure; to make every possible communication between the sewers and the open air, and guard carefully every connection with the inside of the houses. By numerous openings the pressure will be reduced, and the gas will be so diluted by the diffusion of air through the sewers as in a great measure to lose its noxious effects. He found that there is not sufficient pressure in the sewers to force the gas to any great height in narrow tubes, and recommended that numerous openings should be made near the ground, as thus diffusion and dilution will be effected more rapidly.

Mr. ATTFIELD recounted some experiments made on the Presence of Morphia in the Petals of Papaver Rhœas. Three separate analyses had been made upon one pound of petals in each case; but Mr. Attfield failed to obtain any reaction for morphia in either operation.

Mr. T. B. GROVES of Weymouth read a paper on Further Experiments on Nepal Aconite and on the Characteristics of the Aconitines. At the meeting in 1866, Mr. Groves first exhibited specimens of aconitine in a crystalline state; and in 1870, he produced crystals of another alkaloid (pseudaconitine), which he had obtained from Bikh root (? *Aconitum ferox*), and which he considered identical with one noticed by Schroff, the origin of which was only conjectured. The existence of this second alkaloid, however, has been doubted; and M. Duquesnel, to whose treatise, *De l'Aconitine cristallisee*, was last year awarded the Barbier prize by the French Academy, summing up the results of his

research, stated that the activity of *Aconitum ferox* was due not to its containing a more energetic principle than aconitine, but to its containing a greater quantity of that principle. In his first operation on the Nepaul aconitine root, Mr. Groves produced an ounce and a half of pseudaconitine.

Mr. L. SIEBOLD of Manchester described a New Test for Morphia, which consisted in heating the suspected substance with a few drops of sulphuric acid, and adding a small quantity of perchlorate of potassium. If morphia be present, a deep brown colouration appears. Mr. Siebold stated that by this method 0.0001 of a gramme of morphia could be detected. He also described Schneider's recently published test of adding a drop of sulphuric acid to a small portion of the morphia solution, saturated with sugar. This gives a purple coloration.

Three papers were read by Dr. C. R. A. WRIGHT on New Derivatives from Morphine and Codeine; Essential Oil of Orange (Portugal); and Essential Oil of Nutmegs.

Mr. H. POCKLINGTON read a paper on Some Starches Microscopically and Polariscopically Considered.

Mr. SIEBOLD read a Report on the Purity of Commercial Specimens of Official Acids, in which he incidentally recommended the use of stannous chloride for the separation of arsenic from hydrochloric acid, and described a process for obtaining nitric acid perfectly free from sulphuric acid for operations in which an acid of low specific gravity (1.25) was suitable.

Mr. W. D. SAVAGE read a paper on Alchemy and its Bearings on Pharmacy.

Mr. ALLEN, Analyst for Sheffield, read a practical paper on the Examination of Tea for the Detection of Adulteration, in which he criticised the usual method of testing for tannin in tea, and suggested a modification by using a volumetric solution of gelatine. By this process, he found in good black tea 12.5 per cent. of tannin, and in green tea from 19 per cent. "Woody fibre" was estimated by boiling undried tea in water as long as colour was given off; the "insoluble matter" varied from 50.5 to 51.2 per cent. in green teas, and from 58.7 to 60.8 per cent. in black. Gum was estimated by exhausting the tea with hot water, evaporating the solution to a syrup, precipitating with methylated spirit, washing the precipitate, drying and weighing; about 10.5 per cent. was obtained. Such a standard was compared with the results obtained from exhausted leaves. It was also suggested that the presence of foreign leaves in tea might be detected by the aid of the known reactions of the various groups with oxidising agents.

Mr. T. GREENISH of London demonstrated upon a black board the salient botanical characteristics of tea-leaves. These were the serration only coming half way down the leaf, the primary venation turning off before reaching the margin, a notch instead of a point at the apex of the leaf, and a space between the two cells of the stomata. The Assam leaf has its margin bi-serrate.

The Detection of Turmeric in Rhubarb, Mustard, and other substances was the subject of a paper by Mr. W. L. HOWIE of Edinburgh. The method was based upon the free solubility of curcumin in chloroform. The author states that East India rhubarb of fine quality, when heated with chloroform, imparts no colour to blotting paper, but that inferior quality and European varieties colour it yellow. This colour may, however, be distinguished from that due to turmeric by its reactions with alkalies.

It was decided to hold the next meeting in London. The following officers for the ensuing year were elected: *President-Elect*—Mr. T. B. Groves, F.C.S. (Weymouth); *General Secretaries*—Professor Atfield (London) and Mr. T. B. Benger (Manchester); *London Local Secretary*—Mr. M. Carteghe.

The members dined together at the Victoria Hotel on Tuesday, and a very enjoyable excursion to Bolton Abbey and Woods on Friday wound up the proceedings.

BRITISH MEDICAL ASSOCIATION.

COMMITTEE ON QUALIFICATIONS IN STATE MEDICINE.

THIS committee has proposed to add to their number: John Liddle, M.R.C.S., Health-Officer at Whitechapel; T. W. Grimshaw, M.D., F.R.C.P., Dublin; Professor W. T. Gairdner, M.D., F.R.C.P., late Health-Officer at Glasgow; Professor Corfield, M.D., Health-Officer at St. George's, Hanover Square; J. W. Moore, M.D., Dipl. S.M., Dublin; T. J. Dyke, F.R.C.S., Health-Officer at Merthyr-Tydfil; F. T. Bond, M.D., Health-Officer in Gloucestershire; W. S. Trench, M.D., Health-Officer at Liverpool; Robert Elliot, M.D., Health-Officer at Carlisle; M. W. Taylor, M.D., Penrith. A small subcommittee is engaged in preparing documents for circulation among members of the committee. All communications are to be addressed to Dr. Tripe, 172, Richmond Road, Hackney, London, E.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Cholera in Paris.—Distinguishing Marks of Epidemic Cholera.—The Condition of the Urine.—Treatment by Carbolic Acid.—The Quartier Latin.—The New Session.

CHOLERA, as you may imagine, is the absorbing topic of the day in and out of the academies in Paris. It is curious to observe the theories and treatments that have been gratuitously propounded, and in many cases blindly adopted, in connexion with this terrible affection. Whenever cholera makes its appearance, the academies and other learned and unlearned bodies are regularly assailed with papers on the subject. Many of them are very interesting, but most of them go over the same old ground without adding a single iota to our present knowledge. In speculations on cholera, as on other subjects, every man has his own hobby. At the Academy of Medicine, M. Jules Guérin has been advocating the theory he held forty years ago—viz., that cholera is not generated by importation or contagion alone; but that it may be, and almost always is, produced spontaneously, under conditions about which we know little or nothing, but which are grouped under the name of "medical constitution." For M. Guérin, sporadic and epidemic cholera are one and the same disease; pathologically, at least, there is no difference between them, except that in the latter form the mortality is more or less than in sporadic cholera. He does not believe in the utility of quarantines, which he says are a sham, as they cannot possibly keep out an enemy so subtle as the cholera; and he cites England as thoroughly understanding this, as there are no quarantines, properly so-called, established on the British shores; "for there is a something, a *quid divinum*," which influences the propagation of epidemics of which we know nothing, and never shall know anything." M. Fauvel, who is his adversary for the occasion, is not of the same opinion. For this learned academician, epidemic or malignant cholera is never engendered spontaneously, but is always produced by contagion or importation, which, for M. Fauvel, are convertible terms. If then it be considered such, it is obvious that we should prevent its propagation by all the means in our power. He is aware of the inefficiency of "cordons sanitaires" and quarantines; but such restrictive measures, however imperfect, must contribute, if only in a small degree, to the shutting out of the disease. Both the combatants left the field much applauded by their respective partisans; but not, I would venture to say, more edified than they were before their appearance in the arena. Here the discussion closed, not for lack of talkers, but the Academy, foreseeing an interminable wordy war, transferred the matter to a commission, whose report has not yet transpired.

But if the subject is exhausted at the Academy of Medicine, other learned bodies are, with praiseworthy zeal and perseverance, sifting the matter. Some of the investigators, with microscope in hand, are in search of the "beast;" some are analysing the blood; others the intestinal evacuation; while others, again, are content with contemplating the heavens, and wondering whether the planets had anything to do with the pathogeny of cholera.

In a letter addressed by Dr. Boggs to the Academy of Medicine, giving his Indian experience of the disease, he drew attention to the researches of Dr. Adolf Hermann of Pesth, who looks upon albuminuria, in the absence of renal disease to explain it, as pathognomonic of cholera (*vide London Medical Record*, July 30th); but I have not heard whether any investigations have been made in that direction in Paris. In questioning some of the "urine-doctors," as they are called, on the subject, I was reminded that anuria, or absence of urine, being one of the characteristic symptoms of cholera, it was impossible to testify to the existence of albuminuria; but when, in my turn, I reminded them that it was at the first manifestation of the disease, in the stage of the "diarrhoea premonitory," it should be looked for, I was told that, albumen being found in the urine in other forms of diarrhoea, the presence of albuminuria in cholera is merely a coincidence, and cannot be looked upon as a characteristic of the disease.

The fungoid or germ theory of cholera is much in favour among the French physicians; and Dr. Déclat, who is one of its strongest advocates, has been for some years most indefatigable in his researches on the therapeutic action of carbolic acid, and has lately submitted to the Academy of Sciences a paper on the treatment of cholera and cholerae by phenate (carbolate) of ammonia, which he summed up as follows. Carbolic acid ought to be employed as a prophylactic in times of epidemics (in the form of syrup), in doses of thirty to forty centigrammes a day, which corresponds with three or four table-spoonfuls of

the syrup. When the cholera manifests itself, the same substance is to be employed, and, at the same time, the carbolic acid may be injected from four to ten times in the form of solution, in the proportion of two and a half per cent., not more than five grammes being employed at a time. The injections are to be continued until convalescence sets in, and the patient is to use the syrup until perfect restoration of health. If the case be so serious that the circulation becomes affected, and the patient lapses into the second stage, he employs a syrup of the carbolic of ammonia in the same proportions as the simple syrup of carbolic acid, accompanied by subcutaneous injections of the same strength as above-mentioned. Dr. Déclat is so confident as to the efficacy of this remedy, that he recommends it even where death is imminent, in which case he injects a solution of the carbolate of ammonia, drop by drop, directly into the veins, beginning with a single drop, and increasing the quantity to one hundred and fifty and even two hundred drops. Dr. Déclat has had an opportunity of putting this treatment to the test in two cases only; and, he says, it has been attended with success. Two more cases in which the patients were *in extremis* were thus treated at Venice, and were, it may be said, restored to life by it. This number, though small, is sufficiently encouraging; and Dr. Déclat is hopeful to shew that, though carbolic acid be not a specific, his system will prove a valuable addition to the therapeutics of cholera; and if the fungoid or germ theory of the diseases be correct, carbolic acid, which is an antifermentative agent *par excellence*, will here find its proper application.

But while pathologists are in search of the true pathology or etiology of cholera, Dr. Edward Fournié, an able physiologist and laryngoscopist, writes that "the knowledge of morbid causes is not so important as we are led to believe. The word disease signifies a derangement or transformation of the physiological condition, and the art of healing consists in restoring, by appropriate means, the deranged physiological condition to its normal type. The physician never acts directly on the cause of the disease; he simply places the patient in the most favourable condition for his recovery, and the patient cures himself. If a knowledge of morbid causes be sometimes useful, it is not indispensable; in proof of which, it is well known that many diseases are cured where the cause or causes have been unknown. So it may be said of cholera, as to which, it matters not whether engendered by a special miasm, or whether it be the result of some temporary meteorological change. We know that this unknown cause produces certain disorders which, put together, bear the name of cholera. It is these disorders that should be attentively studied, and therapeutics will furnish us with the proper means for their cure."

The present epidemic of cholera is, I am glad to say, fast disappearing; and, according to Dr. Delpech, the cholera reporter to the Academy of Medicine, the mortality from this disease in the hospitals and town has been, for the week ending Oct. 6, only 51, instead of 66 for the preceding week. He remarked that there were only two deaths from cholera in the military hospitals, while there were 32 in the civil hospitals and 17 in town.

The "Quartier Latin", which during the vacation is rather dull, is resuming its wonted lively aspect, owing to the return of the medical and other students, who abound in this quarter. Most of the professors of the Faculty have come back from their holiday excursions, and all are preparing for the coming session, which is to open on the 15th inst. On that day the offices alone of the school of medicine will be opened, and the examinations for the doctorship will be resumed; but the lectures will not begin before the 4th November.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Opening of Medical School. — Joint Clinical Board. — The Branch Meeting. — Resignations and Elections. — General Hospital Meeting. — Queen's Hospital Report on Abuse of Hospitals. — Sanitary Lectures.

THERE is much activity in our medical world here. On the traditional 1st, the session at Queen's College was opened by Professor John Clay with an able introductory, dealing chiefly with sanitary matters. A few days afterwards at the General Hospital, Dr. Bell Fletcher, Chairman of the Birmingham Clinical Board, inaugurated under most favourable auspices the first united hospital clinical session; and now, thanks to the mutual cordiality shown by the authorities of the Queen's and the General, our students have the advantage of the teaching of both medical staffs, and of a *clientèle* comprising nearly five hundred beds; also the by no means unimportant advantage of personal acquaintance and emulation amongst numbers.

Last week, also, our Branch began its winter's work with spirit; Mr.

Furneaux Jordan, this year's President, in the chair. Dr. Fowler Bodington read a paper on Certain unused valuable Means of Medical Education, referring especially to the large hospitals attached to work-houses, and to cottage hospitals and county infirmaries; advocating, also, assistantships *after* student life, and in general more practical than book-work in the training of our young men.

At the Queen's Hospital, Dr. Fleming's resignation on account of ill-health has been accepted with many expressions of regret and esteem. He has been elected Consulting-Physician, and we hope to see him again amongst us after another winter in the south of Europe.

At the Children's Hospital, Dr. Heslop, Mr. Sharman (senior surgeon), and Mr. Howkins (surgeon-dentist) have resigned office in a manner highly honourable to themselves; for though their first term of office for twelve years is now expired, they are eligible for re-election for another eight, but decline the advantage. Dr. Heslop is well known as one of the founders and most munificent supporters of this charity; he has always consistently advocated certain principles of hospital reform and management, and of these, the "limitation of tenure of office" he holds to be the most important. He has applied the principle to himself in a most honourable manner, when special circumstances might well have made him an exception. It need scarcely be said that he retires from this post with the highest esteem and regard of his colleagues, and of the Committee of Management, who have at once nominated him an honorary life-governor and consulting-physician. The latter office had recently become vacant by the lamented death of Dr. Evans. Dr. Sawyer passes up to supply the medical vacancy on the honorary acting staff; and for his late post, and for the others mentioned, there are already able and excellent candidates.

The annual meeting of the General Hospital was held a short time ago, and the ninety-fourth Annual Report presented. It deals with a revenue of £15,000; and the expenditure is so well managed as to merit special mention in the statistical report of Dr. Steele of Guy's Hospital. At this meeting, some feeling was manifested on the subject of proposed new laws, which, amongst other changes, and in accordance with "advanced" views of hospital management, remove the medical staff from the Weekly Board. This was strongly protested against, and we understand the obnoxious clause will be withdrawn. The following changes have occurred in the resident staff. Dr. A. H. Carter has been appointed pathologist, and Dr. Rickards house-physician, *vice* Dr. Greenway, resigned.

At the Queen's Hospital, some useful work has been recently done by a subcommittee appointed to inquire into the question of "abuse of hospital assistance". The cases of 88 in-patients were investigated, and were subdivided as follows: false addresses, 5; ticket-cases unsuitable, 6; emergency and accidental cases able to contribute towards maintenance, 8; emergencies unsuitable, 2; legitimate, 67. Of out-patients, 366 cases were investigated; information refused, 2; false addresses, 34; parish cases, 6; unsuitable, 64; legitimate, 260. Cases of severe and prolonged disease had been classed as legitimate, independent of pecuniary considerations. Under "parish cases" were included such as, being in the receipt of parish relief, had not applied to the union doctor. If the patient had done so without avail, or if superior skill were required, he was considered entitled to hospital treatment. The unsuitable were divided into two classes; class 1 including those whose means, taking all circumstances into consideration, were proved sufficient to procure their own medical aid; class 2, the idle, drunken, or dissolute. The inquiry disclosed the following facts. 1. The hospital is doing work some of which belongs to the parochial authorities and some to the medical practitioner. 2. Many "emergency" cases are admitted which are well able to contribute. 3. In-patient tickets are given to persons who are not objects of charity. 4. The out-patient department is seriously abused by persons able to pay. 5. Many subscribers exercise no discrimination in giving tickets. 6. From the ease of getting such tickets, trivial cases come. 7. The present system, in its practical working, tends to discourage provident habits. 8. The beneficial effect of the hospital is frequently neutralised by the extreme poverty of some of the patients. As remedies, the subcommittee recommend the abolition of the ticket system if the subscribers will consent; if not, that the number given be reduced; and also a systematic inquiry into the circumstances of applicants, with a view both to prevent abuse and to administer relief.

The present outcome of this laborious and thoughtful report is a proposal for representatives from all the charities to join in a common conference with a view to united action.

We cannot conclude without referring to the recent delivery of the first public and free lecture on sanitary subjects in our Town Hall. It is introductory to a course of class-teaching of the same subjects at a nominal charge, open to all persons, and endowed with prizes to be given after examination; and this course is the practical result of an

endowment given anonymously for the express purpose, after one of Canon Kingsley's speeches. Dr. Corfield of University College is the present chosen lecturer.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the Seventeenth Session, 1873-74, is appointed to be held at St. Bartholomew's Hospital, Rochester, on Wednesday, October 29th, at 4 P.M.; Dr. JAMES V. BELL in the Chair.

Papers have been promised by John M. Burton, Esq., Dr. Monckton, and the Chairman.

Mr. Simon of St. Thomas's will dine with the members of the District.

Dinner will be provided at the King's Head Inn, Rochester, at 6 P.M.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, October 13th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at Penrith, on Wednesday, the 29th October. The President, Dr. TIFFIN of Wigton, will take the chair.

Gentlemen intending to read papers are requested to give immediate notice to the Secretary,

HENRY BARNES, M.D.

Carlisle, October 1st, 1873.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, October 30th, at 7 o'clock P.M.; E. LONG FOX, M.D., President.

R. S. FOWLER, } *Honorary Secretaries*.
E. C. BOARD, }

Bath, October 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Fountain Hotel, Canterbury, on Thursday, November 6th, at 3 o'clock P.M.; the President of the East Kent and Canterbury Medical Society in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James Street, Dover, October 15th, 1873.

NORTHERN BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Central Hall, Darlington, on Thursday, September 25th. In the absence of the President, Dr. HEATH, S. E. PIPER, Esq., occupied the chair. Twenty-six members were present and five visitors. Four new members were elected.

Alteration of Subscription.—It was agreed that the subscription to the Branch, in future, should be four shillings.

Papers.—The following were read.

1. Mr. JAMES MACKIE: On the working of the Public Health Act. Mr. Mackie expressed his opinion that, of necessity, the act would be differently administered in different parts of the country, and maintained that, owing to the constitution of the House of Commons, and its limited knowledge of medical matters, the measure necessarily was imperfect. He believed, however, that the Act was producing most beneficial results. He dwelt at some length on the more stringent necessity of preventing disease in agricultural districts, through overcrowding and pollutions, and thought that, as a beginning, the Act would prove to be useful and valuable.—The CHAIRMAN complained of the Government having a military, instead of a medical, man as Registrar-General.—Mr. MANSON (Howden) complained that, under the Act, the medical officer was the servant of the inspector.—Dr. FARQUHARSON (Stockton) and Dr. EASTWOOD (Dinsdale Park) spoke, the latter as a guardian, giving illustrations of the difficulty which had to be encountered in administering the Act.

2. Dr. EASTWOOD: On the Water-Supply of the Tees Valley. The towns of Darlington, Stockton, and Middlesborough, are chiefly supplied by water from the River Tees; and there has been so much complaint respecting its character, that Dr. Eastwood entered fully into the causes which affect its impurity. These are—the origin of the water

from a hilly, peaty district, giving it a dark colour; the presence of a large quantity of mineral matters; and the existence of sewage from Barnard Castle and some villages on the banks of the river. After examining various specimens of the water, and various analyses, the author of the paper came to these conclusions. 1. The Tees water is not of a pleasant colour, which is derived from peat; 2. It is too hard for many domestic purposes; 3. It is not unhealthy for dietetic use. The dark colouring matter is almost entirely removed by a carbon filter. If the sewage of Barnard Castle were made use of in irrigating the land, instead of being thrown into the river, the Tees water would be very pure.—The CHAIRMAN said that an analysis showed that the solid matter in the Tees water was only half as much as that supplied to the metropolis, whilst in point of hardness it was only one-fourth.—Mr. FARQUHARSON said that the colouring prevented furring in the steam-boilers, and was, therefore, liked by the manufacturers. In reply to Mr. Manson, he remarked that, for fifteen years, whilst he had been in Stockton, he had never known a case of disease to have arisen from the water, and believed the water to be good for drinking and domestic purposes.

3. Mr. C. S. JEAFFRESON: On Osteoid Cancer.

Votes of Thanks.—On the motion of the CHAIRMAN, it was resolved—"That the warmest thanks of the meeting be given to the readers of the papers." On the motion of Mr. RICHARD BOWES (Richmond), seconded by Mr. G. B. MORGAN (Sunderland), a hearty vote of thanks was accorded to the Chairman for his able conduct in the chair.

Dinner.—The members afterwards dined together at the King's Head Hotel.

SOUTH MIDLAND BRANCH: AUTUMNAL MEETING.

THE seventeenth autumnal meeting of this Branch was held at the Town Hall, Oundle, on Tuesday, September 30th, at 3 P.M.; J. M. BRYAN, M.D., F.R.C.S., President, in the Chair. Luncheon was kindly provided at home at 1.30 P.M. by D. Webster Tomlinson, Esq. Nineteen members and visitors were present.

New Members.—Mr. Alfred Haviland and Mr. W. B. Calcott were elected as new members.

Future Meetings.—It was decided that a joint meeting of the Cambridge and Huntingdon, East Anglian, and South Midland Branches be held in Cambridge on the last Friday in June 1874, under the presidency of Professor Humphry.

It was also decided that the autumnal meeting of the South Midland Branch be held at Buckingham in September or October 1874, under the presidency of Robert De'ath, Esq.

The PRESIDENT read an address.

Papers.—The following papers were read.

1. J. M. Bryan, M.D. On Typhoid and Miasmatic Diseases, their Origin; with special reference to disinfectants and deodorisers, their relative value, etc.

2. Alfred Haviland, Esq. Observations on Typhoid Fever. He also introduced a form for the Registration of Diseases and Deaths.

3. Dr. T. J. Walker, of Peterborough, exhibited three cases illustrative of the results following Resection of the Elbow-Joint, and read notes illustrating the Pathology of Diabetes.

4. Dr. Alexander Macdonald (Woburn) made a few remarks on a case of Caries Tarsi cured by rest and constitutional treatment.

Votes of Thanks were given to the authors of papers; to the President for his able conduct in the chair; and to D. W. Tomlinson, Esq., for his kind hospitality in entertaining all the gentlemen present at luncheon. The meeting then adjourned to Mr. Tomlinson's house, where coffee, etc., was provided.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

A MEETING of the above district was held at the Albion Hotel, Eastbourne, on Friday, September 19th; R. Colgate, Esq., in the Chair. Twenty-four members and visitors were present.

Papers.—I. Dr. FUSSELL of Brighton read notes of a Fatal Case of Dysphagia with excessive Salivary Secretion.

2. Dr. MOON of Brighton read a paper on Perforation of the Intestine. After mentioning various diseases in which it might occur, he detailed two cases where a fatal result ensued from this accident in the course of pythogenic fever: one during commencing convalescence on the thirty-fifth day of the disease; the second (clearly due to imprudence in diet, the patient having eaten some grapes with their skins and pips) on the twenty-fourth day. Dr. Moon insisted on the greatest caution in allowing a return to solid food in the course of convalescence from pythogenic fever. He was disposed not altogether to despair of

possible recovery after perforation, as both his cases exhibited an empty at repair, lymph being poured out and agglutinating the ulcer to an adjacent coil of intestine.

A discussion then took place, introduced by Dr. A. Hall of Brighton, on the question of impure milk inducing typhoid fever.

Dinner subsequently took place at the Albion, under the presidency of Mr. Colgate. In the course of the after-dinner proceedings, Mr. Sanger of Alfreton gratefully recorded his experience of the magnificent hospitality he had enjoyed during the late meetings of the British Medical Association in London, all of which he attended from beginning to end.

The Next Meeting will be held at Lewes in the third week of November; R. Gravely, Esq., of Newick, to take the chair. Communications, etc., are invited by the Secretary.

New Member.—R. Vale Skinner, Esq., of Winchelsea, was nominated as a member of the Association and of the Branch.

EAST YORK AND NORTH LINCOLN BRANCH.

THE half-yearly meeting of the above Branch was held at the Dolphin Hotel, Cleethorpes, on Wednesday, September 24th, 1873; J. MORLEY, Esq., President, in the Chair.

The following papers were read.

1. The Right of Poor-law Medical Officers to payment when Medical Relief is granted on loan. By J. Morley, Esq.
 2. Thrombosis of the Femoral Vein. By Palemon Best, Esq.
 3. On Toothache—a lost remedy. By John Dix, Esq.
- After which a dinner was held, to which upwards of twenty members sat down.

CORRESPONDENCE.

THE PUBLIC HEALTH ACT AND HEALTH-OFFICERS.

SIR,—The last number of a new periodical entitled *Public Health*, contains a review of Dr. Edward Smith's *Manual for Medical Officers of Health*.

This article, like others which have appeared in the same journal, shews that it is under the control of a small party desirous to uphold the unsafe and unstatesmanlike structure raised by the Sanitary Commission and the Public Health Act, 1872. The reviewer says that—"This Act has been frequently and unfairly attacked; rather, we fear, for political reasons than on any other grounds."

A more extraordinary and unjustifiable statement could hardly have been made respecting the criticism, so just and well deserved, which that mistaken and unworkable piece of legislation has received from many very able and experienced sanitarians belonging to both of our great political parties. If we look at the names most prominent in the discussions on this vexed question, it is impossible not to be struck with the utter absence of political animus on either side.

Among the supporters of the Act, and of its bungling and unscientific administration, are to be found marked Conservatives, as Sir C. B. Adderley and Mr. Powell, who, indeed, shaped the form and determined the substance of the Report of the Commission, on the main errors of which the machinery of the Act was founded. The measure would never have been passed but for conservative support, obtained by false pretences, under a vague impression that some sort of sanitary enactment (it mattered not what) *must* be passed that session; also under an entire misconception of the agency required for working a good sanitary law.

Among the opponents of the Act were many men like those eminent barristers, Hastings and Michael, decided Liberals, and having no professional interest or object in opposing the Report and the Act; but influenced solely, as was the majority of other opponents, by a sincere desire for effective sanitary legislation, and a thorough contempt for the fictitious—though pretentious—organisation of authorities and officers which this Act and its administrators have forced upon the country.

If the reviewer were not (as he says of others) "influenced by prejudice," he would have been convinced by the unanswered and unanswerable arguments of the Joint Committee of the British Medical and Social Science Associations; by the addresses of Mr. Hastings, Dr. Rumsey, and Mr. Hart; by the skilful comments of Dr. Lyon Playfair on the Act; and by the excellent papers of Mr. Buteel, Mr. Ceely, and Dr. Anstie on its administration; more than all, by the very list of medical appointments made under that Act. Such an exposure of inconsistency, want of system, contradiction of purpose, and incompetency of administration was scarcely ever before published, as appears in the record of appointments printed in successive numbers of the same period-

ical. This list, if correct, shews the most absurd contrasts in the area and population of districts; in the salaries and qualifications of the officers; and in the arrangements for the performance of duty. It proves that the scheme of duties put forth by the Local Government Board, and ostentatiously lauded by Dr. Edward Smith and his friendly reviewer, is utterly inapplicable, whether to the officer receiving £7 or £10 a year for certain elementary work in a small medical-relief district, or to him who is paid a guinea for each report which he is asked to make by an incompetent and obstructive authority, or to the big man who is to pocket £800 a year for the mere supervision of an area containing many hundreds of square miles.

But, perhaps, the coolest performance of Dr. E. Smith is his reprint of Mr. Simon's famous Minute of 1855, which, by anticipation, condemns the entire system of appointments made according to the present Act. Moreover, that minute is not at all, as he fancies, "a valuable compendium of the mode of performing the duties of this office."

I am, etc.,

October 3rd, 1873.

AN OLD SANITARIAN.

OWENS COLLEGE, MANCHESTER.

SIR,—On the occasion of the opening of the new buildings of Owens College, Sir James Kay-Shuttleworth, Bart., referred "to the establishment in the College of the first laboratory in England for physiological research". Although I regretted exceedingly the error into which the speaker had fallen, and wished to have it in my power to correct it, I felt that, on an occasion of so formal a character, when no speeches were made except by those called upon for the purpose by the President of the College, the Duke of Devonshire, it would have been scarcely becoming had I, unasked, risen to vindicate the honour of the physiological laboratories of Edinburgh, Cambridge, and London.

To the part which these laboratories have taken in what may be termed the revival of experimental physiology in England, I hope to direct my marked attention in the introductory address to my course of practical physiology, which I hope to deliver in this College on Thursday, October 23rd.

I am led to address you this letter to express the, to me, apparent negligence in failing to correct a statement prejudicial to the position of British physiology.

I am, etc.,

ARTHUR GAMGEE.

OBITUARY.

GEORGE RODWELL, M.R.C.S.E.

MR. RODWELL died at Loddon, Norfolk, on August 5th, in comparative middle life, leaving a family of seven (four daughters and three sons). He was educated with the late Mr. Taylor of Kingston-on-Thames, and afterwards entered at University College, where he was dresser under Mr. Liston. He became a member of the College of Surgeons in 1838, and was soon afterwards appointed Surgeon to the East India Company's ship *Edinburgh*. He afterwards settled in general practice in Loddon, and was appointed Medical Officer to a district and workhouse in the Loddon and Clavering Union. He was a man of high principle and utmost integrity, kind and benevolent. A vote of condolence was passed by the Board of Guardians to his widow and family on the first Board day after his decease.

WILLIAM GARDEN, M.D., ALFORD, N.B.

DR. WILLIAM GARDEN of Alford died on September 22nd, at the age of 63. He was a son of the late Mr. George Garden, farmer, of Bandleley, near Alford. He studied at Aberdeen, and, after taking the degree of M.D., practised for some time at Bandleley, and some years ago removed to the village of Alford. Dr. Garden was known professionally as a good surgeon and a skilful and successful general practitioner. He was, in addition to this, an enthusiastic, and, it might be said, scientific farmer, and a very competent business man. Proof of his careful study of the management of land, and the general economy of the farm, was furnished by the evidence supplied by him to the Assistant Commissioners on the Employment of Children, Young Persons, and Women in Agriculture (1867); and on a comparatively recent occasion he read an exhaustive paper on the history and cultivation of the turnip plant before the Local Agricultural Society. Dr. Garden, though retired from medical practice for years, took a very active part in the public business of the district, holding office as a member of the Road and School Boards, etc. In politics he was a moderate but consistent Conservative. Deceased was married to Miss Mary Taylor, daughter of the late Alexander Taylor, Wellhouse, factor for Haughton, by whom, and by his only son, Mr. F. T. Garden, advocate, he is survived.

In Memoriam.

JOHN MURRAY, M.D., M.R.C.P.

DR. JOHN MURRAY, Assistant-Physician to the Middlesex and the Children's Hospitals, died on Wednesday, aged 29, after an illness of three days, from an attack of hospital sore-throat, complicated with sudden and severe oedema of the larynx, which necessitated tracheotomy. The announcement of the sudden and premature death of this gifted, energetic, and much beloved young physician, will be felt as a source of personal grief by a very large number of our readers; and there are few who do not know how great a public and professional loss it bespeaks. We cannot well speak of the story of his life and the circumstances of his death in words which seem fitting to convey a full sense of the loss sustained; for it involves to us, as to others bound to him by ties of intimate affection and close association, a grief sacred from words. But his life has been pregnant with lessons which we all need to learn, and his example was one which may well be recorded as an eminent encouragement to young men of worth and high endeavour; and his story must not be left wholly untold in these pages.

John Murray received his early education at Aberdeen, where his father, Mr. Andrew Murray, holds a highly respected position as advocate. His career at school and college was marked chiefly by traits of generosity, courage, and tenderness, which bespoke the future development of his character. Manly, well grown, active, and intelligent, he was always a favourite, if not always the most distinguished, student of his class. At school and college he was not specially distinguished in his classes, except in botany and natural history, which required outdoor work. After passing through a complete course in Arts, and graduating M.B. in Medicine, Murray came to London, and began a further course of preparation for medical labours at Paris and Berlin. He was distinguished at Middlesex as one of the most able, zealous, and reliable resident officers who had ever entered the hospital; and, when he quitted the indoor service, he had entirely won the confidence of the physicians. His introduction to the staff of this JOURNAL was due to the recommendation of Dr. Murchison and Dr. Stewart, whose good words he quickly and amply justified. Commencing his connexion with the JOURNAL in 1867 as one of its hospital reporters, he gradually advanced into more intimate and important association with its work; and for the last few years, as one of its sub-editors, and as a large contributor to its columns, he has been closely identified with its utterances and efforts on most of the questions of the day. He was imbued with a natural ardour for justice and truth, and could never rest content if he witnessed or heard of any wrong done, of any good work left undone, or of any good man struggling with adversity, without throwing himself into the struggle, and battling for what he believed to be the right. He had the rare gift of battling with vigour but without bitterness. If he inflicted a wound, he left no sting behind; and, though his nature was vigorous and combative, his manner independent, his opinion outspoken, yet his natural kindness of heart appeared in all his bearing; he gave little offence; and even his opponents recognised the generous nobility of his motives, and were well disposed to find an opportunity to become his friends. In a career so short and so prematurely arrested, there have been few opportunities for high achievement; but those opportunities were nobly used. Dr. Murray had rendered great services to the Volunteer medical officers; he had vindicated the right of the graduates of Edinburgh to criticise appointments to the professorial chairs; he had rendered valuable aid to an institution of great usefulness, the East London Hospital for Children, once struggling for existence, now well established; he had accepted and courageously fulfilled important missions for this JOURNAL; and the reports on the Royal Free Hospital, the Westminster Hospital, on the typhoid fever at Scarborough (on the occasion of the Prince of Wales's illness), and other important articles, testify to the courage, ability, and honesty with which he habitually fulfilled whatever duties he undertook. His native town, Aberdeen, is indebted in no small measure to the strong protests which he indited in these columns for the recent provision of fitting accommodation for its fever-patients. During the Franco-German War, he spent the autumnal recess from his hospital labours in the ambulances around Sedan, and he won there the friendship and lasting esteem of many officers of the Red Cross Society, by his earnestness of purpose and unselfish devotion. Some little of his public work is known, and may thus be recorded; but hundreds are indebted to him for a kind

word and a helping hand, for defence from wrong and for encouragement in the right, for friendship, for words of cheer, for sound reliable advice, and for delicate and substantial acts of kindness.

His career at the hospitals was one of early and rapid advancement, of excellent achievement, and yet higher promise. As medical registrar he made a mark at the Middlesex Hospital; and, attaining early promotion as Assistant-Physician and Lecturer on Pathology, he became one of the most active, influential, and useful officers of the hospital. Much beloved by the students and by his colleagues, he was lately appointed Dean, and had the gratification to see that his exertions were already palpably adding to the increasing efficiency and reputation of the hospital and school. When a vacancy occurred at the Children's Hospital, Great Ormond Street, he was by common consent selected as Assistant-Physician out of many eligible candidates.

Well known and much esteemed by a wide circle of professional friends, thus at the early age of 29 he stood in a position of enviable usefulness, prosperity, and promise. Physician to two important hospitals, Dean of a distinguished medical school, wielding no small influence in the medical press, beloved by a most numerous circle of friends, whom his merit had won, and whom his amiable and steadfast character attached to him, he had already, as it were, passed the threshold of a career which included in its present privileges and near prospects all which his heart most desired, and all which good men hold most dear and honourable. His love of out-door exercise was great, and if at his busiest seasons a friend proposed a long walk or a row on the river, he was generally ready to go, and was the most indefatigable of the party. His energy was overflowing, and with all his work in London, he sought these other opportunities of expending it.

He had concluded a season of hard work by a holiday in Norway during the month of July, from which he returned bronzed and invigorated, and only too ready to assume an ample load of labour. During the vacation months he remained in London, doing not only all his own work, but that of many others who were absent. On Thursday last he expressed himself as well, but fagged; on Friday he saw his patients and was partially at work, but complained of hospital sore-throat; on Saturday he was suffering so much from inflammation of the fauces and soft palate that he stayed within doors, and had the advice and treatment of medical friends, which considerably alleviated his symptoms. He was seen repeatedly on Sunday, when suitable inhalations and other means had much relieved the pain and swelling about the fauces, which were the only prominent symptoms. Early on Monday morning he was seen by Dr. King and Dr. Morell Mackenzie; and, while Dr. King was still with him, he was suddenly seized with spasm of the glottis (which was now very oedematous), producing asphyxia so alarming as to be nearly fatal at the time, and to necessitate instant tracheotomy, followed by protracted artificial respiration, to restore animation. He rallied fairly after the operation, enough to excite hopes of his recovery; but they were fallacious. During his short illness, he was surrounded by medical friends, who were devoted in their attentions. Dr. Morell Mackenzie, Dr. King, and Mr. Morris were in immediate attendance, but he was seen also by his friends Dr. Murchison and Dr. A. P. Stewart; and there were never wanting those of his friends and colleagues who felt it a sad but precious privilege to watch by his bedside during all the hours of night and day, and strive to snatch from impending fate a life which was dear to all. It is seldom that any event can have caused so general and deep sympathy, or that the death of any physician has been felt by so many as a personal loss, and a ground of public regret. This is the more remarkable as Dr. Murray was still a very young man. But exceptional opportunities created by his own meritorious effort had early afforded him opportunities of being personally well-known to every practitioner of eminence in the metropolis, and to many in the provinces; and none could know him without seeing how true, how generous, how gentle, how unselfish, and how earnest he was for public ends; how willingly he spent himself, how much he loved his profession, and how much he loved his brother men; so that there are none who knew him who will think this eulogy strained, although it may well fail to define the subtle charm and deeper qualities of him whom it weakly commemorates. A relative of Dr. Murray writes: "The blank caused to his numerous relatives in London is irreparable. He had his national love for the 'Clan' developed to a high degree, and we shall miss for years to come that vigorous kindly face, which has assisted so often at our rejoicings and mournings." His example will live as one which testifies what simple worth and manly courage may ensure of solid enduring achievement in early manhood. His sudden removal from labouring in a sphere of usefulness, in which he never spared himself, is a mysterious and solemn dispensation. His memory will long be dear to many to whom his familiar presence was a daily refreshment; and probably a marble will be erected by his friends, to perpetuate the recollection of his worth,

in the hospital where he worked till death overtook him. It is by the living influence of his life and memory that he would most desire to be remembered, and this influence will not soon fade.

His remains will leave Euston Square Station, to be conveyed by rail to Aberdeen on Monday evening. Friends are invited to assemble at the outer gate of the station at 8 p.m. to pay to them a last tribute of respect.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 9th, 1873.

Kane, Patrick, Sawley, near Derby
Matthews, Arthur, Harwich
Yeung, George William, Mile End Road

The following gentleman also on the same day passed his primary professional examination.

Treves, Frederick, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ABBEYLEIN UNION, Queen's County—Apothecary for the Workhouse: £30 per annum. Applications, 21st instant, to James Finnegan, Clerk of Union.
AUSTRALIAN FISHERY COMPANY—Surgeon to take charge of Expedition to Northern Coast of Australia and adjacent Islands: £150 per annum, and a share in the profits.

BAWNBOY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballinamore Dispensary District: £60 per annum and fees. Applications, 5th November, to James McGovern, Clerk of Union.

BIDEFORD UNION—Medical Officer and Public Vaccinator for the Bideford District: £60 per annum, and fees. Applications, 20th inst., to C. W. Hole, Clerk.
BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Acting Physician: Acting-Surgeon: Surgeon-Dentist; Extra Acting-Physician: £60 per annum. Application, 4th November.

BRISTOL DISPENSARY—Physician.

BURY ST. EDMUNDS—Public Analyst: £10 ros. per annum; 10s. per analysis for the first fifty, and 5s. per analysis beyond. Applications, 20th inst., to W. Salmon, Town Clerk.

BURY ST. EDMUNDS URBAN SANITARY DISTRICT—Medical Officer of Health: £52 ros. for one year.

CAMBERWELL WORKHOUSE INFIRMARY—Medical Officer: £250 per annum.

CARLISLE DISPENSARY—Assistant House-Surgeon: £70 per annum, furnished rooms, etc. Applications to J. W. Davidson, Honorary Secretary.

CHERTSEY, EPSOM, REIGATE, and DORKING Rural and Urban Sanitary Districts—Medical Officer of Health: £600 per annum for three years. Applications, 1st Nov., to F. H. Beaumont, Esq., Reigate.

DALTON-IN-FURNESS URBAN SANITARY DISTRICT—Medical Officer of Health: £60 for one year. Applications, 31st instant, to F. H. Clark, Clerk to the Authority.

DORSET COUNTY HOSPITAL, Dorchester—House-Surgeon.

GENERAL HOSPITAL, Birmingham—Assistant Dispenser: £40 per annum, to commence. Applications, 18th instant, to Wm. T. Grant, House Governor and Secretary.

GOOLE and SELBY RURAL SANITARY DISTRICTS, and Selby Urban Sanitary District: £500 per annum. Applications, 30th October.

GUEST HOSPITAL, Dudley—Honorary Surgeon. Applications, 31st instant, to E. Poole, Secretary.

HALIFAX INFIRMARY and DISPENSARY—Assistant House-Surgeon: £40 per annum, with yearly increase, board, lodging, and attendance.

HOSPITAL FOR SICK CHILDREN—Assistant-Physician.

LANCASHIRE and YORKSHIRE RAILWAY COMPANY—Surgeon for the Preston District.

LINCOLN GENERAL DISPENSARY—House-Surgeon: £150 per annum, furnished apartments, etc. Applications, 20th inst., to James Ward, Secretary.

LIVERPOOL DISPENSARIES—Assistant House-Surgeon: £108 per annum, furnished apartments, etc. Applications, 20th inst., to Wm. Lister, Secretary.

LONDON and NORTH-WESTERN RAILWAY COMPANY—Surgeon for the Preston District.

METROPOLITAN FIRE BRIGADE—Medical Officer for the Eastern District North of the Thames: 20s. per annum for each man. Applications, 21st inst., to J. E. Wakefield, Clerk to Metropolitan Board of Works.

MIDDLESEX HOSPITAL—Assistant-Physician.

MIDDLESEX HOSPITAL MEDICAL COLLEGE—Joint Lecturer on Pathological Anatomy: Dean.

NEW WINCHESTER UNION—Medical Officer for the Twyford District: £105 per annum.

PRESTON, Lancashire—Certifying Factory Surgeon.

ROYAL FREE HOSPITAL—Senior House-Surgeon: £104 per annum, board and residence.

ST. GILES, Camberwell—Dispenser: £120 per annum.

ST. PETER'S HOSPITAL FOR STONE, etc., Berners Street—House-Surgeon. Applications, 20th instant.

SALOP INFIRMARY, Shrewsbury—Resident House-Surgeon: £100 per annum, board, and residence. Applications, 21st October, to W. Boyce, Secretary.

SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Surgeon.

SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon: £40 per annum, with board.

SOUTH RONALDSHAY and BURRA, Orkney—Parochial Medical Officer.

SURREY HOUSE OF CORRECTION, Wandsworth—Medical Officer.

SWANSEA RURAL SANITARY DISTRICT—Medical Officer of Health: £250 for one year, and private practice. Applications, 1st Nov., to G. B. Haynes, Clerk to the Authority.

TURTON URBAN SANITARY DISTRICT—Medical Officer of Health: £10 per annum. Applications, 29th inst., to Thomas Dawson, Clerk to Authority, Turton, near Bolton.

TYNE PORTS—Inspecting Medical Officer: £20 per month, and rooms. Application to Dr. Bramwell, North Shields.

WEST LONDON HOSPITAL, Hammersmith—House-Surgeon: £70 per annum, furnished apartments, etc. Applications, 20th instant, to T. Alexander, Sec.

WESTMINSTER HOSPITAL—Surgeon: Assistant-Surgeon. Applications, 28th instant. Junior Dispenser: £50 per annum, luncheon, dinner, and tea.

WEST SUSSEX INFIRMARY, Chichester—House-Surgeon and Secretary: £100 per annum, board, lodging, etc. Applications, 1st November, to P. A. Murdoch, M.B., House-Surgeon and Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*CLARK, Thomas Edward, M.D., elected Honorary Physician to the Bristol General Hospital, *vice* Henry E. Fripp, M.D., resigned.

ELLIOTT, J. R., Esq., appointed Surgeon-Superintendent to the Jorehaut Tea Company's Plantations, Assam, India.

PLATT, W. H., L.R.C.P., appointed an Honorary Surgeon to the Kilburn, Maida Vale, and St. John's Wood General Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

CAMPBELL.—On October 9th, at Wellesley Terrace, Liverpool, the wife of W. Macfie Campbell, M.D., of a daughter.

*EYTON-JONES.—On October 9th, at the Priory, Wrexham, the wife of T. *Eyton-Jones, Esq., of a daughter.

KELLY.—On October 2nd, at 12, Plough Road, Rotherhithe, the wife of *Bernard Kelly, M.D., of a daughter.

DEATHS.

COCHRANE, W. B., M.R.C.S., at Tirphill, near Cardiff, from typhoid fever, in his 26th year.

*MURRAY, John, M.D., at 42, Harley Street, Cavendish Square, on October 15th, 15th, aged 29.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 9 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 9 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Richardson, "On Organic Stricture of the Oesophagus: a Record of Clinical Observation."

TUESDAY.—Pathological Society of London, 8 P.M. Mr. McCarthy: Traumatic Separation of the Epiphysis of the Great Trochanter. Mr. McCarthy: Recent Fracture of the Atlas and Odontoid Process of the Axis. Dr. Dowse: Foreign Body in the Crico-thyroid Pouch. Dr. Dowse: Traumatic Degeneration of the Spinal Cords. Dr. Peacock: Aneurism of the Aorta forming a large External Tumour. Dr. Greenhow: Large Hydatid Cyst of the Liver. Dr. Silver: Obstruction of the Common Bile-Duct. Dr. Silver: Two Specimens of Diseased Liver. Mr. Nutt: Photograph of a Remarkable Vesical Calculus. Dr. Cayley: Psammoma of the Dura Mater.

THURSDAY.—Hunterian Society, 8 P.M. (London Institution.) Mr. M'Carthy, "A Specimen of Imperforate Anus, and Colles's Fracture."

FRIDAY, October 17th.—Medical Microscopical Society, 8 P.M. Conversazione at the residence of the President, 1, Bedford Square.

SATURDAY, October 18th.—Society of Medical Officers of Health, 7.30 P.M. Dr. Letheby, "On the Right Use of Disinfectants."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE were indebted to Mr. Sims, M.B., of the Royal South Hants Infirmary, for the important report of a death during the inhalation of ether at that Infirmary, which we published last week; and we have to thank him for the communication.

DR. T. DOMETT STONE will, we believe, entirely change his opinion on further consideration of the facts.

REYNOLDS'S "SYSTEM OF MEDICINE".

J. B.—The delay in the publication of the fourth volume of Reynolds's *System of Medicine* is not, we have reason to know, the fault of either Dr. Reynolds or his publishers. It is in progress; and, but for delays beyond their power to avert, and in which they have no part, would be already published, as we believe it will be before long. We cannot at all appreciate objection to the publication of second editions of separate volumes when the first edition has become exhausted.

MR. D. W. MARTIN (Hull) should consult a respectable medical man.

MR. LAKE (Southampton).—The object seems to be a good one, and if the arrangements be in all respects satisfactory, the institution may be worthy of support, although it savours too much of unnecessary specialism not to be regarded with suspicion. In any case the appeal which he recommends would not be suitable in the columns of a medical paper. The professional services which medical men render must exempt them from pecuniary appeals for distressed charities, which have their first claim upon the public.

OWENS COLLEGE.

THE opening of Owens College, Manchester, was marked by a very interesting ceremony. Sir John Kay Shuttleworth delivered a brief address, in the course of which he said: "I may congratulate Professor Roscoe, for I can warmly sympathise with what he has said to-day, that there is not in the United Kingdom any laboratory—and I am sure Sir Benjamin Brodie would likewise acquiesce in this statement—which can compare with the chemical laboratory of this College. I am very glad to say also that I must congratulate Professor Gamgee on the advantage he has of founding the first laboratory for physiological researches in England. For although it is true that there exist in comparative anatomy and in the researches of zoology an excellent laboratory and professor at Oxford, there still remains to be founded there a laboratory for physiological research, so that Owens College has taken the first step in founding such a laboratory. Your success in Owens College was and is certain. You have had in the last ten years a very rapid progress. You have quadrupled the number of day scholars, and attached a medical school."

. On this subject we publish elsewhere a letter from Dr. Gamgee.

DR. COWIE (Lerwick).—1. It is only under exceptional circumstances of emergency that we undertake the analysis of drinking water as a public duty. 2. Mr. J. A. Wanklyn, 117, Charlotte Street, Fitzroy Square, undertakes water-analysis for a very moderate fee, and is a high authority on the subject.

S. A. (Peterborough).—Small shopkeepers are prohibited from selling poisonous drugs by the Pharmacy Act, unless registered as chemists and druggists. Mr. Bremridge, Registrar of the Pharmaceutical Society, Bloomsbury Square, would, we believe, attend to any complaints of infringement of the law.

WE regret to see the following in the *Cork Examiner* of September 30th.—*Important Surgical Operation*.—A young girl, fifteen years old, has just been discharged from the North Infirmary after undergoing a surgical operation which was performed in her case, if not for the first time in Cork, at least for the first time with such complete success. At five years years old the child began to suffer from white swellings about the right knee, which occasioned a contraction of the limb, and made it impossible for her to set her foot fairly on the ground. In course of time she suffered so severely from the malady that it was found necessary to place her in the Infirmary; and, on examination of the limb, it was decided that either amputation should take place, or the knee-joint be cut out. The latter alternative was chosen, and the rare and difficult operation was performed with complete success by Dr. N. J. Hobart, visiting surgeon to the institution, assisted by the usual surgical staff. First, the natural covering of the knee was laid aside, the kneecap and joint were then cut out most skillfully, and the ends of the thigh and leg-bones having been brought together and the leg thus straightened, the knee-covering was replaced and the wound bound up. It united perfectly; and all disease having disappeared, the child now walks with ease, the slight deficiency in the length of the limb being made up by the addition of a thick sole to her boot.

MR. GREENSLADE'S SPLINT.

SIR,—There have recently appeared in the *BRITISH MEDICAL JOURNAL* some conflicting statements under the title "Arnold and Son's Specialities". I am not inclined to lengthen the controversy; but, on the principle of *sum cuique*, I may be allowed to add that my attention having been called to the matter, I examined the leg-splint, shown by Arnold and Son at King's College, on August 5th, and received from the exhibitor, in reply to certain questions, very exact answers—viz., that traversing hinges had not hitherto been a feature in Mr. Greenslade's splint; that the splint with traversing hinges then exhibited was the first Arnold and Son had made; that the work of making the splint with traversing hinges was completed only two days before.

I am, etc., JOHN JAMES, M.B.

. Mr. Greenslade is unfortunate in his novelties. He was charged with a similar plagiarism in respect to his canaliculus knife by Mayer and Metzler, and has never refuted, we think, the charge.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MR. BURDETT'S request shall be attended to.

MEDICAL SICK BENEFIT SOCIETIES.

SIR,—I have noticed that the discussion originated some little time since in your JOURNAL, as to the best means of forming a sick benefit society for medical men has ceased more abruptly than satisfactorily. The only good derived from it that I can hear is, that an insurance company states that "certain special tables are in course of preparation for medical men". Now, why should not a benefit society be started, under the auspices of the British Medical Association, on a scale of payments in proportion to those of the Foresters, Oddfellows, and other clubs, approved of and registered by Government? It seems to me quite as safe and feasible for one man to pay 5s. a week for £6 in illness, £120 at death, or £60 at wife's death, as for another, who pays 6d. a week, to get 12s. in illness, £12 at his own, or £6 at his wife's death. Moreover, in a club composed exclusively of medical men, "the doctor's money" would not be required, and the money thereby saved would be amply sufficient to pay the fees for examination of members, etc. By whom could such a society be started better than by an Association like the British Medical, whose numbers are daily being recruited, more especially from the younger and also struggling members of the profession? and by whom could it be conducted more economically than by the general managers and officers who have placed the Association in such a healthy condition?

I send you these few crude suggestions in the hope that you may be able to think over a matter of such importance to us the younger members of the profession, and originate a scheme which may add yet one more to the many benefits already derived from the Association.

I am, etc.,

C. H. WATTS PARKINSON.

Wimborne Minster, September 22nd, 1873.

. It is clearly possible to construct a sick benefit society on a scale of payments which should ensure its stability; but it is doubtful whether such a scale would not be too high to be popular. Such a society would, of course, require its own staff of officers. The general secretary and manager of the Association is already most heavily occupied in attending to the existing business.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Oct. 8th; The Anti-Gam-Law Circular, Oct. 11th; The Northern Echo, Oct. 10th; The Daily Post, Oct. 14th; The Bedfordshire Mercury, Oct. 11th; The Eastern Daily Press, Oct. 10th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Noble, Manchester; Dr. J. Hughlings Jackson, London; Dr. D. Maclean, Glasgow; Dr. Sankey, London; Dr. T. E. Clark, Clifton; M.D.; Dr. D. Lloyd Roberts, Manchester; Denis; Dr. Alfred Carpenter, Croydon; A.M.; Mr. T. L. Walford, Reading; The Secretary of the Hunterian Society; Mr. E. Lund, Manchester; Mr. Balmanno Squire, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Woodman, Exeter; Mr. Manby, Wolverhampton; Dr. Meymott Tidy, London; Dr. Dyce Duckworth, London; Mr. Searson, Manchester; Mr. Elliott, Leamington; The Secretary of the Medical Microscopical Society; Mr. Southam, Manchester; An Associate; Mr. Erichsen, London; Dr. Sieveking, London; Dr. Fox, Cocker-mouth; Dr. Madge, London; Mr. T. M. Wills, Bootle; The Secretary of the Obstetrical Society; Dr. Bryan, Northampton; Mr. Newstead, Ecclehill; A Member; L. S. A., Peterborough; Mr. Sewill, London; Dr. James, London; Dr. Sims, Southampton; Dr. Charles Parsons, Dover; Dr. W. Macfie Campbell, Liverpool; Dr. Bogle, Liverpool; Dr. Oakes, Manchester; M.D.Ed.; Dr. Oscar Wood, Hatton; Mr. Carwardine, London; Mr. Varley, Nottingham; Dr. Batty Tuke, Edinburgh; Dr. C. McDowell, Carlisle; Dr. Falconer, Bath; Our Paris Correspondent; Mr. J. Smith, Jersey; Mr. Burdett, Birmingham; Dr. James Lewis, Thornbury, Oxford; Dr. Bradbury, Cambridge; Mr. Carter, Richmond; Dr. Rumsey, Cheltenham; Dr. F. J. Brown, Rochester; Dr. Hardman, Blackpool; Our Dublin Correspondent; Dr. Sankey, Cheltenham; Mr. A. Rooker Plymouth; Mr. T. H. Scott, Newent; Our Birmingham Correspondent; Mr. G. J. Llewellyn, Hirwain; Dr. Demarquay, Paris; Mr. Heather Bigg, London; Mr. C. W. Smith, Twyford; Mr. Partridge, Stroud; Mr. Maccall, Edinburgh; Dr. Addison, Brighton; Mr. Nicholson, Hull; Dr. Arthur Gamgee, Manchester; Mr. Holmes, London; Mr. Robert Dalrymple; Captain Winton, Clifton; Dr. Lord Crewe; Mr. Steel, Abergavenny; Dr. Domett Stone, London; etc.

BOOKS, ETC., RECEIVED.

The Convulsions of the Human Brain. By Dr. Alexander Ecker. Translated by J. G. Galton, M.A. Oxon. M.R.C.S. London: Smith, Elder, and Co. 1873.
Annual Report on the Sanitary Condition of the St. Giles's District for the year 1872. By George Ross, M.D. 1873.
Milk, Typhoid Fever, and Sewage: a series of letters. By Alfred Smee, F.R.S., F.C.S. London: 1873.
Factory Acts Amendment Bill: Speeches of Professor Fawcett, M.P., and Sir Thos. Bayley, M.P., on the Adjourned Debate on Wednesday, July 30th, 1873. London: Macmillan and Co. 1873.

CLINICAL LECTURE ON A CASE OF 'PLEURISY.

By GEORGE JOHNSON, M.D., F.R.S.,

Professor of Medicine in King's College; Physician to King's College Hospital.

Brief Abstract of a Case of Pleurisy with copious Effusion.—Thoracentesis.—Quick Recovery.—Two Modes in which a copious Pleuritic Effusion impedes the Absorption of the Liquid.—Explanation of the thick Layer of Fibrine in Cases of Pleurisy and Pericarditis.—Practical Application of the Doctrine.—Albuminous Expectoration after Thoracentesis: its probable cause.

T. LONG, aged 16, an errand-boy, was admitted under my care on June 18th. On June 9th, he left off his waistcoat, and, in consequence, he got a chill. On the 12th, he first felt pain in the left side, of a dull aching character. The pain was increased by exertion and by a deep breath; and, being unable to continue his work, he went home to bed. The pain continued; and he lost his appetite, and felt weak. On the 18th, when admitted into the hospital, the left side of the chest had a rounded form, the intercostal spaces bulged, and the ribs were nearly motionless. The left side measured 14½ inches, the right 14 inches. The heart was seen and felt beating to the right of the sternum. The whole left side was dull on percussion from base to apex. No respiratory sound was audible, except an indistinct and distant blowing near the spine. Vocal fremitus was absent. On the right side, there were normal resonance and puerile respiration. Respirations 34; pulse 120; temperature 101.4; urine normal. The boy had a pale, delicate, and emaciated look, and a malar flush on the face. Here we obviously had to deal with a very copious liquid effusion into the left pleura; and, after watching the case for a few days, I determined, for reasons which I will presently explain, to have the liquid withdrawn.

On June 26th, the house-surgeon, Mr. Duncan, introduced a fine cannula through the ninth intercostal space in a line below the angle of the scapula, and drew off with an aspirator forty-one ounces of opalescent fluid. The wound was then closed, and no air was admitted into the pleura. The admission of air into the pleura, if it do not increase the risk of suppuration within the cavity, certainly tends to compress the lung, and so to impede, if not entirely to prevent, its expansion after the removal of the liquid. Within a few minutes after its removal, the liquid formed a firm gelatinous coagulum. The withdrawal of the liquid was attended with immediate relief to the breathing.

Two days afterwards, the left side of the chest had regained its normal form and size, and its movement was nearly as free as that of the right. From that time, his progress towards recovery was continuous and rapid; the normal resonance and respiratory sounds gradually returned; and our last note of him, on July 21st, just before he left the hospital, was to the effect that the only remains of abnormal physical signs were some dullness on percussion and feeble respiration below the angle of the left scapula, the result, probably, of false membranes over that part of the lung.

Now, I wish to point out to you that there are two conditions which greatly impede the absorption of the serous effusion of pleurisy. These are, 1, so copious an effusion of liquid as to distend the pleural cavity; 2, a thick layer of unorganised fibrine covering the surface of the pleura. A very copious liquid effusion impedes absorption, partly by obstructing the flow of blood through the compressed lung, thereby causing a general fulness of the systemic veins, including, of course, the bronchial veins; partly by directly compressing the subpleural veins, thus retarding the return of blood, and causing capillary engorgement beneath the pleura. When the pressure of liquid is sufficient to cause bulging of the intercostal spaces, such as occurred in this case, it is obvious that the intercostal venous circulation must be seriously impeded. The mechanical withdrawal of a sufficient amount of the liquid effusion to relieve tension of the cavity and remove pressure from the lung and the veins beneath the pulmonary and the costal pleura, will usually be followed by a quickened absorption of the liquid which remains in the pleura. In like manner, when anasarous swelling of the legs has rendered the skin so tense as to impede the return of blood by the veins, and thus to favour the increase of the dropsical swelling, the discharge of some liquid through a puncture in the skin is usually followed by the absorption of a further portion of the dropsical effusion,

which, entering the circulation, exerts a diuretic influence upon the kidney, and excites a copious flow of urine.

There is no difficulty in understanding that a thick layer of fibrine covering the surface of the pleura, and therefore interposed between the subpleural vessels and the liquid effusion, must greatly impede the absorption of the liquid. In some cases of pleurisy, with copious liquid effusion, the pleura has been covered by firm unorganised fibrine from a quarter to half-an-inch in thickness. Now I wish to show you that an exact knowledge of the mode in which a thick layer of fibrine is formed upon an inflamed pleura affords a powerful argument for early tapping in cases of pleurisy with copious liquid effusion. The explanation which I am about to give you applies to the formation of false membranes upon the pericardium and peritoneum, as well as upon the pleura. In the first stage of inflammation, the serous membrane is roughened by a thin layer of exuded lymph; in the next stage there is an effusion, more or less copious, of an albumino-fibrinous liquid. Then the subsequent thickening of the false membrane on the pleura occurs by successive deposits of fibrine from the liquid effusion upon the previously exuded and deposited lymph. The process is exactly analogous to that which occurs on the surface of an inflamed cardiac valve. The endocardium being roughened by a scanty exudation of lymph, there occurs a subsequent deposit of fibrine from the blood upon the damaged valve, and thus the so-called warty vegetations are formed. The fibrine coagulates and is deposited upon any part of the endocardium, which has been roughened by inflammation, as it coagulates and concretes upon a wire or other foreign body introduced within the vessels of a living animal.

The liquid effusion of pleurisy may be looked upon as blood minus its red corpuscles. We have seen that the liquid drawn from our patient's chest quickly clotted into a gelatinous mass; and this coagulation, which occurs rapidly after the removal of the fluid from the chest, often takes place gradually within the chest, upon the roughened surface of the inflamed pleura. The explanation which I have given you of the process by which fibrine is deposited from the liquid effusion of pleurisy is in accordance with the fact that, while in cases of dry pleurisy, the effused lymph is comparatively scanty, the very thick and firm false membranes occur only in association with a copious liquid effusion.

And now for the practical application of this pathological doctrine. It is obvious, that the longer the liquid effusion of pleurisy remains within the chest, the greater is the probability of a copious deposit of fibrine upon the roughened surface of the pleura, and the thicker this fibrinous deposit, the less is the probability that the liquid will be absorbed. These considerations, then, suggest the expediency of early tapping in all cases of pleurisy with a copious liquid effusion; and I have no doubt that the timely performance of thoracentesis in the case of our patient greatly promoted his recovery. If the liquid had not been pumped out of the chest, it is probable that the pleura would have become coated over by successive layers of fibrine deposited upon its surface; the result would have been a tedious convalescence, and ultimately an incomplete recovery, with more or less contraction of the side, the lung being bound down, and its expansion prevented by a thick and firm false membrane over its surface.

During the last few months, the French medical societies and journals have been much occupied with the discussion of the "albuminous expectoration" which sometimes occurs after the operation of thoracentesis for pleurisy. In two leading articles in the BRITISH MEDICAL JOURNAL of the 4th and 11th of October, you will find a clear and able summary of the discussions, and an account of the various theories to which this interesting subject has given rise. The expectoration of a frothy albuminous, sometimes blood-tinged fluid, may begin within a period varying from ten minutes to an hour after the withdrawal of the pleuritic fluid; and its duration varies from a few hours to a whole day. Referring you to the articles in question for an account of the various theories relating to the subject, I may state now that the explanation which appears to have met with the most general acceptance amongst the French pathologists is, that the readmission of air into the previously compressed lung acts as an irritant to the air-passages, and so excites active pulmonary congestion, which results in a serous transudation through the capillaries into the air-cells and bronchi. This explanation appears to me unsatisfactory. I doubt whether the readmission of air could exert any such irritant influence upon the pulmonary tissues as the theory in question assumes; and I venture to suggest a different explanation of the phenomena. While the lung is compressed by a copious liquid effusion into the pleura, it is probable—nay, it is certain—that, in consequence of the more or less complete blood-stasis within the compressed lung, coagula will form in the minute pulmonary vessels, and especially within the pulmonary veins.

Suppose, now, that coagula exist within the minute pulmonary veins at the time when the liquid is being removed from the pleura; the lung begins to expand, and blood and air are again more freely admitted into their respective channels. It is obvious that obstruction of the pulmonary veins by coagula would cause a backward passive engorgement of the capillaries, and a consequent serous transudation into the air-cells and bronchi. This serous transudation is analogous to that which occurs from the Malpighian capillaries into the uriniferous tubes, thus rendering the urine albuminous, when from any cause, either within the kidney itself, or in the heart or lungs, the return of blood through the renal veins is much impeded. A consideration of the obvious tendency which there must be to the formation of coagula within the vessels of a lung compressed by a copious pleuritic effusion, affords an additional argument in favour of early thoracentesis in such cases.

(Brit. Med. Journal)

ABSTRACT OF LECTURE

ON

THE PROGRESS OF SANITARY SCIENCE.

Delivered at the Birmingham and Midland Institute.

By W. H. CORFIELD, M.A., M.D.,

Medical Fellow of Pembroke College, Oxford; Professor of Hygiene in University College, London; Medical Officer of Health for St. George's Parish; etc.

HE said:—Sanitary science is a thing of yesterday, comparatively speaking; but sanitary art, the art of preserving the health, whether of individuals or of communities, has been studied and practised for ages. Sanitary science is the latest and highest development of medicine. I say it is the highest branch of medical science, because of the extreme importance of its objects, and, I may also add, of its results. It is the study of the causes of diseases, and it points out the means of preventing them; and I am sure you are all agreed that "prevention is better than cure;" as Rollet, of Lyons, well said, "Medicine cures individuals; hygiene saves the masses." But, while we contrast hygiene (another name for sanitary science) with curative medicine, we must not forget that it is altogether a medical science, and that its great lights have all been medical men (mind, I am not speaking of the art now, but of the science), and this is necessarily so, and always must be so. I have said that sanitary science is the study of the causes of diseases, of the modes in which they originate, and in which they spread from one person or place to another. It is, therefore, plain that only those who are acquainted with diseases are competent to deal with it at all, and these are those who have made medical science generally their special subject. You sometimes hear it said that medical men don't know much about diseases. Just think what this means: disease has been studied by earnest men in all its varied forms for thousands of years; experiences have been recorded, comparisons made, the effects of remedies noted from generation to generation, and yet we are asked to believe that medical men don't know anything about diseases. The thing is absurd on the very face of it. Sanitary science is, then, a medical science, and the most intimate acquaintance with diseases is necessary for its prosecution—I mean for its advancement as a science. Sanitary investigations can only be scientifically conducted by medical men, just as pianos can only be played by musicians. This science is also the latest development of medical science. We must understand simple things before we can study complex ones. It is little use for a boy to study higher algebra until he has mastered the rule of three; and so pathology, or the study of diseased actions, becomes more and more advanced as physiology—the study of normal healthy actions—is more scientifically pursued; while the study of sanitary matters in a scientific way has only become possible of late years from the great advances made in the study of pathology, physiology, and chemistry; but, being possible, it has made such rapid strides, and evolved such startling facts with regard to the causes of diseases, that it has become the popular subject of the day. Every one thinks that he is competent to speak about it, and every one who wants to make an effective discourse must needs take upon himself to expound some, to him, new view of sanitary matters; this is very mischievous. A man may do more harm by giving the weight of his authority to erroneous views respecting the method to be employed for the prevention of diseases than he has done good during the whole of his life in any other way. None but those who have made a special study of this subject have a right to speak on it, or at any rate have a right to try to influence the public mind with regard to it. The amount of good which may be done by the exposition of correct views on sanitary matters is incalculable; the amount of evil done by the enunciation of

erroneous views, backed by apparent authority, fearful. But, if sanitary science is a thing of yesterday, such is not the case with the observation of sanitary facts, nor with the practice of sanitary art; and, while it is true that sanitary science is essentially and entirely a medical study, and is necessarily so, it is equally true that the practice of the art of preserving the health is not only possible to all, but it is a duty which devolves upon all. In all ages we have had writers on this subject. From all countries we may learn useful lessons about it. From the times of Hippocrates, Galen, and Celsus, we have had records of the results of observations on the methods of preserving the health; from the time of Moses we have had lawgivers imposing salutary conditions of existence upon unwilling, because ignorant, populations. We look upon the immense engineering works undertaken and carried out by the Romans to supply their towns with pure water with astonishment, when we turn round and see our own towns supplied from polluted rivers, or, worse still, from shallow wells dug in the soil upon which they themselves stand, wells supplied in most cases chiefly by the foul water which has percolated from the surface of the ground. We have found out, in later times, that one of the main conditions of the health of communities depends on the purity of the drinking water, and we see that the Roman engineers, by having to go to a considerable distance for water in order to get it to a sufficient height in their cities, accidentally, as it were, fulfilled one of the most important of sanitary requirements.

"Knowledge is power;" and, as we come to know more of the conditions which favour the spread of diseases, as we do daily, it is our own fault if we neglect to use the power which that knowledge gives us. There are two conditions of insalubrity which are pre-eminent. I hardly know which to place first. The one is overcrowding, and the other the accumulation of refuse matters in and about dwellings. These conditions were those which especially favoured the spread of the fearful plagues of the Middle Ages; as a result of overcrowding, we have a deteriorated condition of the air, from the diminution of the amount of its most essential constituent, oxygen; and, worse still, we have it rendered foul by the exhalation of decomposing organic matters from the bodies of the persons breathing it. Such a state of air is especially favourable to the multiplication of the poisons of diseases; such a state of the air is also brought about by the non-removal of refuse matters from the vicinity of habitations. Dr. Laycock tells us that the plague in York, in each of its visitations, and also the cholera, broke out in the same abominably filthy place; and in cholera epidemics it has been repeatedly noticed that those parts of towns which are most filthy and most overcrowded always suffer worst. But the danger is not only from special epidemic diseases. Such insanitary conditions induce a lowered vitality of the inhabitants, who become more prone to attacks of diseases of all sorts; and then we have sickness, inability to work, and consequent inability to earn bread and to pay rents, and so the evil recoils from the tenants upon the landlords. One witness says, "Rent is the best got from healthy houses." Another, "Sickness at all times forms an excuse for the poorer part not paying their rent, and a reasonable excuse." I consider that one of the most important conclusions that the study of sanitary science has forced upon us lately is the conclusion that the immediate removal of refuse matters is one of the first necessities of the healthy existence of a community. There are those who would have you believe that refuse matters may be rendered innocuous in one way or another, so that they may be kept with safety in and near to houses. Don't listen to them; the principle is wrong—radically wrong. Depend upon it that the true method is to get rid of such matters at once, and in the simplest possible way, and that is the cheapest plan in the end.

Show me a town where refuse matters are kept—no matter how they are treated—and I will show you a town where the standard of vitality is low; I will show you a town with a high death-rate, especially among children. To take the other side of the question, look at London. There you have a population of three millions and a quarter, with the lowest death-rate of any very large collected population in the world, with one of the lowest death-rates among the large towns of even our own country. Why is this? I say unhesitatingly, and without fear of contradiction, that, with all allowances made for the excellent position of London, it is mainly due to the fact that the principle there, however incompletely it may be carried out, is the immediate removal of all refuse matters; in London, the water-carriage system by which the foul water, containing a very large proportion of the refuse matters of the population, is removed by gravitation in sewers, is carried out far more perfectly than in any other large town, and this system is daily being rendered more perfect there; it is the right system based upon a true principle, and its results are most salutary. When you have got rid of refuse matters, then see what you can do with them; and here arises a very curious consideration. Sewers, in

most instances, were not originally built as sewers, but as drains; a sewer is a conduit for the removal of fouled water; a drain is a channel for the removal of mere superfluous water, the object being to dry the soil.

The pattern of all our old sewers, the Cloaca Maxima at Rome, was originally a drain; it was constructed by Tarquinius Priscus, the fifth King of Rome, 600 years B.C., to drain the marshy ground between the Palatine and Capitoline hills, and it was so well constructed that it drains that ground at this moment. Pliny wondered that it had endured 700 years, unaffected by earthquakes, by inundations of the Tiber, by masses which had rolled into its channel, and by the weight of the ruins which had fallen over it. What would he say could he see it now, as any of you may who choose to go to Rome, still discharging, after more than 2,400 years, its dirty water into the Tiber? But the convenience of the great drain for the disposal of refuse matters soon became apparent, and so it was turned into a sewer, and has been one ever since.

Well, what are we to do with the refuse sewer water, when we have got it out of our towns? This is one of the greatest questions of the day. Drains, of course, were naturally made to discharge into rivers, their proper place, so long as they were only drains; but, when they come to be used as sewers, this will not do; in the first place, the rivers are fouled, and, in the next, the manure is lost. I shall be able to show you, in the course of the lectures, that the only way known by which sewer water can be either purified or utilised, is by turning it, with suitable precautions, on to land; and that this may be done, not only without injury to the health of the neighbourhood, but with great benefit in many ways. We have spoken of drains to dry the soil; what is the necessity of this? Every farmer knows that his crops will not flourish on undrained land; neither can human beings; a damp house is a synonym for an unhealthy house—you all know that; but it is only within the last few years, as the result of a most important sanitary research made by Dr. Buchanan, that we have come to know as a scientific fact, beyond all dispute, that the drying of the soil of a town reduces the number of deaths from consumption in a most extraordinary manner; in some towns the number of deaths under this head has been reduced by one-third, or even by one-half, in this way. To mention some other special diseases which have been successfully combated of late years, look at scurvy, that terrible malady which formerly decimated our navies! We know now that that disease may be prevented by the use of limejuice as part of the daily food, and we are no longer afraid of it. (Some illustrations of the ravages of this disease were given). Look at small-pox, beyond all exception the most fearful epidemic disease with which the world was ever afflicted! We know how to prevent it, and we have recently had a very severe lesson from not applying that knowledge.

It is to the immortal credit of England that Jenner, the discoverer of vaccination, was an Englishman; there are certain people, and they have actually formed a society, who are trying to get compulsory vaccination done away with in this country. Let me tell you that, if there is one fact established in preventive medicine, it is that vaccination affords a protection from small-pox; let me tell you that this statement is founded upon an induction such as has been brought to bear upon no other subject in medical science; and, let me add, that those persons who bring isolated facts as arguments against a statement so supported, show that they have no idea of the nature of an inductive argument at all. An unvaccinated person is a danger to the community, and ought not to be allowed to go at large; and, so far from persons being merely fined for not allowing their children to be vaccinated, and then permitted to keep them unvaccinated, the children ought to be vaccinated by the public vaccinator, even in spite of their parents, who should not be allowed to risk their children's lives through their own obstinacy and ignorance; and not only their children's lives, but those of the persons around them. The recent epidemic of small-pox showed us several important things—it showed us what we knew before, that small-pox is far more fatal to unvaccinated than to vaccinated persons; it showed us that, while small-pox is especially fatal to unvaccinated children, it is less fatal to vaccinated children than to older persons; thus demonstrating the necessity of re-vaccination; and it showed us that re-vaccination once performed is actually a better protection against small-pox than a previous attack of small-pox is. You know that it is not common for a person to have small-pox twice. Well, it is much less common for a person to have small-pox after he has been successfully re-vaccinated; and, if he have it, it is almost certain to be a very mild attack. Out of nearly 15,000 cases of small-pox admitted into various London hospitals during the late epidemic, only four presented proof of having been re-vaccinated. Let us pass on to typhoid fever. Here is a disease of the very existence of which, as distinct from certain other diseases, we have only known in recent times, but yet a disease

about which, thanks to the researches of men now among us, one of whom it especially becomes me, as his pupil, to mention, Sir William Jenner, we really seem to know more than about almost any other disease; a disease which we deliberately hunt down to its source, and stop just as we could stop the supply of stone from a quarry, or of rifles from an armoury; a disease, the haunts and habits of which we know with such accuracy, that we are able to go into a house and say, "Alter this, and alter that, or you will very likely get typhoid fever here;" a disease, the ways of which we know so well, that, when there has been a case of it caused by local defects in a house, we can almost predict what alterations are required without going to the place. Surely the results obtained from the study of this disease are some of the most striking results of sanitary progress in our day. I find that the idea has become widely spread that the recent epidemic of typhoid fever in London was due to the distribution of milk from a sewage farm. This was not so, and I regard it almost in the light of a special providence that none of the milk sent out from that establishment came from a sewage farm; had it been so, such a fact, combined with the prejudice and ignorance which exists upon the matter, would have dealt a severe blow to the progress of one of the greatest sanitary improvements of the day. The cause of that epidemic is known with absolute certainty, the very channel by which the poison got into the dairy well having been recently unearthed.

I must allude, for an instant, to the recent sanitary legislation; it has been found fault with by many on account of matters of detail; but consider the fact that the result of it is, that the country has spent a large sum of money in the employment of medical officers of health and sanitary inspectors, and that such men now exist; and you will see that in it we may find great cause for rejoicing when looking to the future of sanitary progress. In a lecture on the "History of Hygiene," which I delivered some three or four years ago at University College, London, I said, "From its very nature, hygiene interests all classes of society; but it is to those who are worst off—the poorest and most wretched—that it must direct its first attention. Civilisation has its evils as well as its advantages, as Bouchardat has well remarked; and one of the greatest of them is the overcrowding of people in the great centres of population, with the misery and disease which are the results of it. It is to better constructed houses for the working classes, to a free supply of good water, and to satisfactory sewerage arrangements, that we must look for an amelioration in these respects; and, I would hasten to add, to a wider spread among those classes of such an education as shall lead them to appreciate the means used for the improvement of their condition, and to lend a helping hand for the furtherance of those means."

I feel that I cannot do better, in conclusion, than congratulate this town on having, through the munificence of one of its citizens, been the first to appreciate the importance of the education of the people in these subjects, and on having such an institution as this, in which so much useful knowledge is imparted to the people, and congratulate myself on having the privilege of such an opportunity of spreading broadcast the great truths of sanitary science. The time is fast coming which was looked forward to by Dr. Parkes when he wrote:—"Let us hope that matters of such great moment may not always be considered as of less importance than the languages of extinct nations, or the unimportant facts of a dead history."

IS THERE SUCH A DISEASE AS ACUTE PRIMARY MANIA?*

By W. H. O. SANKEY, M.D.Lond., F.R.C.P.,
Lecturer on Mental Diseases, University College, London.

THE plan on which writers on insanity describe the disease is most frequently different from that which authors on medicine usually adopt. The general medical writer commences with the signs and symptoms of a disease, and describes each phenomenon in the order in which it arises in the course of the malady. This may be called the historical mode, and it is the method which is observed in every department of natural history. But in the description of mental disease, some prominent feature arising during the course of a case, without regard to what has gone before or what will follow it, is taken and made the chief feature in the description of the disease. If this feature vary, the variation is itself described, and perhaps is exalted to form the basis of a new variety of mental disease. The varieties become by this process endless.

* Read before the Psychological Section at the Annual Meeting of the British Medical Association in London, August 1873.

Some writers have attempted to classify insanity into emotional, ideational, impulsive, and intellectual insanity, according to whether the case showed more prominently an emotional or ideational disturbance, etc. I say more prominently, for there never was yet known a case in which either of these artificial divisions of mental phenomena was alone affected; the brain-functions were never so dissected, as it were, by disease.

Again, some authors divide the cases of insanity according to their supposed causes. They speak of mania *à potu* as a distinct malady, while others fix upon a mere concomitant, and describe a puerperal mania, or phthisical mania, making a mere accident the godfather to the disease; as, again, in kleptomania, onomania, etc.

Surely this is a great and very unnecessary departure from the rules of pathology. We might as well speak of the varieties of fractures, as fractures from falls, from blows, from pressure, etc.; or describe puerperal fractures, scrofulous fractures, and so on. In general pathology, too, a disease once ascertained in its early stage continues to be called by the same name throughout all its stages. A case of pneumonia is pneumonia from beginning to end; the first, second, and third stages have not distinct titles, and are not disconnected in works on medicine. It would be as rational to classify disease by its duration, as cases of one week, or two weeks, three weeks old, etc. Yet this is very much what is done by some writers in their classification of mental diseases.

We read in reports of such a case as epileptic mania complicated with paralysis. Surely one disease is enough at a time, and as surely our nomenclature should signify an unity, not a trinity, of morbid processes. Of course, we cannot expect to achieve a nomenclature which is perfect; such a consummation presupposes a complete knowledge of all diseases. But, admitting that our system must be only a provisional one, we ought to guard ourselves against allowing such an auxiliary to become our master instead of our servant; against perpetuating error, instead of aiding in the discovery of truth.

When we speak of acute mania, do we not imply that we are alluding to a disease which is of a distinct and separate morbid species? or, rather, do we or do we not mean a disease as distinct in all its characters, in its progress and termination, as small-pox, syphilis, cancer, etc.? If we do not, we should acknowledge the fact at the outset, and say that mania is a symptom merely, like cough, jaundice, tormina, etc. But mania finds a place in most published treatises on insanity, and occupies, indeed, a prominent position in most classifications, and is divided also into several varieties.

If mania be a disease *per se*, of course it must commence as mania, continue and terminate, always a mania; and if so, I would ask, is such a malady ever met with?

I extract from a French author the following example of the mode of describing the condition. "Mania," he says, "was thus described by Esquirol. A cerebral affection of chronic character, ordinarily without fever, and characterised by perturbation and exaltation of the emotions, the understanding, and the will. It breaks out suddenly, following some strong emotion, an alcoholic excess, or a prolonged incarceration, and mounts in a few hours to its highest degree."

I have, with this view in mind, waited now some twenty years without finding anything in my experience to agree entirely with this description. If this description be that of a distinct species of disease, I have never met with any clearly marked instance of acute primary mania; and my experience now ranges over several thousands of cases.

I have several times supposed that I had such a case under observation, but on thorough investigation I have never been able to satisfy myself of the fact. I use the word primary to avoid misconception, though I do not admit its propriety: all true morbid species of course are primary. I have also received patients certified to be labouring under acute mania, cases commencing, that is, as mania and so continuing; but I have never been able to verify such a diagnosis. I have searched reports, newspaper accounts, trials in which persons have been accused or tried for sudden outbreaks of maniacal violence, or whose crimes have been excused on the ground of insanity; but, whenever any history of the accused's case has been given, I have never found that the outbreak was the first symptom of the disease. The cases which I have received as examples of acute primary mania have been of the following character.

Firstly—and these appear to correspond most nearly to the description given of acute mania—are cases of general paresis, in what the French call the expansive stage. I believe it to be almost universal that maniacal symptoms occur very early in the course of general paresis. There is a stage of excitement evidenced at first by great garrulity, which speedily goes on to an outbreak of maniacal violence. It is not uncommon, as we all know, for this stage to pass away before any motor symptoms make their appearance, and the patient may be even discharged cured at this juncture, and his case may seem to justify a diagnosis of primary

mania; but the motor symptoms, according to my experience, invariably appear, and in the sequel all the other characteristics of paresis. It would not be correct, however, to call the same pathological conditions by two names. The disease is general paresis from first to last; one morbid process only is in operation in the patient's system from beginning to end.

I think that other cases, considered at first sight to be examples of primary mania, are secondary attacks of recurrent insanity. In such cases, the attack, though it be the second or third, may not be known, or it may be concealed by those who bring the patient to the asylum. The premonitory symptoms of these secondary attacks are often of very short duration, and show but slight deviation from the ordinary condition of the patient, to detect which it may require a well-tutored observation. The symptoms of maniacal character quickly succeed; they are often well-pronounced, and seem to the friends and non-medical observer to be the first phenomena of the attack; but such cases are not instances of primary mania.

If it be the fact, then, that no case of insanity commences as mania, we should expunge the name from the list of diseases, and use the word only as a term for a symptom or series of symptoms of a given character. And if it be true that no primary case commences with violence, the knowledge of the fact becomes of the utmost value in a medico-legal point of view also.

ON THE ACTION OF ALCOHOL.

By JAMES ROSS, M.D., Waterfoot, near Manchester.

I WISH to supplement my paper "On the Action of Alcohol," which appeared in the JOURNAL of October 4th, by a few additional remarks. When I wrote that paper, I was quite aware that Dr. Beale, in common with Professor Binz and many others, was of opinion that alcohol was one of a class of agents which checked the movements of white blood-corpuscles and other masses of protoplasm; and that from this fundamental action, all the other effects of these agents upon living organisms was to be explained. I was not, however, aware that Dr. Beale had to a very large extent anticipated the views which I now hold so far back as 1863. The author has kindly sent to me a small pamphlet of his published at that date, entitled, "On Deficiency of Vital Power in Disease, etc.," and the coincidence between some of his observations on the action of alcohol and some of my statements is altogether remarkable.

I will, with permission, cite one or two of the more striking passages. After describing the morbid changes which take place when a slight abrasion of the cuticle inflames, he proceeds, "Now what happens when a drop of alcohol is applied to such a sore? Momentary pain, followed in the course of a few minutes by great relief, or complete cessation of pain, and diminished vascularity. But how does the alcohol bring about such changes? If alcohol be added to any serous fluid, the albumen is precipitated. If delicately granular cells are placed in alcohol, and afterwards examined under the microscope, every one knows that they will appear shrunken, and will have altered much in form; and they would resist disintegration by pressure to a greater extent than they did before. The surface of the wound is covered with a dry crust, produced by the hardening effects of the alcohol; and some of the rapidly growing cells are quite destroyed, while others become surrounded by an envelope of hardened matter, which prevents the possibility of their absorbing nutriment, and giving rise to new cells so rapidly as before. Not only so, but the permeating power of the nutrient fluid itself is diminished by the tendency of the alcohol to coagulate it. The most superficial of the cells, composed entirely of germinal matter, would be destroyed by alcohol, though not so quickly, perhaps, as by the actual cautery, nitrate of silver, sesquichloride of iron, sulphate of copper, etc."

Dr. Beale then goes on to make interesting remarks on the action of alcohol upon the vessels and nerves; and he finally discusses the action of the agent when taken internally. After noticing that many agents have the property of coagulating albuminous fluids and solutions of extractive matter, he says: "The favourable action of such remedies is probably due to their direct influence on the fluid constituents of the blood. They, no doubt, also diminish the rate at which blood-corpuscles are disintegrated, and at the same time they tend to render the walls of the blood-vessels less permeable to fluids. But of all remedies, I believe alcohol acts most rapidly in this way, and in these particular cases (pneumonia, etc.) most efficiently. The properties alcohol possesses of hardening animal tissues, and of coagulating albuminous fluids, are well known; and these properties must not be forgotten, when its effects in the animal body are discussed. Of course, when

absorbed by the blood, it does not actually coagulate the albuminous matters; but it probably renders them less fluid, and reduces their permeating property. Alcohol interferes with the disintegration of blood-corpuscles; and in cases where this is going on very rapidly, and where fluid is passing through the walls of the vessels in considerable quantity, in consequence of the walls themselves being stretched and too readily permeable to fluids, alcohol is likely to be of service; but where these changes are occurring very rapidly, and the patient's strength fast ebbing, it may save life. We may, therefore, explain the beneficial action of alcohol, without assuming that it is a food, or contributes directly to the process of nutrition." And again, he says: "This view of the action of alcohol accords with many broad facts familiar to all. It accounts for the shrivelling of the hepatic cells, the shrinking of the secreting structure, and the increased hardness and condensation of the entire liver, which results from the continual bathing of the gland-structure by blood loaded with alcohol. It accords with the gradual shrinking and condensation of tissues which occur in persons who have long been accustomed to excess. The tendency to increased formation of adipose-tissue, which occurs in persons who live generously, and seems to be augmented by alcohol, may be explained upon the same view; and the stunting in growth which follows its exhibition to young animals is readily accounted for."

These extracts will show that Dr. Beale has, to a very considerable extent, anticipated me by ten years in the theory of the action of alcohol which I advanced in the JOURNAL a short time ago. For a fuller exposition of his views, I must refer my readers to the little pamphlet* itself; since no number of detached extracts can do complete justice to an author's opinions.

I am happy to be able to add that, in a very kind private communication, Dr. Beale disclaims the idea of accusing me of intentionally appropriating his ideas without due acknowledgement; and that he cordially congratulates me on coming to the same general conclusion from a different point of view. The hypothesis was originally suggested to me by Mr. Herbert Spencer's remarks upon narcotics, reference to which I have already given. I must leave others to judge whether what I have said upon the subject has given to the hypothesis additional significance.

PULMONARY APOPLEXIES (HÆMORRHAGIC INFARCTIONS) IN CASES OF CEREBRAL APOPLEXY.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,

Physician to the London Hospital.

IN his highly interesting Harveian Oration (BRITISH MEDICAL JOURNAL, July 5th, p. 5), Professor Rolleston refers to Brown-Séquard's important experiments, which show that injuries of certain encephalic centres are followed by pulmonary hæmorrhages. I wish to point out that some of the "experiments of disease" on the higher nervous centres of man produce the same result. I have alluded to this briefly in my article on Apoplexy in Reynolds's *System*, 2nd edition, vol. ii.

I shall in this article use the term pulmonary "apoplexy". It is true that to use this term for local internal hæmorrhages is to write inaccurately; but I never, or scarcely ever, hear used any other term than pulmonary apoplexy to describe what is better called pulmonary hæmorrhagic infarction. In the expression "cerebral apoplexy", the term apoplexy is used strictly; but it is well in this paper to qualify it by the word cerebral. In the two expressions, pulmonary apoplexy and cerebral apoplexy, the word apoplexy has quite different meanings.

After cerebral apoplexy—the effects of any comatous lesions being included in this term—numerous conditions of lung are found. As regards differences in mere quantity of blood in these organs, there are two causative factors—1, the robustness of the patient when taken ill; 2, the rapidity of his death. As a rule, the more robust the patient, and the more rapidly he dies, the more blood in the lungs; but in one case of death in an hour from large cerebral hæmorrhage, I found that the patient's lungs weighed together only twenty-two ounces. They were very like—quite like, I think—the lungs of patients who have died in cholera collapse. This case puzzles me very much, as I have found the lungs much congested in patients who have only lived apoplectic half an hour or less (as after meningeal hæmorrhage). But, as a rule, the lungs are the more congested the more rapid the death, provided death

does not occur *very* rapidly, does not occur within, let us say—and I only state my impression—two hours.

I have above spoken as if there were only degrees of congestion of the lungs in cerebral apoplexy; but in a considerable number of cases we find other appearances *post mortem* which certainly cannot be passed by as "congestion". It is of these that I wish to speak. I omit further reference to well known conditions of posterior congestion, and need not detain the reader by speaking of oedema and acute emphysema.

We see in some cases, on slicing the lung, not only a general reddening of the dependent parts, but *patches* also. These patches are not confined to lobes, although they affect the lower lobes most. They vary in tint from a black to a granite colour; and in some lungs we find both colours and intermediate degrees of colouration. The sections are margined, slightly raised; the masses can sometimes be felt from the surface, but very indistinctly, as nodules. The black nodules vary in area of section from a half-crown to a split pea. The granite-coloured ones vary similarly. These appearances—the differences of stages being well marked—were very striking in the case of a largely built patient aged 50, whom I saw a few months ago with Dr. Stephen Mackenzie. In this case, a few patches were broken down into a pulp.

I think it is plain that the above description of the dark patches is that of "apoplexies"—hæmorrhagic infarctions of the lung. The large black patches are indeed, I consider, unmistakably "apoplectic". The patches (nodules) in heart-disease are, however, for obvious reasons, harder. In a case of coma from injury to the head in a very robust man, I found lungs which were very like, if not quite like, the "damson-lungs" of heart-disease; and I found the same in a case of apoplexy from opium-poisoning. The suicide was a healthy man eighteen years of age.

As to the pathology of the granite-coloured patches, there will be a difference of opinion. As we find them along with black patches in some cases, and as there are all degrees of intermediateness, I suppose them to be decolorised pulmonary "apoplexies". This is what Brown-Séquard has said. But I often hear them called pneumonic. There is, I suppose, the hypostatic pneumonia of Piörty. But, whatever the pathology of the patches may be, I think that the term pneumonia is an unfortunate one. There is not clinical pneumonia. Pneumonia should be kept for an acute affection—of one lung in most cases—which has a fairly definite course, beginning by a severe rigor, and attaining its climax in about a week. When the patches I have mentioned are so numerous as to be confluent, we may find the dependent parts of the lungs bulky and solid. But even then both lungs are nearly always affected—one more than the other, it is true, in many cases; and they are not affected in one or more lobes only, but in all lobes and in the dependent parts of these. When, however, there are a few scattered granite-coloured masses, the condition will occasionally be called lobular pneumonia. The geographical part of the expression is, I think, correct; it is a lobular affection, but it has not the clinical associations of lobular (catarrhal) pneumonia. It is lobular; but there is no evidence that it is inflammatory—that is, inflammatory *primarily*. Sometimes the pleura is inflamed over a patch seated near the surface; but the same can occur in the pulmonary "apoplexies" of heart-disease, which are certainly not inflammatory primarily. It occurs also in the hæmorrhagic infarctions of pyæmia. The latter, by the way, present stages of decolorisation analogous to those of which I speak in severe cases of coma. It is true, they go on to suppuration; and so, although very rarely, may the apoplexies of heart-disease.

The general opinion of medical men in this country, so far as my knowledge goes, is, that pulmonary "apoplexy" in heart-disease is owing to impeded exit of blood. It is not, however, easy to understand how this process can lead to localised hæmorrhages, even if it be easy to understand that it can lead to general congestion, splenisation, etc. The more likely explanation seems to be, that the "apoplexies" result from pulmonary embolism. Virchow's experiments, indeed, demonstrate that embolism does produce pulmonary apoplexies. The embolic material in cases of heart-disease is believed to be blood coagulated during partial stasis on the chordæ tendinæ; and I suppose the same explanation holds in the pulmonary apoplexies of cerebral apoplexy. Every one knows that splenic and renal blocks are *red* when recent; and the accepted explanation of "red softening" of the brain is, that it is dependent on *obstruction* of small arteries. It is true that there are difficulties in understanding how increased quantity of blood, and even extravasation, result from plugging of arteries; but of the facts of the matter there is no doubt. It is warrantable, then, to infer that the pulmonary apoplexies of heart-disease or of cerebral apoplexy arise in a like manner from blocking of arteries (pulmonary). It is not necessary to deny that impeded exit has something to do with the production of pulmonary "apoplexies".

* On Deficiency of Vital Power in Disease, and on Support; with Observations upon the Action of Alcohol in Serious Cases of Acute Disease. By Lionel S. Peale, M.B., F.R.S. London: T. Richards, 37, Great Queen Street. 1869.

If the above reasoning be correct, the pulmonary apoplexies from lesions of the encephalon arise, not directly from the nervous lesion, but indirectly and by a quasi-mechanical process; there being primarily produced imperfection in the respiratory and circulatory movements. The great emphysema which in some cases we find anteriorly is complementary to the congestion, oedema, and solidifications found posteriorly. Thus it admits of a mechanical explanation too. The distinction is important. If my explanation be correct, the hæmorrhages, congestion, emphysema, etc., do not result by vaso-motor or other nervous actions directed straightway upon the lungs themselves.

Several of the pulmonary states mentioned occur, of course, under other conditions than those of cerebral apoplexy. But I suggest cases of cerebral apoplexy for study, because there is often a *sudden* and *local* lesion. In traumatic cases in healthy and occasionally robust persons, the process is near akin to the experiments which the physiologist makes. I have not been able to conclude as to the influence of exact position of encephalic lesion; I do not think it makes a great difference. Indeed, I have seen, as before remarked, lungs like those of heart-disease in a young suicide who died apoplectic from opium. In cases of brain-disease, the two elements of size of lesion and suddenness of lesion are more important than position of lesion. Without hastily concluding, I would suggest that the matter of greatest importance is to note the *mode of death* in numerous cases of apoplexy, and especially the alterations of respiration and circulation in cases of lesions, large and small, differently placed. But it will be essential also to note the health of the patient before his illness, the suddenness of the attack, and the rapidity of death. These, however, are very difficult matters, and I shall consider the methods and objects of such observations another time.

THERAPEUTIC MEMORANDA.

CROTON-CHLORAL HYDRATE.

THE profession and the public are chiefly indebted to Dr. Oscar Liebreich for the introduction of chloral hydrate; and this obligation is further increased by the addition of croton-chloral hydrate, which will doubtless prove an equally valuable therapeutic agent. It is of the greatest service in cases of nerve-pain. Every sufferer from neuralgia is anxious to obtain speedy relief from pain; this may be obtained by taking croton-chloral hydrate, and then the antecedent causes of the neuralgia may afterwards be inquired into and treated accordingly. The following cases are interesting, as showing the immediate relief from pain that this drug affords.

A. suffered from facial neuralgia of a most severe character; it affected her hearing and eyesight. She could not rest or take food. She took one grain of croton-chloral hydrate every hour. In three hours, she was considerably better. After taking three more doses, she was entirely free from pain.

B. suffered much from facial neuralgia dependent on decayed teeth, and had not been able to take food or sleep for three days. She was ordered croton-chloral hydrate in grain-doses every hour, and obtained great relief after two doses. Six doses removed the pain completely. She slept that night.

C. This patient suffered from concussion of the spine caused by a railway accident some years ago. She has had every variety of treatment for the pain she suffers in the spine and the nerves proceeding therefrom. She took potassium bromide gr. 20, and croton-chloral hydrate gr. 1, three times a day, with marked relief and no bad symptoms.

E. This is a young dyspeptic and neuralgic patient, and suffers greatly from dysmenorrhœa. She took two-grain doses when the paroxysms of pain came on, with marked relief.

F. has been under treatment for various neuralgiæ for some years. She has had, at one time or another, almost every external and internal therapeutic agent in the *Pharmacopœia*—strychnia, iron, quinine, ammonium, chloride, aconite, belladonna, iodine, bromine, blisters, hypodermic injections, galvanism, together with baths and other hygienic appliances, including change of air. In this case, two grain-doses of croton-chloral hydrate every hour afforded more speedy relief from pain than any of the above remedies. After taking eight grains, she was almost free from pain.

In thirteen patients who have taken croton-chloral hydrate, not a single bad symptom has been observed. In grain-doses, it relieves pain quickly; causes natural sleep; no subsequent headache or furred tongue. In several cases, it acted as a gentle laxative.

EDMUND OWEN, BAKER.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

INCISED WOUND OF WRIST, INVOLVING THE CARPAL JOINT: RECOVERY, WITH SLIGHT IMPAIRMENT OF MOVEMENT.

(Under the care of Mr. EDMUND OWEN.)

A LITTLE girl, just under two years of age, was admitted under the care of Mr. Edmund Owen on October 21st, 1872, with a severe wound about the left wrist, which had been caused, about an hour previously, by the blade of a chaff-cutting machine. The patient had suffered from considerable hæmorrhage on her way to the hospital. On examination, it was ascertained that the flexor carpi ulnaris, the ulnar nerve and vessels, and some of the more internal of the flexor tendons of the fingers, as well as the ulna itself, had been divided by an incision which

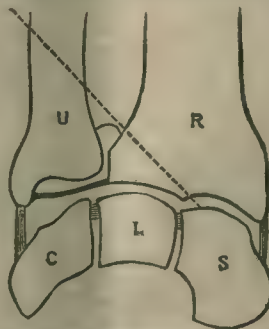


Diagram of Wrist, with dotted course showing line of division of Ulna (U) and Radius (R).

passed obliquely downwards and outwards from an inch above the head of the ulna into the radio-carpal articulation. The blade had also cut through the lower end of the radius in such a manner that the lesser sigmoid cavity was separated from the shaft, the inferior radio-ulnar articulation being uninjured, whilst the interior of the wrist-joint was freely exposed.

Mr. Owen, having consulted with Mr. Knott, the resident registrar, came to the conclusion that the proper course of treatment would consist in endeavouring to save the hand, notwithstanding the severity of the injury, remarking that the processes of repair were extremely active in healthy young patients, and that even if Nature should fail to effect a cure in this case, the surgeon could subsequently come to her assistance. The ulnar artery was then tied at the wound with a carbolised catgut ligature, of which the ends were cut short; the edges of the wound were brought together with sutures of the same material; and, dressings soaked in weak carbolic acid lotion having been applied, the arm was lightly bandaged on a splint. When the dressings were removed upon the third day, the appearance presented by the wound was very satisfactory. Pulsation, too, could be distinguished along the ulnar side of the little finger, showing that at this early period collateral circulation had been established between the radial and ulnar arteries. All went on well for three weeks, when erysipelas and abscess attacked the back of the hand. Incisions and poultices were employed, and steel-wine and port prescribed. Under this treatment the child gradually improved, and was discharged about three weeks subsequent to the formation of the abscess, with the wound entirely healed, and the limb still supported upon a splint.

When the child was last seen, at the beginning of May, there remained some stiffness at the wrist-joint, and an extensive cicatrix indicating the position of the incision—the child using the hand, the mother said, almost as freely as before the accident.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

A THIRD YEAR'S CASES OF LITHOTOMY.

(Under the care of Mr. VINCENT JACKSON and Mr. NEWMHAM.)

OF the examples of stone in the bladder admitted into the hospital during the year 1872, the following eight cases were successfully (excepting one) operated upon by lithotomy. The operation is always

in British Med. Journal

See an article on this subject in the British Med. Journal

performed as follows. Chloroform having been administered, as large a staff as possible, either grooved laterally or upon the convexity, is at once passed into the bladder; no previous injection of it with warm water being employed. The patient is not tied up, but held in the lithotomy position by a couple of assistants, a third taking charge of the staff. An ordinary scalpel-shaped knife with a strong handle is used for cutting into the bladder, and, as a rule, the calculus is extracted with a scoop and the left forefinger. If possible, no tube is used after the operation.

The publication of this series gives, with the cases of the two previous years, a total of thirty-one lithotomies, all (excepting one) being successful. The age of the youngest patient operated upon was two years, and that of the oldest sixty years.

CASE I.—John B., aged 16, was admitted January 22nd, under Mr. Newnham. The duration of his symptoms was more than three years. The boy was emaciated, and suffered occasionally great pain. On February 22nd, lateral lithotomy was performed; the stone being removed with the forceps. It weighed 468 grains, and was composed of oxalate of lime with a thick phosphatic coating. On the fifth day after the operation, the urine passed *per urethram*. Soon afterwards pain was complained of in the right hypochondriac and lumbar regions; this increased the temperature, and the pulse rose, and less urine was passed. The boy died on April 8th, the lithotomy wound having long since healed. The necropsy revealed an empty contracted bladder. The ureters were greatly dilated, and in each a soft phosphatic calculus was impacted. The kidneys were much enlarged. Upon section, nearly all traces of renal substance proper were found to be lost, the cortical portion alone remaining. Connected with the pelvis of the kidney, which was greatly dilated, were large abscess-like cavities, each containing a soft phosphatic calculus. The other organs of the body were healthy.

CASE II.—Charles S., aged 4, was admitted March 14th, under Mr. Vincent Jackson. The duration of the symptoms was ten months. He was a very delicate looking boy. On March 29th, lateral lithotomy was performed, the stone being removed with the scoop. Its weight was 20 grains; its composition, uric acid. On May 14th he was discharged cured.

CASE III.—R. J., aged 46, was admitted April 3rd, under Mr. Vincent Jackson. The duration of the symptoms was at least two years. He was a fairly healthy man, with much chronic cystitis and severe irritability of the bladder and suffering. On April 18th, lateral lithotomy was performed, the stone being removed with the forceps. It weighed 951 grains, and was composed of uric acid. On April 27th, considerable secondary hæmorrhage took place, which was stopped at last by filling the rectum with ice and injecting cold water into the bladder and again, afterwards plugging the latter. On May 1st, slight hæmorrhage again took place, but it was easily restrained. On May 9th, the first urine passed *per urethram*. On June 18th, he was discharged cured.

CASE IV.—Thomas F., aged 33, was admitted May 25th, under Mr. Vincent Jackson. The duration of the symptoms was a few months. He was a healthy boy. On May 30th, lateral lithotomy was performed, the stone being removed with the scoop. It weighed 14 grains; and consisted of uric acid. On July 2nd, he was discharged cured.

CASE V.—William S., aged 9, was admitted June 11th, under Mr. Vincent Jackson. The duration of his symptoms was eighteen months. On June 20th, lateral lithotomy was performed, the stone being removed with the scoop. Its weight was 280 grains, and its composition uric acid. On July 18th, he was discharged cured.

CASE VI.—Samuel R., aged 60, was admitted May 24th, under Mr. Vincent Jackson, with severe stricture of the urethra and vesical calculus. He fell upon his perineum twenty years previously. Two years after this, symptoms of urethral stricture commenced, and continued for two years, when he apparently had an abscess in the perineum. This was opened, and an urinary fistula resulted; and through this opening the first stone (as large as a horse-bean) passed. He was now admitted into the Queen's Hospital, Birmingham, where instruments were passed, and the calibre of the urethra was restored. For about nine years he continued pretty well, with the exception of passing small calculi; but at the end of this time the stream of urine completely ceased, and he became an inmate of the Birmingham General Hospital. A perineal operation was performed, and thirty-five calculi were removed from the bladder and urethra. For the next four years, he continued well, but frequently passed small stones; but at this time the urethra for the third time contracted, and he was readmitted into the Birmingham General Hospital, and a second perineal operation was performed for his relief. For five years, he continued comfortable, when for the fourth time the urethra almost closed, and he was admitted into this hospital. The man's condition was very deplorable, the perineum was thickened and

deeply indurated, the scrotum swollen and brawny, apparently from being soaked in the urine which trickled from the meatus; the pain, which the passage of this and the contained muco-pus gave him was very great; the straining efforts being violent. His health was much shattered. No catheter would enter the stricture; the attempt to introduce one caused much pain, and was always followed by a prolonged shivering fit. He was directed to remain in bed and use soothing measures. On June 20th, the patient's health had improved, and the acuteness of his symptoms was lessened. No instrument had entered the stricture, the pain attending the attempt being too great for it to be prolonged. Under chloroform, a Holt's dilator was carefully guided into and through the stricture, and on into the bladder, and the stricture split. The dilator being withdrawn, a large staff grooved on the convexity was passed into the bladder, and median lithotomy was performed; several small calculi being removed with the scoop. They were composed of uric acid. His recovery was slow; but he was discharged on December 17th, able to pass for himself a No. 9 gum elastic catheter, and with an urethra through which the largest sized metal catheter readily passed. The perineal wound still allowed a small quantity of urine to escape.

CASE VII.—John W., aged 3, was admitted July 22nd, under Mr. Newnham. The duration of his symptoms was not known. On August 15th, lateral lithotomy was performed, the stone being removed with the scoop. It weighed 11 grains, and consisted of uric acid. On September 3rd, he was discharged cured.

CASE VIII.—Thomas G., aged 13, was admitted December 12th, under Mr. Newnham. The duration of the symptoms was uncertain. On December 19th, lateral lithotomy was performed, the stone being removed with the forceps. Its weight was 304 grains, and its composition oxalate of lime. On February 18th, 1873, he was discharged cured.

THE BIRMINGHAM EYE HOSPITAL.

CASE OF TRAUMATIC ECTROPION OF UPPER EYELID TREATED BY DR. WEAVER'S PLAN OF DERMIC GRAFTING.

(Under the care of Mr. D. C. LLOYD OWEN.)

H. A., aged 46, a jeweller's foreman, came under Mr. Lloyd Owen's care, at the Birmingham Eye Hospital, on July 29th, 1873. Twelve months previously, he had had the whole of the skin of the forehead, temple, eyelids, nose, and upper part of the cheek, on the left side, destroyed by acid sulphuric fort. The resulting cicatricial contraction produced a severe ectropion of the upper lid with total inability to close the eye. To such an extent had loss of substance taken place, that one or two hairs, all that remained of the eyebrow, were in close proximity to the cilia.

On careful examination, it was found impossible to treat the deformity by plastic operation according to the plan usual in such cases, because there was no true skin sufficiently near for transplantation. Mr. Owen, therefore, determined to adopt the plan recommended by Dr. Wecker, of Paris, in the *Annales d'Oculistique*, July—August, 1872, which he terms "dermic grafting."

The patient was put under ether, and a horizontal incision was made along the whole length of the lid, parallel to, and about a line behind, the cilia, completely through the cicatricial tissue; an additional incision, nearly an inch in length, was then made at each end of the horizontal one, extending upwards and forming an obtuse angle with it. The mass of cicatrix included by these incisions was carefully dissected off the healthy tissue beneath and allowed to retract, so that the horizontal margin assumed a position a little above the level of the opposite eyebrow.

The agglutinated tissues of the lid itself were next separated freely, so that it could be drawn down over the eye. The upper and lower lids were then united by a silver wire suture. The wound was dressed with water-dressing, which was repeated daily. On the morning of the fourth day after operation, when the surface of the wound was found to be becoming covered with active, small, healthy-looking granulations, the work of grafting was performed. For this purpose, small pieces of skin, measuring about one quarter of an inch in various directions, were removed by means of forceps and scissors from the inner sides of the upper arms and spread out over the granulating surface. The grafts were so fitted together that a complete "mosaic" covering was secured. Twenty-five grafts were required, of which number twenty-four adhered firmly and ultimately lived. The after dressing consisted simply of a piece of very thin gutta-percha, covered with cotton-wool and secured by a flannel bandage.

At the end of forty-eight hours, the bandage and cotton-wool were removed, when some of the grafts could be seen, through the gutta-

percha, which was not removed, to have taken on a purplish streaked look at their margins; and at the end of another forty-eight hours nearly all the grafts had become more or less reddish. Nine days after the grafting, when the grafts were all firmly adherent, the gutta-percha was superseded by a weak zinc and lavender loion; and the suture uniting the eyelids was removed. In five days after this the new skin was quite sound and dry.

As now observed, nearly three months after operation, the new tissue has contracted to one-half the original extent at time of grafting; the patient is cured of his ectropion, and has an excellent upper eyelid, the skin of which, however, has a curiously uneven look.

REVIEWS AND NOTICES.

ON MEGRIM, SICK-HEADACHE, AND SOME ALLIED DISORDERS: A Contribution to the Pathology of Nerve-Storms. By EDWARD LIVING, M.D. Cantab., etc.: London: J. and A. Churchill. 1873.

It rarely falls to our lot to write a notice of a book like this, which is unquestionably a most excellent one. The reviewer rises quite refreshed from the perusal of the volume, which, from the first to the last page, bears evidence of thorough, honest work, placed before the profession in an attractive style, and in a manner which shows that its author is a scholar—thoroughly well-versed in the literature of the subject on which he writes—and also a physician of great clinical experience. Megrism is a disease with which we have previously endeavoured to make our readers familiar by the reports of experienced hospital physicians on it. These can be found in the first volume of the JOURNAL for 1872, where also are published some previous observations of Dr. LIVING on this disorder. In the book before us we have his views *in extenso*—in fact, quite an exhaustive monograph on the subject—as well as valuable remarks on other closely allied neuroses.

The space at our disposal will allow us to do little more than give an outline of the contents of the volume, and this, perhaps, is the less to be regretted as there is so little in the book to criticise, and so much to praise.

The book is divided into seven chapters, of which the opening one contains cases illustrative of the various forms of megrim; viz., simple hemicrania, sick-headache, blind-headache, hemiopia, and that form of the disorder which is attended by temporary paralysis of sensation and aphasia, etc. Dr. Living thinks there can be no doubt of the intimate relationship of this group of disorders. The second chapter is devoted to the consideration of the general features of megrim, and of the exciting and accessory causes of the seizures; the phenomena, ordinary and extraordinary, of the paroxysm forming the subject of the third chapter. The fourth chapter, "On the affinities of megrim with other neuroses," is a very interesting and instructive one. Dr. Living quotes extracts from various authors to show "the intimate relations of megrim with the whole family of neurosal disorders, of which epilepsy is the type, including epilepsy, epileptic vertigo, spasmodic croup, spasmodic asthma, angina pectoris, gastralgia, tic douloureux, intermittent and paroxysmal insanity," etc. At the end of the chapter, the subjects of neurosal equivalency and transformations, and the metamorphic and vicarious relations of megrim are discussed.

In the fifth chapter, which is one of great length, Dr. Living discusses the various doctrines propounded in explanation of the pathology of megrim and allied disorders, from the time of old Willis up to the present day, including the doctrine of biliousness, the theory of sympathy and eccentric neurosis, and the vaso-motor hypotheses of Du-Bois Reymond, Möllendorf, and others. The author is of opinion that all these theories are insufficient to explain all the phenomena of megrim. The theory of "nerve-storms" which Dr. Living adopts is as follows:—"On this theory the fundamental cause of all neuroses is to be found not in any irritation of the visceral or cutaneous periphery, nor in any disorder or irregularity of the circulation, but in a primary and often hereditary vice or morbid disposition of the nervous system itself; this consists in a tendency on the part of the nervous system to the irregular accumulation and discharge of nerve force, to disruptive and unco-ordinated action, in fact; and the concentration of this tendency in particular localities, or about particular foci, will mainly determine the character of the neurosis in question. The immediate antecedent of an attack is a condition of unstable equilibrium and gradually accumulating tension in the parts of the nervous system more immediately concerned, while the paroxysm itself may be likened to a storm, by which this condition is dispersed and equilibrium for the time restored."

Dr. Living next proceeds to explain in what sense he applies the designation "nerve-storms" to neurosal seizures, stating that it has not been his intention "to press the analogy it suggests very much beyond an illustration." He then discusses the analogy of nerve-storms to healthy nervous actions, as sneezing, yawning, etc. With regard to the anatomical seat of megrim, Dr. Living infers, from the phenomena being almost exclusively sensory, that the territory "is limited for the most part to the sensory tract and the ganglia of the sensory nerves, from the optic thalamus above to the nucleus of the vagus below." Only one portion of the tract may be affected, as, for example, the optic thalami, in those forms of the disorder in which peculiar visual, emotional, anæsthetic, or aphasic symptoms alone are present; or the medulla oblongata in those cases of sick-headache unattended with the premonitory visual and other phenomena.

Gouty megrim, brow-ague, and megrim symptomatic of organic disease of the brain, are considered in the sixth chapter.

If one were disposed to find fault with any portion of the book, it could only be with the last chapter, which is devoted to treatment. We had hoped that Dr. Living, from his great experience in the treatment of this disease, would have been able to tell us the particular cases in which we should give guarana, bromide of potassium, chloride of ammonium, cannabis Indica, etc.; but he adds little, if anything, to our information as regards these remedies. He says the object of our treatment must be, "first, to lessen the tendency to explosive action in the nervous centres; and, secondly, to avoid or remove the exciting causes of the seizures."

At the end of the book will be found a plate, illustrating the various stages of sinistral teichopsia (which has been copied from Dr. Hubert Airey's paper in the Philosophical Transactions for 1870), and also analytical tables of sixty-seven cases of megrim.

In conclusion, we strongly recommend our readers to purchase the book for themselves, and to carefully peruse it, and we venture to predict that the verdict of all who will be at the pains to examine it thoroughly will be, "it is a work, which, for elegance of style, deep research into previous and contemporary literature, lucid expression, and a scientific interpretation of clinical facts, has had no equal during the last decade."

THE CONVOLUTIONS OF THE HUMAN BRAIN. By Dr. ALEXANDER ECKER. Translated by J. C. GALTON, M.A. (Oxon.), etc. London: Smith, Elder, and Co. 1873.

Mr. GALTON has rendered a great service to the profession by presenting in an English dress a work which, in the present aspect of cerebral physiology and pathology, ought to be in the hands of every one. As the translator states in his preface, the much-desired establishment of a science of the localisation of function in the brain is now in process of being realised by the recent researches of Fritsch and Hitzig in Germany, and Ferrier in this country. Experimental research in the lower animals, however, must be supplemented by accurate clinical study, combined with the most careful *post mortem* examinations, before we can arrive at a knowledge of the physiological significance of each separate convolution of the brain in man. It is to the physician that this part of the work must be in a great measure intrusted; and hence the necessity of placing in his hands "materials by the aid of which he may be enabled easily to take observations in the midst of the apparent chaos of convolution which obscures his track. Then, and only then, will the physician be in a position duly to register the observations which he has made upon the dead body." This is the object of Professor Ecker in the work of which we now have an admirable translation. It does not contain much that is novel, for the investigations of Gratiolet, Huxley, Turner, etc., have already indicated the plan and nomenclature of the cerebral convolutions. In Ecker's work, however, we have, in a suitable easily mastered form, the results of previous investigations in this direction, which are all brought together and compared, so that there need be no difficulty in determining the name and situation of each convolution. The numerous illustrations which accompany the text serve as maps by which the traveller is enabled to determine his position and course in the district he is exploring.

The nature of the subject is such, that any abstract or extract would be unintelligible in the absence of illustrations. In the appendix, useful and practical hints are given as to method of study for the benefit of those who approach the subject for the first time. Lastly, the very complete bibliography, for the most part compiled by the translator, must prove of immense service to comparative anatomists and physiologists.

Mr. Galton has not performed the function of a mere translator, but has added numerous notes, which greatly enhance the value of the original monograph.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 25TH, 1873.

UNCERTIFIED DEATHS.

A LETTER which we print elsewhere very properly directs attention to a state of things that ought without doubt to become the subject of official inquiry, with a view to speedy amendment. Our correspondent asks what is the law respecting the registration of causes of death, and the answer is this: Under the twenty-fifth section of the Registration Act, the legal informant of the death to the registrar—*i. e.*, some person present at the death or in attendance during the last illness, or the occupier or some inmate of the house in which the death occurs—is bound to supply, “*according to the best of his knowledge or belief*,” the several particulars which are required by the Schedule B to be known and registered touching the death. The “cause of death” is one of the particulars scheduled in the Act, but there is no legal obligation whatever that such cause should be medically certified. The necessity for medical certification, in fact, does not appear to have entered into the minds of the framers of the Act, or of the legislature which passed it. So far, therefore, as the law of the case is concerned, the registrars are dependent upon the statements as to the cause of death made “according to the best of their knowledge and belief” by the informants; and any registrar who objected to register a death the cause of which was not accounted for to his satisfaction, would be acting without legal authority. But, as it was obvious to those entrusted with the administration of the Act that its usefulness would be very restricted if an endeavour were not made to obtain reliable information of the causes of death, the Registrar-General—acting, no doubt, on the advice of his able medical assistant, Dr. Farr—at once sought the co-operation of the medical profession in supplying the deficiencies of the Act. The following extracts from the instructions issued for the guidance of the registrars will enable our correspondent to see exactly what is the authorised method of procedure in respect of the registration of causes of death.

“It is very desirable that the fatal diseases should be accurately recorded; and I am anxious that every facility should be afforded you in obtaining correct information of the cause of death, certified in writing by the medical attendants of the persons deceased.

“Having this object in view, I have prepared books containing forms of certificates for the use of medical practitioners; and I will thank you to give one of these books to every registered medical practitioner resident in your district and practising medicine.

“You will have the goodness to take every opportunity of reminding the inhabitants of your subdistrict that, on the occurrence of a death, a certificate of the cause of death on one of the printed forms should be procured by them from the medical man who was in attendance during the last illness of the deceased, and be delivered to you by the informant, who signs the entry in the register-book. The entry, once commenced, must in every case be completed at the same time, no column being left blank with a view to the insertion of any particulars at a future period.

“Whenever a certificate of the cause of death signed by a legally qualified medical practitioner is produced by an informant, you will fill up the sixth column of the entry in accordance therewith, adding the word ‘certified’.

“If the deceased has been attended by a legally qualified medical practitioner, but no certificate has been obtained, you will, if possible, ascertain the cause of death from the informant, and add the words ‘not certified’.

“Should a certificate signed by a legally qualified practitioner be presented to you containing words implying that he does not take upon himself the responsibility of certifying the *fact* of death, you will record the cause of death as stated by him, adding the words ‘not certified’.

“If an informant should produce a certificate signed by a person who is not a legally qualified medical practitioner, you will insert ‘not certified’ after the cause of death.

“When, although there was a medical attendant, the informant is unable to state the cause of death, you should insert ‘unknown’, ‘not certified’.

“Whenever you ascertain that no medical man has been in attendance during the last illness of the deceased, you will insert the words ‘no medical attendant’ after the cause of death or after the word ‘unknown’, as the case may be.”

Thus far on the general subject. As to the particular case brought forward by our correspondent, we may remark that he would be rendering a service to those who are seeking to get proper legal provision made for the medical certification of causes of death, if he would inquire into the circumstances under which 26 per cent. of all the deaths registered in a given time were uncertified as to their cause, and let us know the result. He will gather from what we have already said, that the registrar is legally justified in recording the causes of death as they are stated to him by the informants, but that at the same time he is not acting up to his instructions if he make no effort to induce the informants to exhibit medical certificates of the causes of death. We need hardly say that if, as rather seems to be implied, our correspondent be in a position to show that certificates of causes of death given by him have been ignored by the registrar, he is in duty bound to bring the facts officially under the notice of the Registrar-General.

The precise extent to which the causes of death throughout the country are medically uncertified, has never, so far as we know (certainly not of late years), been accurately determined over any sufficient period of time to enable anybody to speak very confidently about the matter. To be told that 92 per cent. of all the deaths registered in England during three months were found to be properly certified as to their cause, may be interesting as a statistical fact; but we should like to see how the proportions would run over a whole year or more in every registration district. If Dr. Farr would give this information in his next Annual Report, he would supply us with means we should be glad to use of inquiring into the reasons why in certain localities there is a medical certificate for every death, while in others more than 50 per cent. of the deaths are registered without medical certificates.

MILK AS A VEHICLE OF DISEASE.

THAT milk has the power of conveying disease, and, under certain circumstances, of absorbing effluvia which make it not only distasteful, but also more or less injurious to health, and unfit for human consumption, is a matter which does not now admit of any doubt. But of the extent to which it may become a vehicle of disease, we have probably much to learn. Itself an organic fluid, and naturally tending towards fermentation and putrefaction, it appears especially liable to absorb the emanations of putrefying and other organic bodies, and also at times to take up effluvia of an inorganic nature. Thus, such articles as cheese, game, and various kinds of fruit, if left near milk, will often strongly taint it; so, also, a case has recently come within our knowledge in which milk was for several months sensibly affected, whenever placed in a dairy which had been lime-washed; and in the face of evidence such as this, it becomes easy to understand how the contagium-particles of various zymotic diseases can be taken up by this fluid. Water and air form the two media by which such poisons must, as a rule, be conveyed to it. In the various outbreaks of enteric fever which have been traced to milk, admixture with polluted water has, as a rule, been discovered; in others, however, the spread of the disease has apparently been caused through the milking of cows by persons in attendance upon the sick, and to whose hands the poison had in all probability attached itself, either directly from the bowel-discharges or indirectly by means of the patients’ linen. Thus, in the outbreak which occurred last

January in Parkhead, Glasgow, and which was reported on by Dr. J. B. Russell, the person who habitually milked the cows was also the person who nursed the enteric fever patients in the dairyman's house. In a like manner, and also by means of water, the poison of cholera would easily be transmitted through milk. Other diseases, such as scarlet fever and measles, which spread largely by means of minute fragments of desquamated skin, may, also, under certain conditions, be spread through the agency of a milk-supply, the atmosphere in this case being the medium through which the poison would most readily gain access to the milk. And we see no reason why the enteric fever poison should not also be conveyed to milk through the air; for, although the bowel-discharges which are so fertile in the poison are, when in a recent state, probably incapable of charging the air with injurious emanations, yet when they become mixed, as they often do, with decomposing matter, such as the contents of cesspools and privies, they become powerful for harm, and the contagium-particles given off from them travel with the foul effluvia and penetrate wherever they do.

But it is not by conveying diseases peculiar to the human subject, that milk is alone capable of producing injury to man. The milk of various animals who have fed on poisonous plants has, in America and elsewhere, proved poisonous if partaken by human beings. Colic, febrile symptoms, and general gastro-intestinal irritation, have been the result of drinking the milk of animals who were in a sickly condition; and special inquiry has elicited important information as to the results ensuing upon the use of milk from cows suffering from foot-and-mouth disease. Numerous observations were made on this point in various parts of Europe, when this disease prevailed as far back as 1834 and 1841, and they have on several occasions been repeated since, the latest being those embodied in a paper published in the "Twelfth Report of the Medical Officer of the Privy Council." From these observations, it appears that, though much milk from diseased cows has been consumed, apparently without producing any injurious effect, yet, when the milk has been fresh and undiluted, its free use has on several occasions been followed by symptoms of some severity, the principal of which have been derangement of the alimentary canal, together with febrile disturbance and the presence of a vesicular eruption on the mucous membrane of the mouth and tongue.

The whole subject of the dissemination of disease by means of milk is one which deserves attention; and we are glad to note the recent publication, by Dr. John Dougall, of a pamphlet containing much thoughtful matter on the relation of milk to the spread of zymotic affections. One thing, however, we have already learnt; namely, that if we would ward off a great and fruitful source of danger to health and life, dairies must henceforth be subjected to strict supervision and control, not only as regards the general sanitary conditions prevailing in and around them, but also as to the freedom from disease both of the cows producing the milk, and of all persons employed on the premises.

THE PREVENTION OF LOSS OF BLOOD IN OPERATIONS.

CONSIDERABLE interest has been excited among surgeons on the continent, and also in this country, by the description, by Professor Esmarch of Kiel, of a proceeding for preventing the loss of blood which often interferes seriously both with the performance and with the success of operations. The proceeding consists in pressing the blood out of the part to be operated on, and preventing its return until the operation is completed.

A clinical lecture of Professor Esmarch lies before us, in which he gives a graphic description of an operation in which his plan was applied with complete success. The case was one of extensive necrosis of both tibiae. While the patient was being brought under the influence of chloroform, a bandage of India-rubber webbing was applied tightly round each leg, from the toes to above the knee. Immediately above the bandage, a piece of India-rubber tubing was drawn firmly four or five times round the thigh, and its ends were secured together

by hook and chains. This being done, the elastic bandage was removed from the leg, which was found to be quite exsanguine—in fact, like the leg of a subject on the dissecting-table. The operation for removing the sequestrum was then performed. So utterly bloodless was it—so entirely free from the oozing which often requires the aid of an assistant to clean the wound before the surgeon can proceed with his operation—that Dr. Esmarch was able to dispense altogether with the aid of an assistant. In fact, his ordinary assistant, Dr. Petersen, was at the same time operating in a similar manner on the other leg of the same patient; Dr. Esmarch having decided that, as he could save the patient's blood, he would also avoid subjecting him to two operations at different times, and thus spare him the tedium of two processes of convalescence. The operation having been completed and the wounds dressed with plugs of amadou and antiseptic applications (Dr. Esmarch being apparently a follower of Professor Lister's doctrines), the caoutchouc tube was removed, and the blood allowed to re-enter the leg. There was no hæmorrhage—the whole amount of blood lost during the operation being about a teaspoonful from the bone. The subsequent progress of the case was most satisfactory; the healing process proceeded so rapidly, that the patient was enabled to leave the hospital, at his own request, on the twenty-first day after the operation.

The plan here described has been employed by Professor Esmarch in eighty-seven cases of operation, from the beginning of the present year to August 15. Of these, twenty-one were cases of amputation and disarticulation (including six amputations of the thigh, eight of the leg, and one disarticulation of the humerus); eight were cases of excision, thirteen of removal of necrosed bone, five of operation for the removal of tumours. Of the eighty-seven patients, four only died. The amputation wounds generally healed by the first intention, with scarcely any traumatic fever. In no instance have there been any indications of local disturbance of the circulation as the result of the compression.

The method described by Dr. Esmarch is obviously applicable only, as he states, to operations on the extremities, and on the penis and scrotum; in other regions of the body, its application in the manner described is obviously impossible. Yet Dr. Esmarch makes a very ingenious suggestion for its application in operations on the head, neck, or trunk, remarking at the same time that the idea is one the possibility of carrying which into practice requires to be tested by experiment. It is that, as a preliminary to the operation, the elastic tubing should be applied around one or more of the limbs, so as to retain a store of blood in them, which might be allowed to re-enter the circulation from one limb after the other, if the patient showed symptoms of being exhausted by the hæmorrhage attending the operation.

One caution he gives, and it is an important one. When infectious material is present in the limb to be operated on, the elastic bandage must not be applied, lest the poisonous matter should be drawn into the general circulation. In such cases, the limb is to be raised so as to empty it of blood as much as possible; and then the compressing ring of elastic tubing is to be applied.

The method described by Esmarch has been tested and found efficient by Professor Billroth of Vienna, Dr. Menzel of Trieste, and the surgeons of St. Thomas's Hospital in London. Its simplicity, and the successful results which have hitherto attended its application, render it worthy the attention of surgeons. In cases where the surgeon has to operate in circumstances where he cannot obtain efficient assistance, it must be of great value.

PROVIDENT DISPENSARIES.

THE Gloucester Dispensary, which has been in existence for forty-two years, was last year placed upon the provident footing; and the first Report which has since been published is now before us. It announces that during the year the dispensary "has been successfully carried on as a provident institution"; and that, out of 1,129 applications for admission, "1,001 have been accepted and become members, fairly representing, with their families, a total of about 4,000 persons entitled to

medical relief". We are particularly glad to notice that the "Committee hope that before long the suggestion of the Charity Organisation Society will be carried out, and the provident dispensary affiliated with the hospital of the Gloucester Infirmary, so that the members may be eligible, when necessary, to the hospital, and their out-patients relieved by the dispensary. The Committee believe that thereby both institutions would be protected to a considerable extent from abuses in their relief, whilst the importance of the infirmary as a centre of medical education would be increased rather than diminished."

The provinces are certainly in advance of the metropolis in the matter of provident sick societies; but there are hopeful signs which indicate that London is awaking to the necessity of establishing such institutions. We have a proof of this in the recent Report of the Hospital Sunday Fund. Those who administer this fund are obliged to take a wide view of the medical charities of the metropolis; and it is gratifying to find from the following sentences how entirely they endorse the opinions which have long been advocated by this JOURNAL.

"In considering the great question of the relation which the medical charities bear to the poor of London, and remembering that a very large number of the inhabitants of this great metropolis annually apply for gratuitous medical relief, it is scarcely possible to refrain from expressing a hope that the time is not far distant when many of these applicants may be induced to associate together to secure for themselves efficient medical help in time of need as a matter of right, rather than to be so constantly dependent on purely eleemosynary aid. The great step in this direction would appear to be to make a large number of our local dispensaries and provident dispensaries self-supporting to a great extent."

THE number of students attending the Leeds School of Medicine now is ninety-five. The new students this year are twenty-eight in number.

AN admirable photograph of the late Dr. John Murray has been published by Messrs. Fradelle and Marshall, Regent Street.

DR. HERMANN BEIGEL has just translated Dr. Marion Sims' last work on *Ovariectomy* into the German language.

PROFESSOR SIGMUND of Vienna has obtained a six months' furlough, and intends spending the winter in Italy. Professor Zeissl is spoken of as likely to continue the class for the present.

DR. MACKEY, Professor of *Materia Medica* in Queen's College, Birmingham, and well known for his valuable therapeutical inquiries, has been elected one of the physicians of the Queen's Hospital, to fill a vacancy caused by the resignation of Dr. Fleming.

THE entries at the German Universities for the year 1873-4 are 7,467; 3,904 being for the winter, and 3,563 for the summer session. The number of medical students is 2,479. The total number is 851 less than the previous year, when it was 8,318, there being a falling off of 444 in the medical entries alone.

DR. E. SYMES THOMPSON will shortly commence his Gresham Lectures at the Gresham College, Basinghall Street. Lecture I, Thursday, November 6th, "On the Climate of Europe in Prehistoric Times." Lecture II, Friday, November 7th, "On Diaphoretics." Lecture III, Saturday, November 8th, "On Diaphoretics." The lectures are free, and commence each evening at seven o'clock.

A NEW BED-LIFT.

AFTER the operations at St. Mary's Hospital on Wednesday, Mr. Bull, of Slough, exhibited an apparatus which he has devised for moving patients in bed. Five loops, about two inches wide, and constructed of the stout webbing used for girths, are passed over the body from the shoulders downwards, and through them are introduced two poles of oak or ash, kept apart by cross-bars at either end. The upper extremities of the poles being passed under the pillow, form the fulcrum on which the subsequent movements are made, whilst the patient's head retains an easy posture, and a very moderate amount of force is now

sufficient to tilt the body upwards to any requisite extent. An easy swinging motion is communicated by the loops, and much suffering thus obviated in cases of rheumatic fever and other acute affections, in which the operation of changing bedding, etc., is usually attended by great pain. Mr. Bull's idea is practical, and requires very simple materials; those of the surgical staff who were present expressed their conviction that in country practice, or where the medical man cannot readily obtain assistance, a valuable addition may thus be made to the ease with which he either partially moves his patient, or conveys him from one bed to another.

CLINICAL SOCIETY OF LONDON.

AT the meeting of the Clinical Society on Friday evening, October 24th, papers will be read by Sir W. Gull on *Anorexia Hysterica*, and on a *Cretinoid State* supervening in the Adult; and Dr. Guinier of Montpellier will show a new method of gargling the larynx, illustrating this upon himself.

THE MEDICAL SOCIETY OF LONDON.

ON Monday last, October 20, the Medical Society of London commenced its *second century* in the new premises, No. 11, Chandos Street, Cavendish Square. There was a large attendance of Fellows. The President, Dr. Habershon, opened with a short address, commenting on the past, present, and future, of the Society, which was warmly received. Dr. Richardson followed with a carefully written paper on *Organic Stricture of the Œsophagus*, being a recast of his own clinical observation of this disease. A debate then took place, in which Dr. Semple, Mr. Mason, and Mr. A. E. Durham joined. The new building proves admirably adapted to its requirements, and the society may be congratulated on making so successful and important a change.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A PUBLIC meeting was held at the Mansion House on Wednesday, at which it was resolved to continue the organisation. A subcommittee was appointed to consider the classes of dispensaries and infirmaries which have been (as they complain) cavalierly treated by the committee at the distribution of the present year's collection. The medical men who spoke were Mr. Brudenell Carter and Dr. Glover; both spoke with their accustomed ability and force.

THE GENERAL HOSPITAL, BIRMINGHAM.

THE committee appointed at the annual meeting of Governors, 1871, of the General Hospital, Birmingham, to revise the laws of that institution, have decided, by a majority of nine to two, to retain the medical staff upon the Weekly Board, or rather to make them *ex officio* members of the Committee of Management.

THE CITY LUNATIC ASYLUM.

AT the General Quarter Sessions on Saturday, the Aldermen received the report of the Committee with the estimates for the enlargement of the lunatic asylum. Mr. Alderman Besley said the expense would be £9,000, and the increased accommodation was necessary for the pauper lunatics. The report was adopted.

HOSPITAL SUNDAY.

GLOUCESTER had its first Hospital Sunday on Sunday last, when sermons were preached in all the places of worship in the city. The institutions selected for benefit were the County Infirmary, the Eye Institution, the Children's Hospital, and the Gloucester Provident Dispensary. Bishop Ellicott preached at the Cathedral in the morning, when there was a large congregation. The three largest collections made were—the Cathedral, £39; Christ Church, £41; and the Congregational Chapel, £30. The total amount collected will probably amount to rather over £300.

OVERDOSE OF MORPHIA.

MRS. MACLEOD, wife of Dr. Macleod, Surgeon-Major in the Madras Army and a Fellow of the Royal College of Surgeons, has died in Car-

lisle under very painful circumstances. Dr. Macleod's eldest son has lately been ill of typhoid fever. Mrs. Macleod sat up with him for three nights this week, and, when opportunity at length offered of getting some repose, she could not sleep. Her husband prescribed a dose of *medicate* of morphia, and having obtained a bottle from a druggist, administered a grain in a glass of port wine on Wednesday evening. That dose did not, however, produce sleep, and Dr. Macleod repeated the dose at intervals between four o'clock and seven o'clock. At the latter hour, Mrs. Macleod had fallen into a comatose state so alarming that Dr. Macleod sought additional medical aid, but all efforts to restore the patient were unsuccessful, and she died about ten o'clock. An inquest has been opened, but was adjourned in order that a *post mortem* examination might be made.

THE ROYAL ORTHOPÆDIC HOSPITAL.

PERSONS with short memories may begin to forget the Royal Orthopædic Hospital scandal, and the unrepaired insult and injury inflicted by the governors on their two oldest and most distinguished medical officers. No doubt it is hoped by the delinquent persons that time will wipe away quickly the memory of whatever they may have done, and that by a Fabian policy of delay they may effect that triumph which the sense of justice of the profession denied to them while the facts were borne in mind. So disgraceful did it seem to medical men of character and repute to take office violently vacated by an act of gross injustice and insult, and by the sudden creation of a bundle of faggot-voters, that the hitherto coveted surgical appointments to this hospital were rejected by all to whom they were offered: nor could any young man of suitable position, however needy, be found who would accept what the governors had converted into a post of dishonour. So long as this reproach is not purged away, the governors cannot expect to find any young surgeon who will consent to share the disrepute which they have inflicted on the officers in their hospital. It is a matter of regret that Mr. Brodhurst, who was openly charged at the time with complicity in the creation of the faggot-voters who cleared his colleagues from his path and made him at a stroke senior surgeon, should retain that office. Mr. Brodhurst is connected with St. George's Hospital, an institution of the highest character and repute; and it is of bad professional influence that he should also retain an office, which is at present so little creditable from this point of professional ethics, as that of senior surgeon to the Royal Orthopædic Hospital. Surely some *modus vivendi* can be devised. It must be possible by some concessions in fact, and expression of regret, to repair the gross wrong inflicted. It is a public question, and the governors of the Orthopædic Hospital must reflect that they have already declared that the work of the hospital required an increase of the staff to six surgical officers, while the result of their present attitude is to reduce it to two, and voluntarily to deprive the hospital of services necessary for the sick poor, which would be at once at their command, were suitable means taken to efface the recollection and remove the consequences of proceedings which in cool blood no one would, we think, attempt to justify.

INDIVIDUALISM.

DR. CURNOW'S remarks on this subject, in his address at the opening of King's College Medical Society, are worthy of ample consideration. They are especially notable as the opinions of a man who has himself successfully passed through some severe ordeals by competition. We do not at all participate in his fear that the publication of pass and pluck lists will tend to reduce the teaching of the best lecturers to a dead level. It seems, indeed, to be founded upon some erroneous assumptions. The pass examinations of the College of Surgeons are minimum tests. The increased incentive to lecturers to reduce the percentage of men plucked at this examination, therefore, can only have a healthy effect. It will no doubt compel lecturers who have affected a lofty disdain of the minimum requirements of examiners, and the consequent necessities of students, to come down from the pillars which they have erected for themselves in the wilderness, and to sacrifice so much of

their individualism as to give the students that basis of educational training which they bargained to have when they paid their fees; but it will still leave them free scope for a very considerable individual development. The pass and pluck lists of the Oxford and Cambridge Colleges are perfectly well known; and the university examinations there have not yet reduced the higher teaching to a dead level. The highly marked differences of mental idiosyncrasy which students and lecturers alike display, do not, we think, run any danger of being extinguished by any existing system of examinations—certainly not by the illumination of the dial which indicates how far the teachers in the schools have succeeded or failed in the duty which they have undertaken of preparing students for the examinations which lie before them. As to competition for the higher places, it may be observed that it has succeeded admirably in bringing the best men to the front in the Paris hospitals; and that, if it were adopted here, it would relieve our hospitals and schools from many a living reproach. Differing as we do from Dr. Curnow's views on this subject, we may yet point to his address as one which is singularly spirited and suggestive, and which we shall be glad to have an opportunity of perusing *in extenso*.

THE LINCOLN HOSPITAL.

WE have received a pamphlet by Mr. Sympton, Surgeon to the Lincoln County Hospital, relative to the necessity for reconstructing that hospital. The defects of the existing building are now admitted by all parties. The question is, Shall a new building be erected, or shall the old one be patched up? Mr. Holmes, one of the best English authorities on the subject, speaking from personal observation and a wide experience, is of opinion that it cannot be advantageously patched, but should be wholly replaced by a new building on improved principles. That is Mr. Sympton's opinion also. The whole gist of modern observation is to ascribe a prime importance to hospital construction and hygienic care of patients whose misfortune it is to need admission into hospital wards. The governors of the Lincoln Hospital will incur a grave responsibility if they slight the opinions we have quoted and others which Mr. Sympton adduces. They are from men of the highest competence; to provide a perfect building is the first and most important of the duties of the governors of a public hospital.

THE CHOLERA AT NAPLES.

THE *Times* correspondent states that cholera has not yet disappeared at Naples, and quarantine at Nisida and fumigation at every landing place are in full force. The cases for the last four days have been 14, 9, 10, 14, while the deaths have been 5, 9, 8, 13. During the week which closed yesterday, there were 96 cases and 77 deaths. From this great fatality it is evident that the malady is of a severe type, and if it have not spread as widely and as rapidly as might have been expected, it must be attributed to the sanitary measures which have been so promptly adopted, and to the energy and unwearied activity of the authorities. From the prefect downwards, every one has done his duty. Medical men, however, frequently have great obstacles to contend with in the absurd prejudices and gross credulity of the people, who, while refusing to take the medicines offered them, swallow the most ridiculous reports. This credulous tendency is now in full operation, and, were it not lamentable to listen to them, one would be disposed to laugh at the absurdities daily propagated *apropos* of poison. A few cases of cholera have appeared in the Province of Caserta, six having been registered up to the 1st of October and two deaths; but the coast of the Bay and the Islands are "clean." The weather continues to be brilliant, and not a cloudlet holds out the promise of rain. But few foreigners have arrived, and the autumnal invasion will be delayed, perhaps, this year.

THE CHOLERA IN GERMANY.

"THE first day free from cholera" is the heading in reference to this subject on the 14th inst. in the Berlin papers. From the 6th to the 9th of October, including hospital and private cases, only 37 new cases occurred, the diminution being attributed to the sanitary notices distributed to every

house, disinfection and the most stringent regulations being observed under pain of punishment. Had this been done two months ago, the epidemic might have been more limited; still, better late than never. From the 8th to the 15th of October inclusive, 72 new cases occurred, with 47 deaths, the majority of which took place in the lying-in hospital, having been brought there from the foundling hospital. In Berlin, since the commencement of the epidemic, 938 cases have occurred, of which only 223 recovered, 628 being fatal, 87 cases being still under treatment.

HONOUR TO WHOM HONOUR IS DUE.

A CORRESPONDENT writes:—In the Navy List for April 1873 the name of Dr. H. N. Maclaurin, Assistant-Surgeon, appeared in the obituary. In the Navy List for this month appears the following correction. "In the Navy List for April 1873 the name of Dr. H. N. Maclaurin was accidentally placed among the deaths; his name should have been removed the list." This is as grievous an error as the former, as without any further explanation a most unjust stigma lies upon this gentleman. The facts of the case are these. Dr. Maclaurin had served long and meritoriously as an assistant-surgeon, and latterly was in a ship on the Australian station; whilst there, his high qualifications and literary attainments endeared him to many with whom he became acquainted, and when the ship was paid off in England, he voluntarily resigned his commission to return to Australia to accept a lucrative appointment, and he is now in the enjoyment of a first-class practice. In justice to this gentleman, these facts should be explained; this uncourteous treatment of a highly qualified late medical officer will probably be remembered by candidates for commissions in the naval medical service.

DEAF AND DUMB.

DASENT estimates that in Europe alone there are 200,000 afflicted in this way. In mountainous regions, as in Switzerland and Savoy, the proportion is very great. In the Berne Canton, there is one to every 195 inhabitants; in Scotland, one to 196. In Great Britain, however, the proportion is only one in 1,660; in Ireland, one in 1,380. At the census in 1851, there were 12,553 deaf and dumb, 6,884 male, 5,669 female. They have increased in number during the last twenty years, the former still heading the list.

PHARMACEUTICAL ERRORS.

A MARSEILLES chemist has been condemned to a fine of 100 francs and damages of 200 francs for delivering a mischievously excessive dose of arseniate of soda (beyond what the physician had prescribed). The patient showed symptoms of arsenical poisoning. The apprentice who prepared the draught was acquitted.

ACCIPERE DUM DOLET.

THE daily work of a medical man borders constantly on the exercise of charity. It must, however, we think, be left with him to determine when and where he will voluntarily exercise charity. We protest against the doctrine that a medical man is liable to claims for assistance made, not *in forma pauperis*, nor in virtue of any legal right; and that his subsequent claim for payment should be legally rejected on the ground of the poverty of the person invoking his aid. We make the protest in consequence of a conversation reported between Mr. Furner, Judge of the Chichester County Court, and Mr. Elliott, surgeon of the town, in which the former refused a summons on the ground of the poor wages of the labourer who was to be proceeded against. It is, we hope and believe, rarely if ever charged against members of our profession, that they refuse aid to the necessitous. We trust it never will be otherwise. Merciful helpfulness to his fellow-creatures is the crown and heritage of the physician. A very ample tribute is paid to humanity by the traditions and the practice of our profession. Were they to lay themselves open to the decisions of Mr. Furner—that, "with the price of provisions as they are", it is absurd "to give credit" to the sick, and absurd to enforce payment—a very much heavier than the present bur-

den must be laid upon the state. His Honour's advice to Mr. Elliott, "that he should not give credit," is a free translation of the old Latin maxim. It would be convenient to medical men always to enforce it; but it would be hard on a great many people if a sharp pain must needs wait upon a full purse before it could seek relief otherwise than in pauper fashion.

MEDICAL OFFICERS' DUTY.

ZEALOUS medical officers, stationed near London, were formerly in the habit of appreciating very highly the facilities thus afforded of keeping *au courant* with professional progress. Many of them attended hospital practice with as much regularity as circumstances would permit, and thus found most satisfactory relief from the tedium of barrack life and the routine of monotonous duties. It has lately been remarked, however, that these welcome visitors have been less frequently seen among us; we miss the familiar faces from wards and operating theatres, and wonder whether their disappearance is merely accidental, or whether any actual impediment has been thrown in the way of these little trips to town. The explanation is not difficult to find, and is briefly as follows. Surgeons and Surgeons-Major, having been deprived by the recent warrant of their regimental position, are now placed precisely on the same footing, regarding leave, with staff and other departmental officers, and are, like them, strictly limited to sixty-one days *per annum*. Every period of twenty-four hours, over and above this, during which they are absent from duty by permission of their superiors, is either rigidly deducted from the yearly total, or made up by loss of pay and allowances; and it, therefore, comes to this, that a medical officer, desiring to witness an operation in town, must either sacrifice a day's leave or pay a heavy pecuniary fine for his professional zeal. It may be argued, on the other hand, that staff officers are placed under the same régime, but we must recollect that they have been specially selected for peculiar and responsible duties, and that, in addition to the prestige which such an exceptional position entails, they receive remuneration over and above their regimental pay. It is also significant to note that it is only this extra sum which is withheld as a stoppage for an extra day's leave, whereas the unfortunate doctor who belongs to the staff only in name is mulcted under the same circumstances of every farthing of his daily subsistence. Now, it is well-known that at all large camps, Saturday is a general holiday, and that a considerable proportion of regimental officers are permitted to absent themselves until Sunday night by simply sending in their names to the Adjutant or Brigade-Major. We have seen that the Surgeon can claim no such indulgence as this; and that, if he go away, it must either be at his own risk, or at very heavy expense. At Aldershot, for instance, it is impossible for a conscientious medical man to complete his work sufficiently early to arrive in London within hospital hours, and we would strongly urge upon the authorities the propriety of recognising short periods of leave for strictly professional purposes. Saturday might fairly be devoted to this useful end, and a roster of medical officers would provide everyone with the opportunity of keeping his interests fresh by contact with his professional brethren. The rigid application of hard and fast rules recently introduced has caused much dissatisfaction throughout the service, and it seems hardly judicious to encourage this most unnecessary addition to the numerous discomforts which are rapidly impairing the popularity of the Army Medical Department.

AMERICAN COMMENTS ON THE LAST ANNUAL MEETING.

OUR late annual meeting has been the subject of comment and eulogistic notices in the American not less than the European medical press. It may be of interest to note that it has attracted further the attention of the political press. The *World*, a leading democratic paper in New York, publishes a very complimentary and interesting report of the meeting, and in an article referring to it "as the largest and most brilliant gathering of professional men ever assembled," proceeds thus: "Noting all this, we are tempted to wonder why the rela-

tions between the medical profession and the public are so different in our own country. We, too, have our American Medical Association, holding its annual meetings in the principal cities of the Union in rotation; but beyond a passing notice in local papers its proceedings enlist little, if any, attention outside of strictly professional circles, and even in these no overwhelming interest is aroused. One reason of this is, perhaps, that in medicine, as in every other pursuit in America, the business element preponderates. Of the really eminent physicians whose names grace the rolls of the American Medical Association, very few will even temporarily relinquish a lucrative daily practice to attend its distant meetings, and those who are convened seem usually more inclined to discuss medical politics than medical science. Year after year the time has been frittered away in squabbles over the pecuniary underbidding of competing rural medical schools; in angry disputes whether this or that college or society were entitled to representation; whether members should be permitted to consult with female physicians or those of African descent, and in other frivolous quarrels, until the intellectual objects of the organisation have been almost lost from sight and very few contributions have been made to the advancement of science. In Great Britain, on the contrary, the acknowledged leaders of professional thought give much time to the preparation of papers, many of which embody the results of important original research, and nearly all of which possess an interest for every reader of culture. In a word, professional ambition and scientific enthusiasm maintain a successful rivalry with *£ s. d.* in the British mind, whilst the American who has made for himself a sufficient reputation to ensure a profitable practice is too apt to relinquish further unremunerative labour. Medicine in the United States holds within its ranks many men of as great ability and attainments as can be found abroad; with these it rests, through generous emulation, to elevate the character of the entire profession, and to render the American Medical Association a source of as much national pride as its British prototype." Thus the universal voice of the foreign press notes the reports of this meeting as a notable event in professional history, and one tending to elevate the profession in public estimation throughout the world. We may, while congratulating ourselves on what has been achieved, with advantage resolve more fully to deserve all the compliments which the meeting has evoked from foreign spectators. It is not quite the fact that all the acknowledged metropolitan leaders of the profession thought it right to make sacrifices to further the success of the meeting. Many did so; they made, indeed, every kind of sacrifice, most cheerfully, generously, and unostentatiously. Their efforts will always be gratefully remembered. There are others who did not think it worth while to postpone their ordinary holiday for a few days to take part in this great professional festival, or even to express regret at being prevented from doing so; and this is much to be regretted, and will also not easily be forgotten.

IRELAND.

DR. WILLIAM MOORE has been appointed by the Board of the University of Dublin an Examiner in the Practice of Medicine to the Conjoint Examining Body.

AT a recent meeting of the Guardians of Macroom Union, Dr. Godfrey, who has held the post of medical officer to the Clonmoyle Dispensary District for the past fifty-four years, was unanimously granted *£93 : 1 : 4 per annum* as a retiring pension.

THE medical officers of the Adare, Castletown, and Croom Dispensaries, Limerick, having memorialised the guardians for an increase of their salaries, have had *£50 a-year* added to each. We may remark that the only dissident to this arrangement was, strange to say, a medical practitioner! The salary of Dr. Pelly, medical officer of Eyrecourt Dispensary, has also been increased from *£100* to *£120*, and Dr. Blackton's from *£33 : 0 : 8* to *£40 per annum*.

MEDIAN LITHOTOMY: FOREIGN BODY REMOVED.

MR. STOKES, of the Richmond Hospital, has lately published a case in which lithotomy was performed in order to remove an entire gum elastic catheter from the bladder. It seems that the patient was in the habit of passing an instrument himself, but during a fit of intoxication he allowed it to pass up into the bladder.

QUEEN'S UNIVERSITY IN IRELAND.

THE annual ceremonial of conferring the degrees to those successful at the recent examinations took place in St. Patrick's Hall, Dublin Castle, on the 16th instant. During the past year, 474 candidates were examined, of whom 334 came up to the standard required. Since the University has been established, twenty-three years ago, it has conferred the degree of Bachelor of Arts upon 795 candidates, the degree of Doctor in Medicine upon 635, and the degree of Master in Surgery upon 250 candidates.

ROYAL COLLEGE OF SURGEONS.

THE usual quarterly examination for the year for students for the first half for the license in surgery has been omitted this month, and there will be no examination until December next. The reason generally assigned for this change, is that dissections on the subject have lately been added to the usual course, and it was thought advisable by the Council that intending candidates should have an additional couple of months to give them time to make up that portion of the examination in a practical manner.—At the Preliminary Examination in Arts, held on the 15th and 16th instant, 79 candidates presented themselves, of whom 72 received certificates.

RICHMOND HOSPITAL, DUBLIN.

THE two surgical vacancies in this hospital were filled up last week by the appointment of Mr. Thompson, house-surgeon, and a Mr. Stoker. The result was perfectly unexpected, and has created considerable dissatisfaction among the medical profession in Dublin. The candidates were thirteen in number, and among them comprised three lecturers on surgery, whilst the gentlemen appointed were not even Fellows of the College of Surgeons. It has been mentioned that, as the Governors considered that Messrs. Adams and Smith were much too old to remain longer as visiting surgeons, the more youthful the candidates the better would it be for the hospital. Such reasoning is absurd; but it is stated that interest rather than merit ruled the final decision—a state of things highly detrimental to the interests of a public institution.

COLLEGE OF PHYSICIANS.

ON St. Luke's Day, the 18th instant, an election for Fellows took place, when Drs. Robert Cryan, J. Hawtrey Benson, John W. Moore, and George F. Duffey were selected from among the candidates. The voting was open, the ballot which was previously the rule for elections in this College having proved objectionable. On the same day the following office-bearers were elected for the ensuing year:—*President*: James Foulis Duncan; *Vice-President*: Robert D. Lyons; *Censors*: Henry Kennedy, W. B. Jennings, Walter G. Smith; *Registrar*: J. Magee Finny; *Treasurer*: Aquilla Smith; *Examiners in Midwifery*: Lombe Athill, John Ringland; *Professor of Forensic Medicine*: Robert Travers; *Representative on the General Medical Council*: Aquilla Smith.

INCREASE OF LUNACY IN IRELAND.

FROM the report of the Inspector-General of Lunatic Asylums in Ireland, issued on Tuesday, it would appear that lunacy is on the increase in this country. The total number of the insane is 18,327, being an increase of 150, as compared with 1871. 1,068 lunatics were discharged cured, and the results of the treatment of the insane in the district asylums is described as satisfactory as regards the amount of cures and the paucity of deaths in these institutions, which present a favourable contrast with the same conditional affairs in other countries.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC INSTRUMENTS, AND RECENT IMPROVEMENTS IN THEIR APPLICATION:

WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE MEDICAL PRACTITIONER.

V.

Faradic or Induction Machines—Stöhrer's, Krüger and Hirschmann's, Mayer and Meltzer's, Weiss's and Gaiffé's Instruments.—*The Rheostat*.—*Conducting Wires and Electrodes*.

WE now proceed to describe the faradic or induction machines which are at the present time principally employed. There is, however, such an *embarras de richesses* as far as these instruments are concerned, that we can only select some of the most prominent amongst them. There are, indeed, few instrument-makers of any enterprise now-a-days who do not construct these handy little machines, for which, on account of their cheapness and portability, there is a very large demand both in the profession and in the public. Unfortunately, the sphere of action of these instruments is far more limited than that of the more costly and bulky constant batteries which we have already considered.

The most popular and, on the whole, the best induction-machine is Stöhrer's, who has utilised for medical practice the principle of Du Bois-Reymond's "sledge-apparatus", which is generally used for electro-physiological experiments.

a. *Stöhrer's one-celled Volta-Faradic Machine* has a battery of zinc and carbon (Bunsen's pair) charged with chromic and sulphuric acids. There is no porous vase, but a carbon cylinder, which is closed by a glass stopper, and contains in its interior from ten to twelve minims of a concentrated solution of chromic acid in water, and is surrounded by a zinc cylinder contained in a vessel of glass, which receives diluted sulphuric acid in the proportion of 1 to 6. (Fig. 21.) The glass vessel

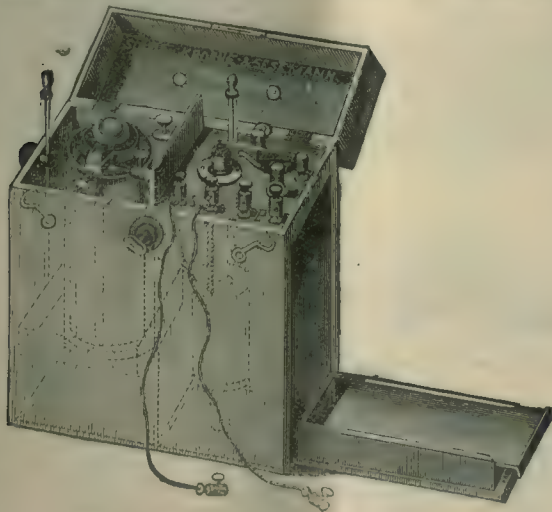


Fig. 21.—Stöhrer's Single-celled Induction Machine.

is placed on a small saucer of porcelain connected with a metal rod, by means of which it may be more or less raised, so to bring the different parts of the battery into contact with each other. When freshly charged, it is best to raise the glass only just so far as to induce an effect, but not to the utmost limit; this having the advantage of keeping a portion of the zinc free from the action of the sulphuric acid. There is no fear of spilling the liquid if the machine be carried about, because it fills up only the lower third of the battery, and does not touch the plates except when in action.

The zinc and carbon are connected by means of clamps with the primary coil and the contact-breaker. Both primary and secondary

coils are contained in the interior of the box; and the secondary may be drawn over the primary by pulling up a graduated rod. The hammer consists of an oblong piece of iron, which is so fixed to a spring as to allow easy motion in two opposite directions. As soon as the battery-current traverses the coil, the soft iron of the latter is rendered magnetic, and attracts the hammer. When the parts are in this position, the conduction is interrupted, inasmuch as a platinum-pointed screw on the other side, which is connected with the coil, becomes separated from the hammer. The magnetism of the electro-magnet is therefore lost, and the latter no longer attracts the hammer, which then again touches the platinum-pointed screw, and re-establishes the communication between the battery-current and the coil. Fresh magnetism and fresh attraction are the result, followed again by cessation of conduction as well as of magnetism. This play of the hammer repeats itself at regular intervals. The rate of succession of the instantaneous currents thus produced is regulated by a brass spring on the other side of the hammer, which is furnished with a screw, by means of which the hammer may be pressed more or less forcibly against the platinum-pointed screw on the opposite side. If the brass spring be forced, the play of the hammer becomes retarded; if the spring be relaxed, the hammer beats more rapidly; and if the spring be entirely screwed off, the intermittences are most rapid. The pitch of the musical sound and the intensity of the physiological action are directly proportionate to these changes.

Stöhrer's hammer is so well made that the instrument may be used a long time before any oxidation of the platinum by the electric spark is caused. A marked degree of oxidation would interfere with the play of the hammer; and it may, therefore, be occasionally necessary to remove any oxide which may have been formed. There is, however, another ingenious contrivance connected with the hammer, in order to prevent the effects of oxidation. This consists of a small piece of brass, coated with platinum, and soldered to that portion of the soft iron which is opposite to the platinum-pointed screw. The brass piece is pierced in its centre, so that a pin or a metal rod may be inserted into it and give it a turn, so as to bring a different portion of the disc in contact with the platinum-pointed screw, whereby these parts are rendered almost permanently useful.

There are four studs for receiving the conducting wires. The two on the left side are marked P, and give the primary current or that generated in the short and thick wire; and the two on the right side are marked S, giving the secondary current, or that generated in the long and fine wire. The graduation of the tension of both currents is effected, first, by the greater or lesser immersion of the battery-plates into the exciting liquid; secondly, by altering the play of the hammer as described above; and thirdly, by raising or depressing the stem connected with the outer coil of wires. The primary current may also be weakened by connecting the secondary studs with a piece of bent iron, and thus raising the external coil. An inner chamber contains the electrodes and conducting wires.

b. *Stöhrer's double-celled volta-faradic machine* is much larger than the one-celled, and most carefully constructed. (Fig. 22.) The battery is the same as in the smaller instruments, and can be used either by connecting the zinc of one with the carbon of the other cell, or by connecting the two zincs and the two carbons amongst each other, so as to produce a single pair of large surface. The hammer is somewhat different, inasmuch as the platinum-pointed screw is situated in the hammer itself, while the platinum disc is movably fixed to a spring, the action of which is regulated by a screw behind. The play of the hammer may be modified by altering the position of either of the screws. The solidity and beauty of construction of these parts are beyond praise.

P and S are the same as in the smaller instruments. The graduation of the two currents is likewise effected in the same manner; but, for weakening the primary current, a further contrivance is added, which consists of a brass tube in the interior of the box, which covers the primary coil. This tube may be drawn up or pushed down by a small graduated rod, which is seen to the left of the core of iron wire. It is used for faradisation of the face, tongue, and other parts which possess an exquisite sensibility, and where a powerful current cannot be administered. The price of the single-celled induction-machine is £4 : 4, and that of the double-celled £6 : 10. They may be procured in London from Messrs. Krohne and Sesemann, Duke Street, Manchester Square.

Messrs. Krüger and Hirschmann of Berlin have constructed a nice portable induction-apparatus, which is nursed by Leclanché's battery, and is likewise constantly ready for action. The play of the hammer commences as soon as a stopper is inserted into a brass block fitted for its reception. There is only one pair of studs for inserting the conducting wires; but, by inserting stoppers in different ways, these studs will alternately give the primary and secondary current. The hammer is constructed in a somewhat different manner from Stöhrer's, but like-

wise allows slow and rapid intermittences. Both currents are easily graduated, as far as intensity is concerned. The same manufacturers construct a smaller instrument, nursed by one cell of Leclanché's. The

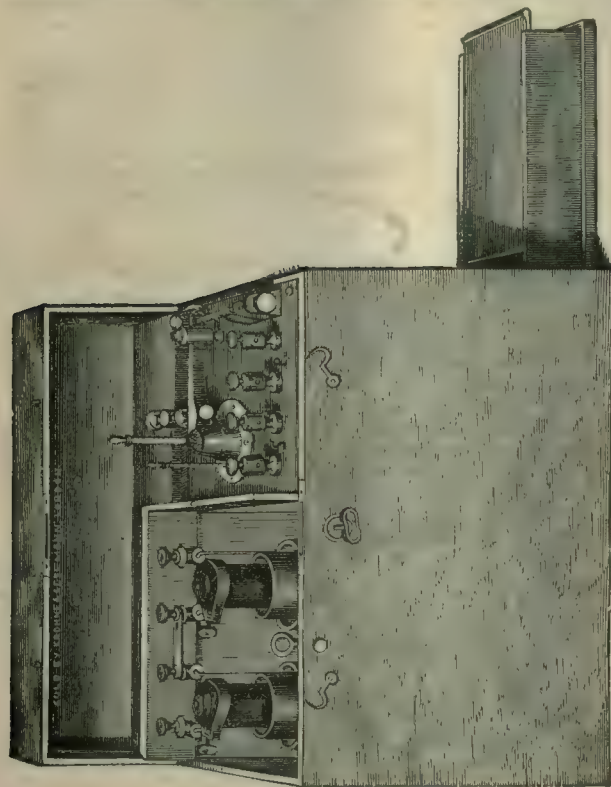


Fig. 22. — Stübler's Double-celled Induction Machine.

price of the large apparatus is £3:15, and that of the smaller £3. Electrodes and conducting wires are contained in an inner chamber.

Messrs. Mayer and Meltzer's induction-machine (Fig. 23) is enclosed

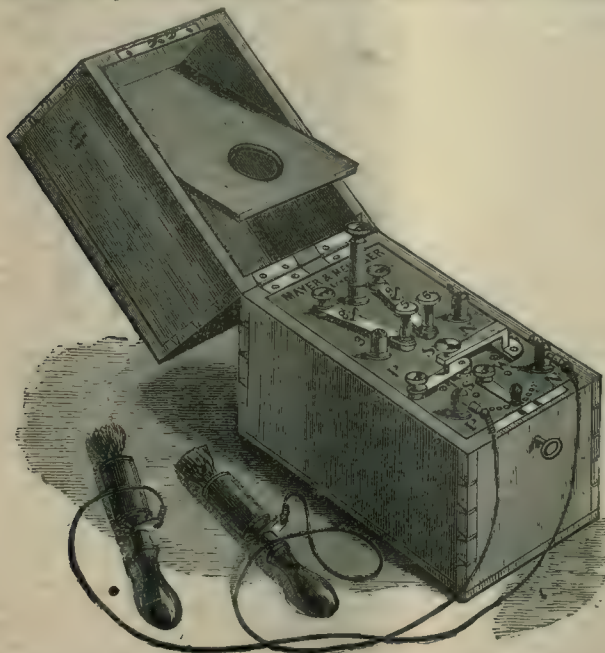


Fig. 23. — Mayer and Meltzer's Faradic Apparatus.

in a light mahogany box, six inches high, three inches and a half deep,

and six inches wide. The instrument, therefore, occupies only a small compass, and nevertheless gives all the different graduations of power which may be required. The battery is one of zinc and carbon, nursed by a solution of two ounces of bichromate of potash and one ounce of sulphuric acid in nineteen ounces of water. The primary and secondary current may be used without changing the position of the conducting wire, which is a great convenience. The power of the current is increased or diminished by moving a dial either to the right or to the left side. The price is £4:4.

Weiss's faradic machine is, like everything which issues from that firm, well-made. (Fig. 24). The battery is one of carbon and zinc (K),

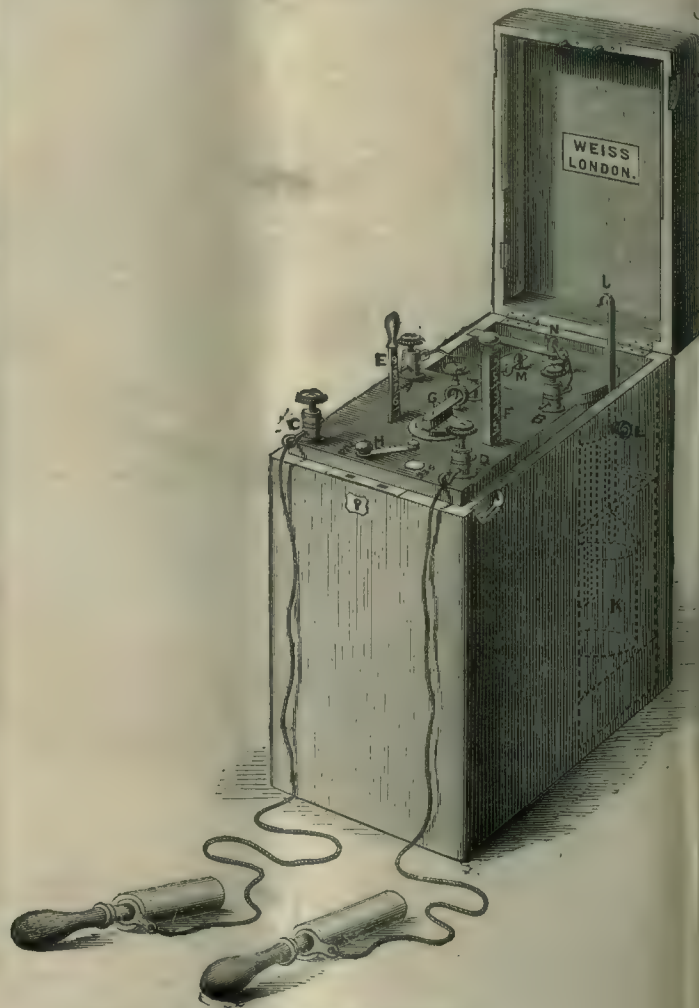


Fig. 24. — Weiss's Faradic Apparatus.

and is charged with a solution of bichromate of potash in diluted sulphuric acid; *j* is the handle by which the charge is pulled up when the instrument is intended for use, and *L* the screw by which it is fixed in that position. When the poles of the battery *N M* are connected with those of the induction coil *A B*, the hammer *G* begins its musical performance. *C* and *D* are the pole-studs of the induced current, and connected with the conducting wires, the other ends of which are fixed to the electrodes. If the primary current be required, the commutator *H* is turned on to *pri*; and, if the secondary be wanted, the position is reversed to *sec*. *E* is the regulator of the primary, and *F* that of the secondary current. The instrument is not heavy, and can be carried about without fear of spilling the liquid. The price is £4 10s.

Gaiffe's chloride of silver faradic instrument is one of the neatest and handiest induction machines ever made. (Fig. 25.) *A B C D* are the four corners of the box in which the apparatus is contained, and which has the shape of a small volume in post 8vo. The box is divided into two partitions by the plate *E F*; one of them contains the battery, the other the coil. *P* is the hammer, *M* the coil, *1* and *2* the primary, *3*

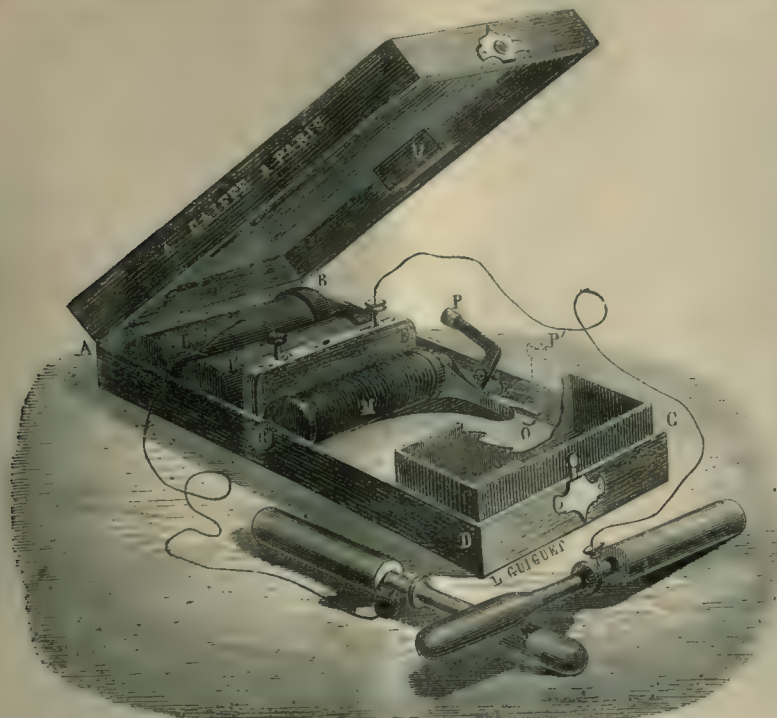


Fig. 25.—Gaiffe's Chloride of Silver Induction Machine.



Fig. 26.—Gaiffe's Sulphate of Mercury Induction Machine.

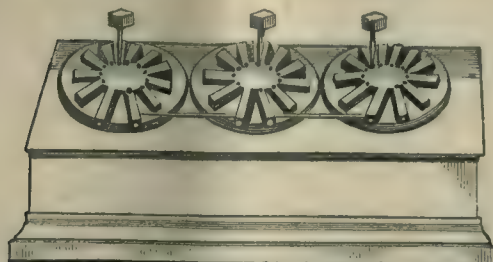


Fig. 27.—Siemens's Rheostat.

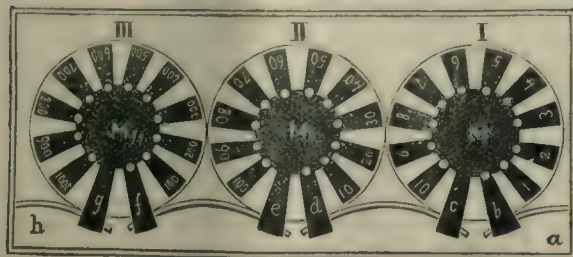


Fig. 28.—Prenner's Rheostat.

and 3 the secondary current; $L L'$ are the two pairs of the chloride of silver battery. The only drawback to this pretty instrument used to be that the battery began to leak after a time; but this has now been prevented by employing a smaller quantity of liquid.

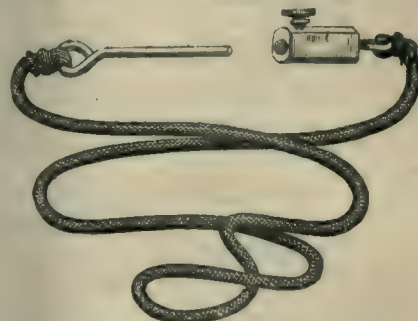


Fig. 29.—Conducting Wire, with Rod and Clamp.

Gaiffe's bisulphate of mercury apparatus (Fig. 26) would be perfect for out-door practice, if the battery L were not somewhat uncertain in its action. It has the form of a book in post 8vo, and may be carried in the pocket. M is the coil, Q the hammer, O its screw,



Fig. 30

and K a tube containing a provision of the bisulphate. The electrodes $N T$ are contained in the box. (Fig. 26.)

We now come to a description of the accessory instruments used in electro-therapeutical applications, and have here first to consider the *rheostat*, or current-regulator, which was invented by Professor Wheatstone, and introduced into medical practice by Dr. Brenner, of St. Petersburg. A variety

of such instruments has been constructed, but they all have one feature in common, which is, that a conducting wire is introduced into the circuit, the length of which may be varied at pleasure, without making any alteration in the rest of the circuit. (Figs. 27 and 28.) The rheostat principally used in medicine is one which is made by Messrs. Siemens, and consists of a number of coils of wire, the length of which corresponds to a certain number of Siemens's units of resistance. A Siemens's unit is equivalent to the resistance of a column of mercury which has a transverse section of one square millimetre, and is one metre long, at 32 deg. Fahr. It may contain a variable number of units. Brenner, who was the first to use the rheostat in medicine, employs one of 2100 units; but one with 1110 is sufficient for most scientific and practical purposes. - The metal



Fig. 3.

blocks, 1, 2, 3, etc., 10, 20, 30, etc., and 100, 200, 300, etc., are connected with insulated coils of wire, the length of which corresponds to the units 1, 2, 3, etc., 10, 20, 30, etc., and 100, 200, 300, etc. *M*, *M'*, and *M''* are brass plates, which are furnished with semicircular incisions for receiving a stopper, by means of which the blocks are connected with the centre-piece, and with the pieces *c*, *e*, and *g*, which can be interpolated into the circuit. If the three stoppers are inserted into the blocks *b*, *d*, and *f*, there is no resistance at all in the rheostat, as the current travels from *a* to *b*, then through the stopper to *M*, and through *c* to *d*; from *d* it goes to *M'* and *e*; from *e* to *f*, *M''* and *g*; at *h* the current leaves the instrument altogether. With this arrangement the current does not encounter any resistance in the rheostat, and therefore goes

altogether through it, and not at all through the body; for, when the current has two ways open to it, the intensity of the current in the several parts of the circuit is inversely proportional to the resistance. The greater the resistance in the rheostat, the greater is the intensity of the current going through the body; the smaller the resistance in the rheostat, the smaller is the intensity of the current going through the patient. If now the stoppers are inserted at 1 in *M*, 20 in *M'*, and 300



Fig. 3a.

in *M''*, the current which enters at *a* has to proceed through the resistance *L* to *M*; thence it passes from *c* to *d*, and encounters fresh resistance, as it has to reach *M'* through the coils 10 and 20; from *e* it goes to *f*; but, before reaching *M''*, it must again pass through the coils 100, 200, 300, and then at last it may leave the rheostat by *g* and *h*. The result is, that the current has to overcome the resistance of 321 Siemens's units; so that a large portion of it goes preferably through the body. If the maximum of resistance be interpolated, only a very small portion of the current will go through the rheostat, and by far the largest part then travels through the body. If the stoppers are entirely removed, the conduction is interrupted, and not a fraction of the current may then go through the rheostat.

No other instrument but the rheostat can yield such a variety of graduations, or, as we would prefer to call it, *shades* of the intensity of the current. It is not generally required for peripheral applications of the continuous current; but, where the latter is to be used in the dia-

gnosis or treatment of diseases of the nervous centres, and of the organs of special sense, the rheostat becomes an indispensable contrivance, without which the application of electricity ceases to be scientific.

Other essential instruments are the *conducting wires*, or *rheophores*, and the *electrodes* (directors, conductors, excitors). Conducting wires should be made of flexible copper thread, two or three yards long, and carefully insulated with silk or cotton. (Fig. 29.) We always employ differently coloured conducting wires for the two poles, in order to be able to tell at once the direction of the current without looking at the battery. This saves a great deal of trouble in case of the wires becoming entangled.

The electrodes most commonly used are metallic cups fixed on insulating handles of wood, and furnished with a screw or clamp for connection with the conducting wires. Carbon-points covered with moistened sponge or chamois leather are likewise much employed. Messrs. Weiss have lately constructed for us electrodes, the cups and stems of which are made of vulcanite, and the inside of which is furnished with a thick wire covered with platinum. These have the great advantage of being always scrupulously clean, which is not the case where brass and wood are employed.

Fig. 30 shows a wire-brush for faradisation of the skin, an ivory speculum with metallic conductor for the ear, and a handle with interrupter, on which can be screwed other directors. Fig. 31 shows another



Fig. 33.

set of conductors, viz., a sponge-holder with a somewhat large diameter, another in the form of a metal disc covered with chamois leather, and two smaller curved directors equally covered. Fig. 32 shows a simple conductor for the womb, a urethral conductor, and a double conductor for the uterus, consisting of two curved insulated branches, with two metal plates on their extremities, movable in one handle, with regulator at the end of the handle. Fig. 33 shows Dr. Althaus's *serres-fines* conductor for the electrolysis of tumours.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—Mr. W. Whalley, M.R.C.S., has been elected President of the Society for the year 1873-74, *vice* J. H. Bell, M.D., whose term of office has expired. Mr. J. Mossop, L.R.C.P.Ed., etc., has been re-elected as Treasurer, Dr. Goyder as Secretary, and Drs. Lee and Rabagliati as Pathologists for the ensuing year. The Society yearly increases in numbers and usefulness.

DR. W. H. STONE AND "OUR MEDICAL COLUMN".

IN the *English Mechanic* of last week, we find that Dr. W. H. Stone, M.A., M.D., "Fellow of the Royal College of Physicians of London, and Senior Physician to St. Thomas's Hospital," continues and justifies the course of editing "Our Medical Column" in that journal. He discusses the subject for the edification of his readers there; he proposes certain modifications, and informs them that he does not feel bound by the rules of the clique or class to which he belongs. It seems to us superfluous to discuss this matter further. We have felt it our duty to express what we believe to be the rules of conduct which are incumbent on members of the medical profession in such respects; and we have received from numerous and highly influential quarters assurance that the interpretation of those rules which we have given is that which commands professional approval. It appears to us that the matter has reached a stage in which it calls for official action. Silence on the part of the staff of St. Thomas's Hospital and of the College of Physicians of London will be liable to be interpreted as implying approval of the course which their fellow and colleague Dr. W. H. Stone is publicly pursuing and justifying. We are far from desiring to prejudice or influence their judgment in the matter. The materials for a decision lie in the pages of the *English Mechanic*, which are easily accessible, and in the letter of Dr. Stone. We do not ask that our own observations shall be in any way taken into consideration; but we feel entitled to ask, in the name of the profession, for some public expression of opinion, which shall inform the profession whether either of the bodies named by Dr. Stone in the titles which he prefixes to his "medical column", are of opinion that his connexion with that column is justifiable on public, professional, or ethical grounds. The matter is one of some importance, as this is now likely to become "a leading case".

We have been requested to publish the following.

To the Editor of the *British Medical Journal*.

SIR,—We, the undersigned medical practitioners, beg most cordially to endorse the views you have expressed in the recent leading articles in the *BRITISH MEDICAL JOURNAL* with reference to the giving advice to correspondents in popular journals by qualified medical men, and more especially by those connected with the large hospitals, whose professional conduct ought to be an example to the whole profession. It is singularly distressing to us to find any medical man identifying himself with so unprofessional a proceeding. We are, etc.,

W. WEBB, M.D., F.R.C.S.Eng. & Edin., Wirksworth, Derbyshire.

R. B. HOLLAND, M.D., M.R.C.S., Matlock.

WM. MILLIGAN, L.R.C.P.Ed., M.R.C.S., etc., Wirksworth.

October 14th, 1873.

THE MEDICAL SOCIETY OF KING'S COLLEGE.

ADDRESS BY PROFESSOR CURNOW ON INDIVIDUALISM.

A MEETING of this Society was held on Thursday last, when the chair was occupied by Dr. J. C. Hayes. An Introductory Address was given by Dr. Curnow, M.D., M.R.C.P. The subject of the address was Individualism; and, after a brief introduction, Dr. Curnow referred to the competitive system as one of the characteristics of the age, and one unhesitatingly believed in by some eminent authorities, especially by the "Apostle of Competition," the Right Hon. Robert Lowe. Some of that gentleman's opinions were, however, considered by the profession as short-sighted, and tending to impede the progress of knowledge, viz., that there were greater advantages in endowing scholarships and exhibitions than fellowships or professorships; and that the highest functions of a university were to examine and not to teach. He pointed out the rapid strides made by competition in medicine; and expressed the opinion that one effect of the recent publication of the list of percentages of plucked and passed men from each school, would be to necessarily reduce the teaching of the best lecturers to a dead-level, and convert them into crammers for the membership examinations, and so inflict a great injury on the better class of students. With regard to the higher examinations, he thought that, although competition up to a certain point was necessary, yet, if very severe, it had great drawbacks. 1. It tested only one side of a candidate—his powers of acquisition and

the facility with which he could reproduce the facts and theories stored up in his memory; whilst other qualities, such as accuracy of observation and readiness of action in emergencies, were entirely overlooked. 2. It led men into exactly the same groove, and made them *fac-similes* of each other, and of their more immediate and successful teachers. It hindered the formation of an independent judgment, and led to a perusal of books "that pay best," their intrinsic merits being disregarded. He objected to the substitution of German for Greek at the matriculation of the University of London, as being due to this idea, and disapproved of a language which could be mastered by a few months' residence in a neighbouring country, being put on a footing of equality, as a means of higher education, with one which contains works that have done more to develop true culture than all other writings since, Dante, Goethe, and Shakespeare alone excepted. 5. A severe competition, by fostering the ambition of young men whose health and talents were not equal to the struggle for the "survival of the fittest," prevented them from becoming good individual practitioners; and the doubtful benefit received by the best from the system was not sufficient to compensate for this positive harm. Dr. Curnow insisted strongly that education should take its proper place as the primary factor in the production of the individual and of the medical practitioner; and pointed out the necessity of assiduously cultivating those attributes which make out and differentiate each man's intellectual character and mode of thought, and so acquiring a healthy individualism, not losing sight of the æsthetic in the scientific, but striving to attain to a "true human perfection, as a harmonious perfection, developing all sides of our humanity." He next passed on to the necessity for maintaining high intellectual thought in medicine, instead of following popular, plausible doctrines, mentioning that, within his own short recollection, four different schools of science had endeavoured to govern therapeutics; the "expectant" school had been of extreme value by teaching the "natural history" of acute diseases, but had often been allowed to paralyse our treatment, and so lives had been unnecessarily lost, e.g. in pneumonia, diphtheria, erysipelas, etc. The averages of the "statistical" method were of no use in the treatment of individual cases. The "chemical" school had taught the knowledge of the actions of the chemical antidotes, escharotics, antacids, and antilithics, but these had reached its limits. Dr. Fraser's lectures at Edinburgh last year were alluded to as a link between the chemical and physiological schools; but some of his conclusions were objected to. Dr. Curnow then spoke of the difficulties in establishing a scientific pharmacology, deduced from experiments on the lower animals; the idiosyncrasy in human beings; the necessity of presence of disease to elucidate the action of the remedy; our ignorance of primary tissue changes in most affections; and the tendency of every mere symptomatic treatment to withdraw our attention from the causation and progress of disease. He considered that physico-chemical tendencies of modern physiologists and the comparative neglect of the subtler problems of nutrition, growth, and development, would lessen the beneficial influence of this school in practical medicine; and he held that the new science of pharmacology was altogether premature in endeavouring to displace the old art of therapeutics, and that its true position thereto was merely suggestive. Allusion was then made to the wild dream of Dr. B. W. Richardson, that organic remedies would alone be used in the future; and a protest was made by the speaker against the remark of Dr. Burdon Sanderson, that it was the practical physician and not the physiologist that had drawn unwarrantable inferences on treatment, from the well-known experiments by the Edinburgh commission on mercury. In refutation of this, Dr. Curnow instanced the rash speech of Professor Hughes Bennett, in the discussion at Oxford in 1868; that "Mercury was found in the *Pharmacopœia* because it was copied from one to the other," as being the dictum, not of the practical physician, but of the physiologist who originated and reported on the researches.

After adverting to the value of society as the only means of fostering healthy individualism and appealing to the patriotism of students to cherish and support such a valuable legacy bequeathed by former King's College men, of many of whom only their memories and their deeds now remain, Dr. Curnow concluded by urging upon all present the necessity of perfecting the individual in the technicalities of the art of healing. This could be done by no royal road or easy method derived from speculative science; but, disregarding what will pay best at the moment, by diligent observation and experience at the bedside, and a careful study of the teachings of the fathers of clinical medicine.

The PRESIDENT, after a few remarks, proposed a vote of thanks to Dr. Curnow for his admirable address, which was seconded by Professor WOOD, and carried unanimously.

Amongst the speakers of the evening were Messrs. Briggs, Hutchings, H. Smith, and R. Birch, who, with a crowded room of students, seemed greatly interested in the address by Professor Curnow.

THE DRAINAGE OF SANDHURST.

[REPORT FROM OUR SPECIAL COMMISSIONER.]

ATTENTION has recently been directed to an alleged outbreak of typhoid at this important institution, and to defects in the sanitary arrangements of considerable gravity. The matter was one which seemed to call for special inquiry, which we have accordingly instituted; and we may state, after personal investigation, that the account of the drainage of Sandhurst College is, we find, substantially correct: the drains are old brick drains, eaten through by rats, and communicating with an old barrel drain which formerly discharged into the lake in front of the College, but which now conducts the sewage to a gravel filter bed, from which the strained effluent water passes into the Blackwater stream. The "surface drain which encircles the basement of the building," and which was evidently merely intended to drain the areas, receives the refuse from the more recently erected water-closets, and it then joins the beforementioned barrel drain. A grating is placed across it (we were told) which intercepts solid matters, and so lately caused the drain to be blocked up, and as grids from the areas open into it, a fouling of the air in the basement rooms, which look out into the areas, must have taken place. There is no ventilation provided for the drains at all, except such as is occasionally afforded in and around the building by broken or removed bell traps.

The water-supply is very good; the water derived from high grounds near is very soft, and its only impurity is a little vegetable matter; it is supplied to the College, partly by pumping to a reservoir above the College, thus supplying the upper storeys of the building, and partly directly by gravitation. The service is constant.

The allegation that "cases of typhoid fever have recently broken out at the College," turns out, however, to be an exaggeration. Only one case has appeared there; and that, very probably, an imported one. The patient was in Boulogne up to August 31st; was not particularly well, but did not complain until about September 15th; was suspected to be suffering from typhoid on the 20th; and was sent to the hospital with that disease on the 23rd. On October 9th, his temperature was normal, and he has been convalescent ever since, and is now well; it was, therefore, a mild case, and it is difficult to say when the attack first commenced; we are inclined, however, to agree with the surgeon who attended him, and to think that, as no cases of the sort had taken place at the College before, it is almost certain that the disease was contracted before his return. Every precaution was taken to prevent any spread of the fever, and with success, no other case having occurred.

The matter was, however, thought of sufficient importance for a special commission of military officers, including a medical man and an officer of the Royal Engineers, to be sent to inquire into the matter; and, on their reporting the sanitary state of the College to headquarters, the officers there were all ordered to join their regiments, and did so on Monday last. We are told that the sewerage arrangements are to undergo a thorough overhauling. The action taken was, therefore, most prompt, and will, we hope, be followed up as completely as it should be; there can be no doubt that an entirely new system of sewerage will be necessary. When the present drains were laid sanitary pipes were unknown. Some more efficient method of treatment of sewage must be employed, as the stream will no longer be suffered to be polluted. Now, indeed, it appears that Sandhurst College is not by any means the only place in the neighbourhood which requires to be looked after in this respect. It would be advisable to keep the surface drains separate from the sewerage proper.

The College is in a beautiful situation on a little rising ground of the middle Bagshot Sand, just on the Surrey side of the stream between that county and Berkshire, and on the outskirts of the old Windsor Forest; the gentle slope between the College and the lake formed by the damming up of the stream in question, is mainly artificial; it would appear that the College was originally built with slight foundations, and the earth thrown up around it to above the windows of the basement story, so that a narrow and deep area is left outside the College into which these windows look; the earth for this purpose having been got by excavating the bed of the stream.

The corridors and rooms of the College are remarkably lofty and airy, and the place only wants to be well drained to make it a most enviable place to live in; it would be well, too, if more light were

admitted to the basement story by widening the areas or lowering some of the bank around; the drains were, doubtless, the best that could be constructed when they were made, but they have served their time and require to be replaced by a better system.

We confess that we do not quite see the force of the concluding sentence of the letter referred to, which speaks of "the young officers at present compelled to reside in the unhealthy and disgusting atmosphere of the College to which they have been condemned, and from which they have no means of escape, unless by abandoning their profession." [The italics are ours.] The action taken by the authorities shows that, at any rate, there is no wish to detain them in a place with an "unhealthy and disgusting atmosphere", if they are "condemned" to reside in a College where they have an opportunity of learning something of their profession in a systematic manner.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 14TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

CASE OF IMPERFECT DEVELOPMENT OF THE CIRCULAR MUSCULAR FIBRES OF THE RECTUM AND VAGINA. BY HENRY LEE, F.R.C.S.

THE case is one in which a large accumulation of feces occurred in the lower bowel. It formed a tumour, which extended six inches above the pubis, and was five inches broad. The perineum was deficient, and also the circular muscular fibres of the lower part of the rectum and vagina. These two passages opened in common. The rectum and vagina were always relaxed, and the uterus very imperfectly developed.

CASE OF IDIOPATHIC HYALITIS: ACUTE INFLAMMATION OF THE VITREOUS HUMOUR OF BOTH EYES. BY W. SPENCER WATSON, F.R.C.S.

A MAN, aged about thirty years, a coal-porter, was seized with dimness of vision, which increased so rapidly that, in the course of a few days, he could not find his way across the room without a guide, his aspect being characteristic of amaurosis. The ophthalmoscope revealed an uniformly distributed turbidity of both vitreous humours. The diagnosis was uncertain, the patient being a free drinker, and having smoked to excess; he had also an ulcer of a suspicious nature on one leg, but no other traces of anything like constitutional syphilis, and no appearance or history of any other disease. Under a course of mercury, rapidly administered to the extent of rendering the gums spongy and tender, vision rapidly improved, and was completely restored in ten days. The progress of the case (taken in connection with the simultaneous healing of the ulcer on the leg) points to syphilis as the origin of the disease. It is concluded from this case that inflammation of the vitreous may occur, independently of injuries, without any iritis or choroiditis, and without any impairment of the retina. The rarity of the affection, and the very rapid improvement under treatment, make the case remarkable.

Mr. HENRY LEE said he wished to make a remark on one point in the paper. It was implied that increased action was necessary for repair; but, when increased action was going on in one part, there was a diminution in another; so he would say, a diminution of activity in the hyaloid, not an increase, cured.—Mr. COOPER FORSTER said the author of the paper doubted the presence of syphilis, because no scars were found on the penis. If found, they would only indicate one kind of sore; and their absence was no proof that the patient had not had syphilis. He thought the abuse of tobacco had more to do with producing hyalitis than syphilis.—Mr. SPENCER WATSON, in reply, said there was no enlargement of the glands of the groin. He thought the hyalitis was due to syphilis: he had never seen the excessive use of tobacco produce it; its action was rather upon the nerves. He agreed with the remark made by Mr. Lee, that increased action was not necessary for repair.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 1ST, 1873.

E. J. TILT, M.D., President, in the Chair.

Vesico-Vaginal and Recto-Vaginal Fistula. By T. EYTON JONES, Esq.—The patient was seized with labour-pains on Saturday night, and remained in labour until 5 P.M. on Tuesday, when a medical gentleman was called in, who delivered her by forceps. Ten weeks after her confinement, she came under Mr. Jones's care, who discovered

great swelling and redness of the labia. At the vaginal entrance there were two apertures—the anterior small, barely admitting the little finger, apparently entering the bladder; the posterior covered by a red, velvety-looking mucous swelling, through which the forefinger entered with ease, and apparently consisting of the vagina and rectum dilated into the cavity, and containing in it the closed mouth of the uterus. She could neither retain her feces nor urine, and the catamenia have never since reappeared. Two years and a half after this disastrous confinement, she suffered excruciating pain for a fortnight, at the end of which she parted with a phosphatic calculus one inch in circumference and two inches in length, which had formed in the bladder or urinary passage. Venesection has to be performed every two months to relieve the severe headache caused by catamenial suppression.—Dr. HEYWOOD SMITH thought that the paper should state accurately the exact present state of the parts. It did not appear that the case was hopeless as regarded operative interference.—Dr. AVELING considered that, at all events, some effort should be made to restore the patency of the cervical canal of the uterus.

The Muscular Substrum in Relation to the Fœtal Heart-Sounds. By J. BRAXTON HICKS, M.D., F.R.S.—The author wished to call the attention of the Society to a point with regard to the diagnosis of pregnancy and the life of the fœtus by means of the existence of the fetal heart-sounds which he had not unfrequently observed in the course of his practice, but which he did not remember to have seen in print, and summed up his observations as follows. 1. The number of vibrations of the abdominal muscles in a state of half suspension can be distinctly counted, watch in hand. 2. Their number and sound are so like those of a very rapid fetal heart that they may be mistaken for them.

On the Spontaneous Separation of the Placenta when it is Prævia. By J. MATTHEWS DUNCAN, M.D.—The author did not in this paper enter on the subject of hæmorrhage, desiring to keep in view only the mechanism of separation of the placenta when prævia. He pointed out that, during labour, every portion of the surface of the body of the uterus underwent contraction, and that it was probably to the same extent over the whole of it. But the lower part of the body of the uterus was greatly expanded during labour, and contraction could there be only in the meridional or longitudinal direction. The contraction of the uterus in early labour did not separate the placenta wherever it might be inserted, whether prævia or not. A small amount of the whole expansion of the cervix, or an early stage of it, when there could be very little contraction, was sufficient to detach partially the placenta. He arrived at the conclusion that the placenta when prævia was separated by expansion, not by shrinking or contraction of the uterus. At present, it was universally held to be separated by uterine contraction. The paramount errors of authors, such as Simpson and Barnes, were in supposing that the placenta might be attached to the cervix even near the external os, which it never was; and in not rightly apprehending the behaviour of the cervix during labour. The process of detachment by expansion will go on till the internal os is dilated to a diameter of about four inches, and this may occupy a great part of the whole duration of the labour. Study of the shape of the lower uterine hemisphere showed that a meridian leaves the vertex or centre of the internal os uteri in a direction nearly at right angles to the uterine axis; and that, after it has described an arc of one and a half or two inches, it becomes nearly parallel to it. At about two and a half inches from the vertex the diameter of the uterine cavity is four inches. There is no need for any considerable expansion beyond a diameter of four inches, which is reached at a meridional distance of two and a half inches from the centre of the internal os uteri. Expansion beyond this would produce very slight extension of uterine surface, and consequently slight detaching power, which would probably be counterbalanced by placental expansibility. Dr. Matthews Duncan pointed out that this was the measure of the spontaneously detaching area, and criticised the various other measurements that authors had made. He showed that Barnes's estimate of three to four inches from the os uteri must be far too great. The circle of latitude, two and a half inches from the vertex, marking this limit, was the line, insertion of placenta within which, constituted placenta prævia. Complete detachment of the placenta was to be explained by a study of the production of a caul, and of those cases in which the placenta was perforated by the advancing fœtus. Finally, Dr. Duncan called attention to the analogous detachment of the decidua around the internal os, which had been described by Dr. Hausmann of Berlin.—Dr. BARNES denied that he was open to the charge of committing the error imputed to him by Dr. Duncan, of stating that the placenta was ever attached to the os uteri externum. He had taken special pains to insist that the cervical canal had nothing to do with gestation. He had even sent to Dr. Duncan years ago a tracing of a drawing made by himself from a pregnant

uterus, showing the separate cavity of the cervix. With regard to the remaining statements of Dr. Duncan, they would be found to be simply repetitions in other words of Dr. Barnes's published account.—Dr. AVELING believed the Society was much indebted to Dr. Matthews Duncan for his accurate and scientific description of the spontaneous separation of the placenta when prævia. We could not be too minutely particular on a subject of such importance, and he believed, with the author, that there were many illustrations to be found in our midwifery works which gave the student an erroneous view of the relative conditions of the body and cervix of the uterus during pregnancy and parturition.

On the Diagnosis of Subacute Ovaritis. By EDWARD JOHN TILT, M.D. The author suggested that the undervaluing of the part played by subacute ovaritis as a source of disease in women, partly depended on the lamentable facility with which many practitioners, wherever there was pain in the ovarian region, inferred the existence of ovaritis, partly on account of the real difficulties of diagnosis, of which he gave some remarkable instances. He intimated that another reason might, however, be found in the difficulty of making examinations in young unmarried women. He had found that the most frequent sexual diseases during this period of life (between 15 and 25) were subacute ovaritis and inflammation of the neck of the womb. When the disorders of menstruation resisted good hygienic and medical treatment, he believed they were generally due to subacute ovaritis and cervicitis. The symptoms of cervicitis he described to be the habitual painless passing of a moderate amount of muco-purulent vaginal discharge, with habitual pain in the back; those of subacute ovaritis, were constant dull pain, deep in the ovarian region, much increased by firm pressure, and extending to the thigh and leg; mammary symptoms, disturbed menstruation, and hysterical phenomena. The positive sign of subacute ovaritis was the finding of an ovoid, smooth or slightly indented lump beside the womb or in Douglas's pouch, pressure upon which, caused by the practitioner's finger or during coitus, caused an overpowering and sickening sensation of pain and debility. It might be necessary to confirm this diagnosis by a rectal or recto-vaginal examination. The author expressly stated that it would sometimes occur to a practitioner, making a first vaginal examination, that instead of finding any ovarian disease as he expected, he would detect cervical disease, and, in other cases, subacute ovaritis would be found, when the symptoms would lead him to expect cervical inflammation. He concluded by describing the line of conduct to be adopted by the surgeon, for the management of each of the three classes, and sketched the treatment most likely to cure them.—Dr. BARNES thought that many ovarian symptoms had their origin in uterine displacement. Dr. WYNN WILLIAMS concurred in Dr. Barnes' opinion. He had rarely met with a case of ovaritis without some uterine complication, unless caused by direct violence. He believed the uterine mischief preceded the ovarian; and his experience taught him that, on the removal of the uterine ailment, the ovarian soon subsided. The same remarks applied to the ovary as to the testicle. Orehitis was seldom met with without previous inflammation of the urethra. He had frequently relieved ovarian symptoms by introducing a stem into the uterus, and he had under his care several unmarried females wearing stems and shields, who could not be persuaded to have them removed, dreading a return of their sufferings.—Dr. HEYWOOD SMITH believed the best way of using the double touch was to use the forefinger of the right hand for the vagina, and the middle finger of the same hand for the rectum; the left hand was thus left free to make pressure on the hypogastric region. With regard to what had been stated as to ovaritis being associated with or consequent upon flexions or other morbid states of the uterus, he must say that he frequently found patients suffering from ovaritis in various stages, unconnected at all with any flexion or misplacements of the uterus or with any metritis.—Dr. J. J. PHILLIPS said that his experience was that so-called subacute ovaritis was a very frequent cause of dysmenorrhœa, and he believed that this ovaritis frequently exists independently of any uterine flexion or peculiar conformation of the cervix uteri. It was very common to find a swollen, hyperæmic, probably inflamed ovary, as the only evidence of disease in case of dysmenorrhœa. The fact stated by Dr. Barnes, however, could not be controverted, that in a large class of cases dysmenorrhœa was due to uterine flexion or some uterine abnormality, and, by appropriate treatment, not only was the pain relieved but also the congested state of the uterine appendages. A suitable selection of cases was, however, important, for some of the most troublesome cases of ovaritis and periovaritis had their origin in mechanical interference with the neck of the uterus by incision or dilatation.—Dr. GERVIS remarked that the truth might be between the two views which had been expressed, and that, while primary subovaritis was probably rare, yet it might certainly continue to exist as a result of various

uterine affections, such as chronic endometritis and mechanical dysmenorrhœa after these affections had been cured.—Dr. TILT, in reply, stated he had always taught that mechanical obstructions to the menstrual flow and uterine malpositions required special treatment, but he intentionally omitted to treat of them in the present instance, because they were not of very frequent occurrence between the ages of fifteen and twenty-five; whereas he had come to the conclusion that subovaritis and cervicitis were then common, and were often treated as diseases of menstruation; he did not think that the analogy between the testicle and the ovary should be pushed too far, because the testicle was not subject to any monthly process similar to ovulation.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 10TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Parasitic Sycosis.—Dr. TILBURY FOX exhibited a living subject affected with parasitic sycosis. The patient had been sent to Dr. Fox the day before by his medical man, and on being requested to do so, readily consented to exhibit himself. The disease began at the outer angle of the mouth six months ago by a patch of eruption having all the characters of ordinary ringworm of the surface (*tinea circinata*). This patch gradually spread until it invaded the whole of the left cheek, the left upper lip, and the left half of the chin. The spreading edge of the patch was always red, very well defined, and herpetic; whilst the central portion became pale, and desquamated slightly. The use of remedies destroyed the disease about the cheek, and the malady now consists of a red, slight scaly surface, occupying the left half of the upper lip, a little of the right half of the same, and the whole of the left side of the chin. In addition, there are eight or nine small tubercular swellings, one of which is slightly pustular in aspect, and scattered here and there over the diseased area. These lumps began to come about a month since. The hairs in the site of these little tubercles lie loose in the follicle; they come away very readily; they are swollen, lustreless, opaque, and loaded with fungous elements. The man, in addition, has a small circular patch possessing all the characters of ordinary ringworm in the middle of the chin beneath the jaw. Dr. Fox said that he had only met with two cases of this parasitic sycosis within the last few years. As Hebra denied its occurrence, he thought it important to bring the case under the notice of the Society. He further pointed out the unsymmetrical character of the disease, the origin of the latter from common ringworm, the slow development and indolent character of the small tubercular swellings, and the absence of any decided suppuration, as points of diagnostic interest; the common non-parasitic sycosis furnishing contrasts in these particulars, no less than in the presence of diseased hairs in the one and not in the other. Dr. Fox placed under the microscope specimens of the hairs invaded by the mycelium of the fungus (*microsporon metoglyphites*) and also of the root sheath, in which the conidia (or spores) were seen in abundance.—Dr. DUFFIN said this form of skin-disease was rare; he had only seen one case. The patient, a German tailor, had a large patch on his chin, and another on the right side of the face. In some parts there were pustules, in others the skin was only red, but in both spores were found. The Vienna physicians maintained that the malady was rare; the Parisian said it was common. At one time Hebra held it to be fictitious, but had now modified his opinion.

Spasmodic Asthma treated by Chloral.—Dr. THEODORE WILLIAMS brought forward three cases of spasmodic asthma treated by chloral. The first was that of a married woman, aged 23, who came from the Isle of Man, where, during the last nine months, she had suffered from asthma of so severe a character as to confine her to her bedroom for four months. Various remedies had been tried in vain. On her arrival in town, Dr. Williams did not at first pursue active treatment, hoping that the change of climate might give relief. The fit, however, coming on as usual, chloral was given in twenty-grain doses. After the first dose, she fell asleep for an hour; after the second, she slept a whole night; and a few more rendered her breathing quite clear. The drug was then omitted, and the patient remained free from asthma for more than a week.—The second case was that of a lad, aged 16, who had been subject for six years to attacks occurring once a week and lasting three days. Chloral was given during a severe paroxysm, with the result of causing sleep and immediate relief to the breathing. He remained in the Brompton Hospital free from attacks, in spite of several threatenings of dyspnoea, which were always averted by the timely administration of chloral.—The third patient was an unmarried woman, aged 27, with a history of asthma of two years' standing; the attacks occurring every morning, lasting two or three hours, and often recurring in the forenoon. During a very severe one, which occurred in the

Brompton Hospital, a variety of drugs were tried with little effect. Chloroform inhalation gave some relief, but caused cardiac intermission. Hypodermic injection of morphia did good, but her increasing lividity precluded its continuance. Chloral was then given in twenty-grain doses, and the first dose induced slumber and easy respiration. The drug was continued in smaller doses for upwards of two months, during which time the attacks seldom recurred, and, when they did so, were extremely mild. Once the chloral was omitted, and the asthma immediately returned, but ceased on resuming it.—All the cases were complicated by catarrhal symptoms, and in the third case there was considerable emphysema, which diminished during the patient's stay in the hospital. Biermer, of Zurich, had already used chloral extensively in these cases. Dr. Theodore Williams's own experience, founded on upwards of twenty cases, was decidedly favourable to its use in spasmodic asthma. In only two cases had any bad symptoms arisen.—Dr. SOUTHEY said that the patient who had been under his care was of a markedly hysterical temperament, and any little occurrence in the ward brought on an attack of asthma. In one bad attack he gave her nitrite of amyl, which seemed to benefit her; but he was not too sure about its efficacy, and it was not a remedy to leave in unskilled hands. In such cases he thought stimulants did most good; and chloral, he thought, would be found most beneficial when the disease was most purely neurotic.—Dr. A. P. STEWART said that chloral seemed to have a decided effect in these cases, but in many he thought it risky and uncertain. In some instances it did well for a time, and then, for no reason at all apparently, it began to disagree, and its use was followed by extreme depression of the circulation to a most alarming extent. In others the same happened after long use. In many cases, no doubt, it was very good; but he would be strongly disinclined to order it several times a day. Often it gave rise to severe itching, so as to destroy rest, as well as to severe irritation about the eyes. He thought bromide of ammonium in large doses better in every way.—Mr. NUNN had seen some cases of asthma, almost like suffocative attacks, produced by food—in one patient by rice.—Dr. WILLIAMS did not think chloral a stimulant; and in one case stimulants properly so called had been given largely before the chloral. He had seen no mischief arise from its use. The cases he thought mainly due to damp.

Chronic Bright's Disease in a Syphilitic Patient.—Dr. SOUTHEY read the account of a case of chronic Bright's disease in a young man, aged 21, the subject of syphilis. The patient had had scarlet fever when a child, and had suffered with dysentery several years previously. The first symptom which led to his admission into St. Bartholomew's Hospital was erysipelatous inflammation of the left ankle, following a trivial injury. His urine was loaded with albumen, but was always excessive in quantity; its daily average was fifty ounces, but on many days more than seventy ounces were passed. His temperature was invariably at or above normal, and he presented very trivial anasarca during his illness. Generally his appetite was good, but, at times, he suffered in the morning, sickness, and had severe colicky pains. Among the anomalous symptoms noted were the following: bright red patches of erythema came out on different portions of his body, sometimes on the face, at others on the trunk and limbs; they were attended by febrile symptoms, and coppery-coloured stains marked their situation for a while. Their disappearance was usually attended with the most profuse perspirations, or critical sweats. These rashes, as well as transient mottlings of the arms and legs, and sudden transitory attacks of acute pain in the calves, loins, and back, were attributed, by Dr. Southey, to the syphilitic poisoning, of which there was further confirmatory evidence in amygdaloid cervical glands, and scars of old buboes in both groins. After being two months under observation, during all which time the microscopical characters of the sediment of his urine varied very little, fatty and granular casts of varying size being always present, although never in large quantity, he was suddenly seized with rigors of a most severe kind. His temperature rose to 103.2; he complained of general pains in different parts of his body, and especially of headache, localised behind his ears. This was followed by profuse sweating, which afforded some relief. For three successive days these ague-like attacks were repeated. The abdomen then became tympanitic and tender, and acute peritonitis supervened, to which he succumbed after a few days; his temperature gradually rising up to 106, which it reached twelve hours before death. At this high temperature he passed into an insensible state, with protruded eyeballs, dilated pupils, and stertorous breathing; but, up to this period, his intellectual faculties had never been clouded, and he never exhibited any epileptic convulsions. The necropsy revealed old as well as recent peritonitis, large and soft liver and spleen, large pale fatty kidneys, the pair together weighing seventeen and a half ounces. All the viscera were examined by iodine, but did not furnish any amyloid reaction.—Dr. SILVER asked if the kidneys had been tested, as in almost every respect the

case was a typical one of amyloid kidney. Such forms of disease usually occurred after syphilis. The quantity of water passed was very large, the amount of albumen considerable, and the specific gravity was also often considerable; whilst there was no dropsy, and little tendency to uræmia.—Dr. WILLIAMS asked what was the nature of the liver and kidney changes.—The PRESIDENT said it was not very common to have constitutional symptoms with scars in the groins. Were there no enlarged glands? He now had a case under his care where there were two kinds of sores and two kinds of glandular enlargement: he had also seen a similar case previously. Scars did not, as a rule, indicate the existence of syphilis.—Dr. SOUTHEY said the liver was large and granular. The kidney had all the marks of intertubular change. He thought the case differed from amyloid kidney in the quantity of albumen and specific gravity of the urine passed.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the Seventeenth Session, 1873-74, is appointed to be held at St. Bartholomew's Hospital, Rochester, on Wednesday, October 29th, at 4 P.M.; Dr. JAMES V. BELL in the Chair.

Papers have been promised by John M. Burton, Esq., Dr. Monckton, and the Chairman.

Dinner will be provided at the King's Head Inn, Rochester, at 6 P.M. Mr. Simon of St. Thomas's will dine with the members of the District.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary.*
Rochester, October 13th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at Penrith, on Wednesday, the 29th October. The President, Dr. TIFFIN of Wigton, will take the chair.

Gentlemen intending to read papers are requested to give immediate notice to the Secretary,
HENRY BARNES, M.D.
Carlisle, October 1st, 1873.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, October 30th, at 7 o'clock P.M.; E. LONG FOX, M.D., President.

R. S. FOWLER, } *Honorary Secretaries.*
E. C. BOARD, }

Bath, October 1873.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING will be held in the Music Hall Buildings, Aberdeen, on Wednesday, November 5th, 1873.

Papers have been promised by Drs. Greig, A. D. Davidson, Dyce Brown, etc.; and a proposal to alter the laws of the Branch so as to have a boundary mutually advantageous to it and the Northern Counties Branch, will be brought forward.

ALEXANDER OGSTON, *Secretary.*
Aberdeen, October 20th, 1873.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Squirrel Hotel, Wellington, on Friday, November 7th, at 5 P.M.

The following question has been settled by the Council as the one on which each member should be asked to express his opinion at the said meeting after dinner:—"Is Club Practice conducive to the interest and welfare of the Profession?"

Gentlemen who intend to be present at dinner, or who may have communications for the meeting, are requested to send notice thereof to the Secretary.

W. M. KELLY, M.D., *Honorary Secretary.*
Taunton, October 15th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Fountain Hotel, Canterbury, on Thursday, November 6th, at 3 o'clock P.M.; Mr. H. G. Sadler in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

The following papers have been promised. 1. Dr. Kersey: Case of Irregular and Deficient Development in a New-born Infant.—2. Mr. Bowes: Case of Cardiac Disease.—3. Dr. Robinson: Some Remarks on the Carriers of the Contagium of Enteric Fever.—4. Mr. Clement Walter: Case of Ligature of the External Iliac.—5. Mr. Rigden: On the advantage of the Obstetric Forceps in some cases in which they are not considered absolutely necessary.

Gentlemen who intend to be present at the dinner are particularly requested to inform me on or before Tuesday, the 4th inst.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James Street, Dover, October 21st, 1873.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council held at the Queen's Hotel, Birmingham, on Friday, the 17th instant—present, Mr. G. Southam (President of the Council), in the Chair; Dr. Falconer (Treasurer); Mr. Baker; Mr. Board; Mr. Bartleet; Dr. Bryan; Dr. Carpenter (Croydon); Mr. Andrew Davies; Dr. Foster; Dr. Fox; Mr. Harrison; Mr. Husband; Mr. Humphreys; Mr. R. H. B. Nicholson; Dr. Rumsey; Dr. Sibson, F.R.S.; Dr. Steele; Dr. Stewart; Dr. Underhill; Dr. Waters (Chester); Mr. Wheelhouse; Dr. Eason Wilkinson; Dr. Wade; Mr. Wood.

The minutes of the last meeting were read and confirmed.

Read minutes of the JOURNAL and Finance Committee.

Resolved—That the minutes of the JOURNAL and Finance Committee be approved and carried into effect.

The following recommendations of the JOURNAL and Finance Committee were also ordered to be carried into effect.

"That the General Secretary be instructed to furnish to each quarterly meeting of the Finance Committee a statement showing the amount of subscriptions due, and the amounts forwarded from the members of the Association; and also the number of members, and the amounts due and paid in each Branch.

"That it be recommended to the Committee of Council to request the Finance Committee to consider whether the Association is likely to be in a position to make special grants for the prosecution of original research in medical science, and, if so, what amount, and report thereon to the Committee of Council before the next annual meeting."

Resolved—That the Annual Meeting of 1874 be held on the 11th, 12th, 13th, and 14th days of August next.

Resolved—That the Arrangement Committee consist of the following gentlemen:—The President; the President-elect; the President of the Council; the Treasurer; Dr. Chadwick; Dr. Sibson; Dr. Stewart; Dr. Bateman; Mr. Cadge; and the three Local Secretaries, Dr. J. B. Pitt, Mr. Robinson, and Dr. Beverley.

The General Secretary reported that a resolution was passed at the last annual meeting, of which the following is a copy; viz.:

"That the Committee of Council be requested to draw up a complete code of laws and bye-laws for the government of the Association, based on the existing laws, with such suggested alterations and additions as may appear desirable, and to submit the same for consideration to the next general annual meeting of the Association."

Resolved—That a Subcommittee be appointed, to consist of the following gentlemen, to consider and report upon the laws, in accordance with the foregoing resolution, to the Committee of Council at their earliest convenience; viz., The President of Council, Dr. Falconer, Mr. Husband, Mr. Wheelhouse, Mr. Nicholson, and Dr. Steele.

Resolved unanimously—That the Committee of Council have received with deep regret the announcement of the premature death of Dr. John Murray. In expressing their deep sympathy with the members of his family, they desire at the same time to record their sense of his high personal qualities, and their warm appreciation of the faithful and important services which he rendered to the JOURNAL and the Association.

Read letter from Dr. Mackay (Elgin), reporting the formation of a new Branch, to be called the Northern Counties of Scotland Branch of the British Medical Association, and forwarding copy of the proposed laws.

Resolved—That the laws of the Northern Counties Branch of Scotland be approved and the Branch recognised.

Resolved—That the Committee of Council desires to express its congratulations to the members upon the formation of the Northern Counties of Scotland Branch of the British Medical Association, and its thanks to Dr. Mackay and others for their exertions in securing this valuable addition to the Association.

One hundred and sixteen gentlemen were elected members of the Association.

THE SHROPSHIRE ETHICAL BRANCH: ANNUAL MEETING.

THE annual general meeting was held in the Assembly Room at the Lion Hotel, Shrewsbury, on Monday (the first week in October having, for several years, been the appointed date for the meeting,) October 6th, at 1 P.M., the President—S. BETTON GWYNN—in the Chair, and the following resolutions were passed unanimously:—

Minutes of General Meeting.—"That the minutes of the last general meeting be affirmed."

Vote of Thanks.—"That the cordial thanks of the meeting be given to the late President, Vice-Presidents, Council, and Honorary Secretary and Treasurer, for their valuable services during the past year."

Election of Officers.—"That W. A. Davies, Esq., be elected President, and C. B. H. Soame, Esq., and R. Wilding, Esq., Vice-Presidents, and the following gentlemen members of the Council for the ensuing year, in the place of those who retire by rotation, or otherwise:—W. A. Davies, Esq. (Llanidloes), Joseph Hickman, Esq. (Brockton), Dr. Fuller (Oswestry), A. Mathias, Esq. (Bridgnorth), and J. W. Roe, Esq. (Ellesmere).

Representatives of Branch in General Council.—"That, in accordance with the eighth general law of the British Medical Association, S. B. Gwynn, Esq., W. A. Davies, Esq., C. B. H. Soames, Esq., and Dr. Jukes Styrar, be the representatives of the Branch in the General Council for the ensuing year."

Representative of Branch on Parliamentary Committee.—"That the President, S. B. Gwynn, Esq., be the Branch representative on the Parliamentary Committee."

Hospital Abuses.—"That, in the opinion of this meeting, the system of medical relief as at present administered at our hospitals, infirmaries, and dispensaries, is open to grave objection; and, considering the abuse which is thereby practised, requires a thorough revision in all its details."

Tariff of Surgical Fees.—"That the members of the Ethical Branch, deeply sensible of the efforts so freely devoted by Dr. Styrar for many years past to promote the interests of the profession, venture to make a further appeal to him: viz., to undertake the completion of the Branch tariff of fees by the addition of a scale of surgical charges—the preparation of which they are aware will entail considerable labour, but which they confidently believe will be ungrudgingly given."

Dr. STYRAR, in thanking the members for the personal compliment, remarked that, although he had never hitherto, he believed, hesitated to accede to a request made to him by his medical brethren in the interests of the profession, he now felt it necessary to withhold assent, until he had well considered the serious responsibility of undertaking so important and laborious a work; but that, should he eventually decide on doing so, it must be on the distinct understanding that no further appeal shall be made to him: for, after so many years of arduous, honorary duties, he thought that he was fairly entitled to retire, and to call upon younger men "to put their shoulders to the wheel!" He would communicate his decision to the President at an early date.

Papers and Communications.—1. Mr. Whitwell (Shrewsbury) exhibited several Calculi of Triple Phosphate of extraordinary form and size taken from the left kidney of a patient—the right being converted into a large sac of pus, and the bladder thickened and ulcerated. The man was fifty years of age, and had suffered more or less from retention of urine, relieved by the catheter, for five years, but continued his employment, as waggoner, to within a week of his death. Mr. Whitwell also related a case of retention of urine with infiltration, and large abscess in the perineum, the natural canal and orifice of the urethra being obliterated, and a fistulous opening formed behind the glans penis, through which the urine had flowed for a long time. The patient was relieved by passing a curved bistoury into the dilated urethra behind the abscess, and then cutting its way through the indurated mass.—2. Dr. Morgan (Madeley) read a paper on a case of Hæmatemesis cured by hypodermic injection of ergotine; and exhibited an improved Ether Inhaler invented by his brother, Dr. J. Morgan of Dublin.—3. Mr. Humphreys (Shrewsbury) described a case of Inversion of the Uterus unconnected with pregnancy.—4. Mr. Wilding (Church Stretton) read notes of a case of Ruptured Uterus terminating fatally on the fourth day, and a case of Inversion of the Uterus.—Mr. Edwards (Llanbrynmair) contributed notes of a rare case in Midwifery, and one of Strangulated Hernia in a pauper, aged 85, terminating successfully.

A Vote of Thanks to the President closed the business proceedings of the meeting.

Seven new members have joined the Branch during the current half-year.

The Dinner was served in the Ball Room at 3.30 P.M. (for the convenience of the country members, several of whom had to leave by inconveniently early trains), under the presidency of S. B. Gwynn, Esq., the vice-chair being filled, in the unavoidable absence of the President-elect, by R. Wilding, Esq. During the dinner, and after each toast, appropriate selections from Auber, Bellini, Bouillon, Donizetti, Mendelssohn, Rossini, and Verdi, etc., were played by the band (an exceptionally excellent one), consisting of nine instrumentalists and vocalist, under the leadership of Mr. Wright of Liverpool—whose strains were listened to with rapt attention, and elicited frequent applause. The party did not break up till a late hour, after spending a very enjoyable evening.

YORKSHIRE BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Church Institute, Wakefield, on Wednesday, October 15. Dr. C. ALLBUTT read a paper on Cardiac Defects as a Cause of Deferred Convalescence in Typhoid Fever, as the first of a series which he proposed to bring before the Branch, and which should deal with some of the less familiar dangers arising in the course of enteric fever. The author divided the failures of the heart into two classes (1), those due direct to the failure of the heart muscle itself, and (2) those due to disorder of the innervation of the heart. After alluding to the combustion of the muscular tissues in fever, he stated that the heart muscle is consumed with the rest, and that a gradual loss of the first seemed very generally noticed in the second and third week. The heart should always be consulted daily in fever, and the state of the first sound is the best single guide to the use of stimulants. The heart muscle is in some cases so far weakened that the cause, great debility of the circulation, seriously impedes recovery. Secondly, the heart often suffers from an interference with its nervous supply or regulation. Such a cardiac neurosis depends rather upon the patient than upon the fever, while, on the contrary, a direct improvement of the heart's muscle depends upon excessive or prolonged pyrexia. Although both these forms of cardiac failure may coexist in varying measure in the same patient, yet it is important to distinguish the two forms. The author then gave the points of diagnosis between them, and spoke of the treatment applicable to each.

Dr. HOLDSWORTH exhibited a case of Hermaphroditism in a child thirteen months old, which had been brought to the Clayton Hospital by the mother for hernia. On examination by the medical man, there was no hernia. There was a rudimentary penis apparently attached to the inner side of the left labium, which, as well as the right, was large, and the urethra appeared to be in the proper situation for a female; on further examination a testicle was detected in each labium. The parts present the general appearance of those of a female child, with large labia; when these are separated, there is the aspect of a vagina, but, on examination, no true vaginal passage existed, but a *cul de sac*. The penis, although small, possesses a rudimentary glans, and a perpendicular ridge where the urethra should be.

Mr. JESSOP exhibited an improved Tracheotomy Tube, and other instruments for operations about the mouth.

Mr. WALKER related a case of Laryngotomy.

Mr. STATTER exhibited and described the use of Casella's Spirometer.

Mr. LAWSON TAIT exhibited an interesting illustration of the method of Amputation of Limbs in a fœtus of the eleventh or twelfth week. The cord was twisted round the limbs in a variety of ways, but practically under and round the right leg. The tissues were so eroded that the bones were affected, and the limb would undoubtedly have been amputated below the knee had it remained *in utero* for some time longer. Mr. Tait also showed a specimen which had a very important medico-legal bearing on the question, as to whether the patient had not been pregnant. The general appearance was that of a vascular hydatigenous ovum when the villi of the chorion had become cystic. Careful examination, however, revealed that there was no ovum cavity or any trace of it—the pseudo-hydatigenous ovum always having such a cavity, and often a stunted image of the fœtus. Further, the specimen had a pretty extensive liminary membrane, in the substance of which the sacs seemed to have been produced; and microscopic examination showed that this membrane was clearly of uterine origin. An opinion was therefore given that the ossification in question was really the result of membranous dysmenorrhea, the membrane having been retained long enough *in situ* in its hypertrophied condition for some of the tubercles to undergo the cystic dilatation, and this was corroborated by the history of the case. Mr. Tait also read a paper on the temperature and pulse after ovariectomy.

After the meeting, twenty three members dined together at the Bull Hotel.

CORRESPONDENCE.

PNEUMATIC ASPIRATION: A NEW METHOD OF MEDICAL AND CHIRURGICAL TREATMENT.

SIR,—The JOURNAL of 23rd August last has only just reached me, and I hasten to answer a letter in it of Dr. P. Smith, who appears—certainly to my mind—to be needlessly reopening a question which appeared settled after what passed at one of the meetings of the Medical Section of the British Medical Association. However, as Dr. P. Smith's letter raises two questions—one concerning priority, the other concerning a patent taken out in London—I can only say that there actually exists no manner of patent. As to the question of priority, being afraid of trespassing too much on your valuable space, I would beg those of your readers who may be interested in the matter to refer to the first chapter of my treatise on aspiration,* where they will find the whole subject discussed in full detail.

I am, etc.,

DR. DIEULAFOY.

Paris, rue Caumartin, 16.

UNCERTIFIED DEATHS.

SIR,—I have been recently appointed medical officer of health in the small town where I reside. It became necessary to procure copies of the Register of Deaths for the purpose of making my report to the Board of Health. Judge of my astonishment, on receiving them, to find that 26 per cent. of these deaths were uncertified. I found patients who had been attended by myself entered as having died of complaints differing considerably from the real cause of death, and doubtless those attended by my brother practitioners were equally misregistered. The explanation is as follows: The sub-registrar resides at a small town about six miles distant; he visits here three or four times a month, and, if he find the relatives of the deceased unprovided with a medical certificate of the cause of death, he registers as the cause whatever they please to say it is.

I am anxious to know what the law is on the subject, as the returns of the Registrar-General must be greatly falsified, and the deductions to be made from them of but little use if in other localities they are equally loosely obtained. I shall be glad if any of your readers can give me information on the subject.

I am, etc.,

ZERO.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

IT is proposed that the rural sanitary authorities of East Stoneham, Horsham, Steyning, and Thakeham, and the urban sanitary authorities of Worthing and Littlehampton, shall combine in the appointment of a medical officer of health.

THE ENNIS BOARD OF GUARDIANS have voted the maximum superannuation allowance, based on the average emoluments for the last three years, to Dr. Charles Cullinan, who has resigned as medical officer of the Crusheen Dispensary District from ill-health.

THE DANGER OF AN INTERMITTENT WATER-SUPPLY.

DR. ALFRED CARPENTER, of Croydon, writes:—A correspondent, "A Medical Officer of Health," asks the grounds upon which the danger of typhoid fever arises in connection with an intermittent water-supply. The greatest danger arises from a constant pressure-service being turned to do duty for an intermittent supply-service. The theory of a constant supply-service is, that the service-pipes shall be always full under a moderate pressure, so that pure water may be ready at all times for use. One has only to turn the tap, and out rushes the water direct from the main, without the intervention of any cistern. It is acknowledged, and does not want demonstration, that pure water rapidly absorbs noxious elements from the air, and that, if the water have not been exposed to this chance in a cistern, it cannot be so contaminated.

Hence the demand for constant pressure-service, and the determination of the legislature that it shall be provided. Parliament may order, but local authorities occasionally over-ride Acts of Parliament and the

* *Treatise on Pneumatic Aspiration.* By G. Dieulafoy. London: Smith, Elder, and Co. 1873.

desires of those anxious for the welfare of their neighbours. It happens, therefore, that the constant service is not always forthcoming, and the water, being turned off, becomes intermittent, and is supplied only at the will of the local authority. A new state of things then arises. Those who occupy the highest portion of the district supplied have the water which was contained in their mains and services abstracted by those who live at a lower level; and, as nature abhors a vacuum, the air rushes in at every place which affords an entrance. Nearly all the urinals supplied to those districts which have a constant service allow this entrance, and those who have occasion to use public urinals are well aware of the smells which pervade those places. The air is loaded with animal impurities, which may or may not come from a typhoid or scarlatina convalescent; if they should do so, the spread of those diseases is made easy, for, when the water is again forthcoming, it rapidly absorbs the now imprisoned air, and may or may not be drank by those upon that particular main.

So again, in some districts, screw-down taps are used to the water-closets. If the service be intermittent, the user does not know that he has left the tap open; and I have detected fresh fecal matter in water drawn from a tap, the contamination of which could only have come from a neighbouring water-closet. Then also fractures occur in service-pipes from violence, or holes may have formed from oxidation; this latter action rapidly occurs where a service-pipe has been laid down across an unused cesspool. Whenever the service becomes intermittent, moisture laden with organic matter of the most objectionable description is drawn into the service-pipe.

These are not fancied dangers. I have before me now a bottle of water, brought to me this morning, drawn from a constant pressure service-pipe, containing matter which must have obtained entrance through a defective service-pipe, which has been laid in an impure soil.

I have pressed the consideration of this matter upon the local authority of my own district for many years, in consequence of the occurrence of disease or temporary disorder among the members of particular households in which the most perfect sanitary arrangements existed, but who had reason at times to complain that something was wrong with the water, a complaint which did not extend beyond that particular house or set of houses. Eventually my complaints were investigated by the then engineer, Mr. Baldwin Latham, and he reported most fully upon the matter, and pointed out the ease with which such contamination could arise. Water drawn from a service which passed near to a slaughter-house was shown with blood-corpuscles in it, and other water stinking of coal gas was exhibited; both were drawn from constant pressure service-pipes.

This report was presented several years ago; but the local authority has not yet taken measures to prevent the use of screw-down taps, or provide proper valves to prevent the reflux of air into the mains from all the dangerous sources which exist in their district.

My attention was most forcibly drawn to this matter by the coincidence of several cases of illness, at some distance from each other, which occurred in houses at the highest points of the water-service, the inhabitants of which had coincidentally complained that the water provided for their use was contaminated; but such contamination had not been perceived by nearer neighbours. I had at first declared that, as their water-supply was the same as their neighbours', the evil could not be present in the water; but further investigation showed the error of this opinion.

AREA OF SLEEPING-ROOMS IN LODGING-HOUSES.

SIR,—May I ask for a little information in connexion with the measuring of the area of sleeping-rooms in lodging-houses, etc.? It is no doubt the duty of the medical officer of health to calculate and apportion the number of inmates to each room; but whose is the duty to measure? At our meeting in London in August, the duty was said to belong to the inspector of nuisances. Our clerk here states it to belong to the medical officer, although the inspector should render every assistance. Asking which is right, I am, etc.,

E. W. S. DAVIS, Medical Officer of Health.

Duffryn Ifrwd, Mountain Ash, Oct. 1st, 1873.

* * * We really cannot say whose duty it is to measure the rooms: it must depend, we presume, on the bye-laws in force in any district. Our correspondent seems to draw no distinction between lodging-houses and common lodging-houses; and if, as he acknowledges, it is his duty to apportion the number of inmates to each room, how can he do it without measurement? but such questions should never arise. It bespeaks inspectors unfit for any duty at all, if they are to measure out strictly what is and what is not within the scope of their duties. If it were a question of any difficulty, or one to come before the magistrates, the surveyor ought to do work which is within his province as a skilled

measurer. In ordinary cases, the officer of health would ask the inspector of nuisances, or the person appointed as inspector of common lodging-houses, or of lodging-houses, to give him the dimensions of the rooms. There will be but a poor and inefficient supervision of the public health if inspectors recoil at the labour of applying a rod or a tape to a wall or a floor.

REPORTS OF MEDICAL OFFICERS OF HEALTH, 1873.

THIS year will be notable as the first in which a large number of sanitary authorities appointed under the Public Health Act, 1872, will receive reports on the sanitary condition of their districts. In the metropolis, and some large boroughs and towns, such reports have for some time past been annual productions; but, in the majority of places, no sanitary inspections have been made, except on the occurrence of some local epidemic. One of the metropolitan reports before us is that of Dr. Meymott Tidy on the sanitary condition of Islington. This parish, during the year 1872, seems to have been remarkably healthy, and free from any outbreak of epidemic disease, except whooping cough; the annual death-rate also was smaller than it had been in any of the ten preceding years, namely, 18.2 per 1000 of the population. Dr. Tidy takes the opportunity of entering a strong protest against the provisions of Dr. Brewer's "Metropolitan Buildings Act Amendment Bill," relating to the retention of private slaughter-houses in the metropolis; and he points out to the vestry, who had given their support to this bill, that, in so doing, they really favoured institutions which gave facilities for the slaughtering of diseased animals, and for the disposal of unwholesome meat, and from which vast quantities of filthy washings passed daily into the sewers. He declares emphatically that such places are, and must remain, nuisances in the worst sense of the word, and expresses the conviction that such a system of sanitary inspection as would tend to maintain them in an efficient condition is practically impossible. A considerable portion of the report is occupied with the consideration of the best method for securing the efficient removal of house refuse and ashes. The principal remedies proposed for the present defective system are, that the work should be under the immediate and entire control of the Sanitary Committee and its officers, that the contractors should only receive payment for the actual work done, and that there should be several depôts for the temporary disposal of the refuse in easily accessible situations. In his position as analyst, Dr. Tidy deals with the question of adulteration of food; he refers to two cases in which a magistrate refused to convict, on the ground that he did not consider the removal of cream from milk to be an "adulteration" under the recent Act; and Dr. Tidy urges that one definition of adulteration should be "the subtraction of the active principles or principal constituents of an article." The only ingredients with which milk was found to have been adulterated were water and a little salt.

Amongst the reports from the country districts, many are drawn up with evident care. As a rule, topographical and geological descriptions of the districts, and the various employments of the population, are given in detail; mortality statistics, and, in some cases, the prevalence of various forms of disease are noted; and then follow accounts of the sanitary conditions of the localities, and the remedial measures required. Mr. Haviland's report on the Northamptonshire area shows that a large amount of work has been done in that widely spread district, and inspection appears to have been made wherever even a single case of infectious disease was known to prevail. The danger of imperfect drains, which, by allowing their contents to stagnate, become in fact elongated underground cesspools, is impressed upon the authorities; and, with a view of dealing with the excremental nuisances so generally prevailing, Mr. Haviland has induced the Wellingborough authority to carry out the dry-earth system. We are glad that a trial of this system on a large scale is likely to be undertaken, for more experience of its working is much needed. In Northampton itself, Mr. Haviland has shown his determination to perform the most vexatious of his duties, and to his energy we must attribute the success achieved a few weeks ago, when the Improvement Commissioners were in a body summoned before the bench of magistrates, and ordered, within a given period, to perform certain works of construction which Mr. Haviland had declared necessary to the health of the town. Dr. S. H. Steel's report on Abergavenny is the more interesting, because in it he draws a comparison between the sanitary condition of the place at the present date, and that obtaining in 1847, when he thoroughly inspected it for sanitary purposes. Since the water works and sewerage works have been carried out—improvements which have caused a remarkable diminution of the prevalence of enteric fever, and in connection with the drying of the subsoil by deep drainage—there has been a favourable decrease in the phthisis death-rate. Still, much yet requires to be done

in Abergavenny; some of the streets are narrow and ill-ventilated, water-closets are without a water-supply, premises are undrained, and the system of sewerage itself is imperfect as regards ventilation. The sanitary condition of the parish of Gelligaer, in the County of Glamorgan, forms the subject of a report by Dr. T. H. Redwood. The high rate of wages now prevailing there is stated to have led to increased intemperance, and to have injuriously affected the physical as well as the moral well-being of the miners. The housing of the population needs improvement, rivers and brooks are polluted, sewers and drains are remarkable only by their general absence, closet accommodation is glaringly insufficient, and in the town itself, which is indeed the most unhealthy part of the district, the principal source of drinking water is fouled by churchyard drainage. Altogether, the publication of reports such as those which we have briefly noticed must, in the end, have a beneficial influence upon the sanitary condition of the country, and they will tend, in these days, when so much is made subservient to education, to teach people some of the first principles of public health.

IN MEMORIAM JOHANNIS MURRAY, M.D.,

Immaturâ morte prærepti,

Id. Octob. M.DCCC.LXXIII.

"Ον οί Θεοί φιλοῦσιν ἀποθνήσκει νέος.

Eheu quam tenui pendent mortalia flo!

Quam subito casu spes bene fulta ruit!

Nil valuit virtus, et nil animosa juvenis,

Quidquid vita boni redderet apta frui.

Ingenio præstans, acer perferre labores,

Candidus in socios, et sine fraude fuit.

Nil pollent mæsti contra tua fata sodales,

Quamque tua ars alius non tibi præbet opem.*

Nec mora quâ nato suprema det oscula mater,

Nec datur ut claudat lumina cara pater.

Sed res dispensat divina potentia nostras:

Cur querimur stulte tristia jura Dei?

Cur querimur portum quod jam capit integra navis,

Quod tenuit cursum, quod breve fecit iter?

Te recipit portus dum nos jactamur in alto,

Te sequimur votis. Frater, ave atque vale.

Τί τοῦτο, Θάνατε; Μῶν ἀφαρπάσαι δοκεῖς

Ἰατρὸν ὡδ' ἀνιόντα, ὡς τέχνης φθονῶν;

Οὐκ ἔστι· καὶ γὰρ ἐγγεγραμμένος φρεσὶν

Φίλων, πενήσων, πάντος ἱατρῶν γένους,

Ἀπὼν παρέστι, καὶ σὲ νικήσει θάνατος.

On Monday evening, the remains of John Murray were removed from London, to be laid in their last resting-place in the family vault at Aberdeen. The intimation which we gave, that those who desired to pay a last tribute of respect to their lost friend would assemble for that purpose at the railway station, brought together a gathering so numerous as to give rise to a scene strangely impressive, and so affecting, as not easily to be forgotten. The officials of the London and North-Western Railway Company had, with a kindness much to be appreciated, set apart a platform as free as any part of a great metropolitan station can be from the noise and tumult of those that go to and fro. In this enclosure, so draped as to befit its solemn use, was stationed the funeral car, and here the modest funeral procession drew up, and the shell, covered with wreaths and crosses in flowers, was placed on the car, to be ready for its last journey. A great crowd of mourners was there, not less perhaps than four hundred: many of the best known faces amongst busy London doctors; many old friends in various walks of life; the representatives of many hospitals, especially of those with which John Murray was officially connected, and where he was most intimately known and best loved; a large group of students from Middlesex Hospital, who had early asked to be allowed the privilege of attending; fellow volunteers from the Scottish regiment of which he was one of the medical officers; a body of printers from the JOURNAL office, and others of his humbler friends who were earnest to pay some honour to his memory. This serious, earnest, and deeply moved crowd of mourners, touched by no ordinary grief, gathered in so strange a place of mourning in the dim evening light, closed quietly round in a sombre circle, while a clergyman of the Scottish Church, the Rev. Dr. Oswald Dykes, read aloud some passages from Scripture, and in earnest words that spoke to the hearts of his listeners,

* Dr Murray had charge of the department for diseases of the throat at the Middlesex Hospital.

pointed out that those qualities in their departed friend which had drawn so many of his professional brethren together were qualities which do not die with the body, but have in them a spiritual and immortal life. "He is not all dead; there was a life in him which could not die." No funeral service, perhaps, was ever performed before an assemblage of men more deeply affected by a common grief, or more wholly bound by a common affection. The gathering was unprecedented in this city; the tribute unaffected and unforced. The sounds of busy, noisy life, which at intervals broke upon and partly drowned the voice of the minister, were unwonted at such a moment, but not wholly inappropriate accompaniments of a memorial service over the remains of one prematurely carried off in the midst of an active career, and who lay on his death-bed in a study full of half-finished labours, and surrounded by tokens of his deep sympathy with human progress. It was none the less suitable memorial of his earnest simple character that there were none of the trappings of grief, and all its reality; little of pomp, and nothing of show; but much that was impressive, sincere, and heartfelt.

The funeral took place on Wednesday, at Aberdeen. The company, which was a very large one, including the Lord Provost and a number of leading citizens, besides professors in the University and medical men, assembled at 35, Belmont Street, the residence of Mr. Andrew Murray, the father of deceased. The funeral service was conducted by the Rev. J. M. Sloan, of the Free South Church. The chief mourners, besides the father and three brothers of the deceased, included his uncles, Dr. Murray, late Inspector of Hospitals in Bengal; Alexander Murray, Esq., Nethermill; Rev. A. Anderson, Chantry House, Old Aberdeen; James Anderson, Esq., London; etc. The place of interment was Nelfield Cemetery.

Very many letters which we receive this week bear testimony to the wide-spread feeling of regret and sympathy which has been aroused by the announcement of the premature death of the late Dr. John Murray. We have taken the liberty of forwarding extracts from some of them—especially those of Dr. Sanders, Dr. Joseph Bell (Edinburgh), Dr. Gairdner (Glasgow), Mr. Lawson Tait (Birmingham), Dr. Ross (Waterford), and Dr. Wiltshire (London)—to the relatives of Dr. Murray, to whom they cannot fail to give some consolation.

The proposition to place a memorial bust and tablet in memory of John Murray in the Middlesex Hospital, his adopted medical home, and the scene of his chief professional labours during the last seven years, has met with a most hearty assent. Some propose to enlarge the object and character of the memorial. The following will form a committee for the purpose:—Sir William Fergusson, Bart., George Street; Dr. Richard Quain, Harley Street; George Southam, Esq., Pendleton; Dr. Joseph Bell, Edinburgh; Professor William J. Gairdner, Glasgow; Dr. Sanders (W.R.), Edinburgh; William Stokes, Esq., Dublin; Mr. Lawson Tait, Birmingham; Mr. Campbell de Morgan, Dr. A. P. Stewart, Dr. Murchison, Mr. Ernest Hart, Dr. George Johnson, Dr. Morell Mackenzie, Mr. William Mac Cormac, Mr. Callender, Dr. Duckworth, Dr. Ford Anderson, Dr. Liveing, Dr. Cayley, Dr. King, Dr. Silver, Mr. Hepburn, Mr. Morris, and Dr. Edis.

Mr. Campbell de Morgan will act as Treasurer; Dr. Edis, 23, Sackville Street, and Mr. Morris, 19, Bedford Square, as Honorary Secretaries.

At a meeting of the Committee of Council of the British Medical Association, held at the Queen's Hotel, Birmingham, the following resolution with regard to the late lamented Dr. Murray was passed unanimously.

"That the Committee of Council have received with deep regret the announcement of the premature death of Dr. John Murray. In expressing their deep sympathy with the members of his family, they desire at the same time to record their sense of his high personal qualities, and their warm appreciation of the faithful and important services which he rendered to the JOURNAL and the Association."

At a meeting of the Medical Committee of the Middlesex Hospital on October 18th, it was resolved unanimously—

"That this Committee desires to record its deep regret at the loss which it and the hospital have sustained in the death of the late Dr. John Murray. Although Dr. Murray had been but a comparatively short time attached to the hospital, he had rendered great services to it and to the school by his unremitting attention to his duties; while he secured the affection and esteem of his colleagues by his genial disposition and excellent social qualities. The Committee feels that in him the profession has lost one of the most promising of its members."

It was further resolved—

"That a copy of the above resolution be forwarded to the relatives of the late Dr. Murray, accompanied by the expressions of deep sympathy and condolence with them on the severe loss they have sustained."

The Weekly Board of Governors is *especially* summoned for next Tuesday, to pass resolutions on the same subject.

The following resolution was unanimously adopted at a full meeting of the Medical Committee of the Hospital for Sick Children, Great Ormond Street.

"Dr. Murray's colleagues have heard with extreme distress of his almost sudden death. They desire to record their sincere regret for the loss of a colleague who gave high promise, not only of attaining to great eminence, but also of adding to the store of medical knowledge; and they wish further to express their high respect for his character, and for the unwearied zeal and scrupulous conscientiousness with which he performed all the duties of his office.

"They beg leave to tender to his bereaved relatives the assurance of their most hearty condolence with them in this their irreparable loss, and of the share which they take in their sorrow."

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

THE following grace passed the Senate of the University of Cambridge on Thursday, October 16th. That, on the recommendation of the Local Examinations Syndicate, a student, though he is above the age of sixteen, may be admitted to the examination for students under that age, provided that he produces a certificate signed by a graduate of the University, or a member of the medical profession whose name is on the *Medical Register*, that such graduate or member believes him to be *bonâ fide* intending to become a medical student; and that the names of students admitted under this condition and satisfying the Examiners be sent to the Registrar of the General Medical Council, but that the ordinary certificates be not granted to such students.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 16th, 1873.

Eastall, Henry Francis, Shooter's Hill Road, S.E.
Waller, William Bevan, Milner Square, Islington

The following gentleman also on the same day passed his primary professional examination.

Crawshaw, Benjamin, London Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BAWNBOY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballinamore Dispensary District: £90 per annum and fees. Applications, 5th November, to James M'Govern, Clerk of Union.
- BIRMINGHAM AND MIDLAND EYE HOSPITAL—House-Surgeon: £80 per annum, apartments, board, and attendance.
- BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Acting-Physician: Acting-Surgeon: Surgeon-Dentist: Extra Acting-Physician: £60 per annum. Applications, 4th November.
- BOSTON UNION—Medical Officer and Public Vaccinator for the Shirbeck District: £55 per annum and fees. Applications, Oct. 31st, to Henry Bates, Clerk.
- BRANCEPETH COLLIERY, near Durham—Medical Officer.
- BRIDGWATER UNION—Medical Officer for District No. 2: £70 per annum.
- BRISTOL HOSPITAL FOR SICK CHILDREN—Two Honorary Medical Officers.
- BRISTOL ROYAL INFIRMARY—Physician.
- CARMICHAEL SCHOOL OF MEDICINE, Dublin—Lecturer on Chemistry.
- CASTLE WARD RURAL SANITARY DISTRICT—Medical Officer of Health for the Ponteland Division.
- CASTLE WARD UNION—Medical Officer for the Workhouse: £30 per annum.—Medical Officer and Public Vaccinator for the Ponteland District: £20 per annum, and fees. Applications, 1st Nov., to Thomas Arkle, Clerk to Guardians, Highlaws, Morpeth.
- CHERTSEY, EPSOM, REIGATE, and DORKING Rural and Urban Sanitary Districts—Medical Officer of Health: £600 per annum for three years. Applications, 1st Nov., to F. H. Beaumont, Esq., Reigate.
- CLIFTON UNION—Medical Officer to the Workhouse: £130 per annum.
- DALTON-IN-FURNESS URBAN SANITARY DISTRICT—Medical Officer of Health: £60 for one year. Applications, 31st instant, to F. H. Clark, Clerk to the Authority.
- DAVENTRY UNION—Medical Officer for District 5: £30 per annum, and fees. Applications, 28th inst., to G. Norman, Clerk.
- DERBY URBAN SANITARY DISTRICT—Medical Officer of Health: £20 for one year. Applications, Oct. 29th, to Joseph Jones, Clerk to the Authority.

- ETON RURAL AND URBAN SANITARY DISTRICTS—Medical Officers of Health: £100 and £20 for one year. Applications, Nov. 3rd, to K. H. Barrett, Esq., Slough.
- GOOLE and SELBY RURAL SANITARY DISTRICTS, and Selby Urban Sanitary District: £500 per annum. Applications, 30th October.
- GREAT YARMOUTH HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
- GUEST HOSPITAL, Dudley—Honorary Surgeon. Applications, 31st instant, to F. Poole, Secretary.
- HALIFAX INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £40 per annum, with yearly increase, board, lodging, and attendance. Applications, 28th instant, to Dr. Alexander.
- HOSPITAL FOR SICK CHILDREN—Assistant-Physician.
- KENT and CANTERBURY HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 28th Nov., to Thomas Southey, Sec.
- LEEDS PUBLIC DISPENSARY—Senior Resident Medical Officer: £120 first year, £140 second and subsequent years, rooms, board, etc. Applications, Nov. 6th, to John Horsfall, Esq., 31, Albion Street, Leeds.
- LINCOLN GENERAL DISPENSARY—House-Surgeon: £150 per annum, furnished apartments, etc. Applications, 28th inst., to James Ward, Secretary.
- LIVERPOOL DISPENSARIES—Assistant House-Surgeon: £108 per annum, furnished apartments, etc. Applications, 29th inst., to Wm. Lister, Secretary.
- METROPOLITAN DISPENSARY AND CHARITABLE FUND, Fore Street, Cripplegate—Physician. Applications, Nov. 15th, to W. H. Goodchild, Secretary.
- MIDDLESEX HOSPITAL—Assistant-Physician.
- MIDDLESEX HOSPITAL MEDICAL COLLEGE—Joint Lecturer on Pathological Anatomy. Dean.
- NEW ROSS UNION—Medical Officer for the Templedugan Dispensary District: £50 per annum. Applications, 30th inst., to E. Kavanagh, Hon. Sec.
- NORTHERN INFIRMARY, Inverness—House-Surgeon and Apothecary: £50 per annum, board, etc. Applications, 13th Nov., to Alexander Dallas, Sec.
- OAKENSHAW COLLIERY, near Durham—Medical Officer.
- QUEEN'S COLLEGE, Galway—Professor of Materia Medica. Applications, 27th inst., to The Under Secretary, Dublin Castle.
- ROYAL FREE HOSPITAL—Senior House-Surgeon: £104 per annum, board and residence. Applications, 29th inst., to James S. Blyth, Sec.
- ST. ETER'S HOSPITAL FOR STONE, Berners Street—Clerk and Dispenser: £100 per annum.
- SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Surgeon.
- SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon: £80 per annum, and board. Applications, 5th Nov., to Alfred Rooker, Sec.
- STROMNESS, Orkney—Parochial Medical Officer. Applications to W. Ross, Chairman.
- SURREY HOUSE OF CORRECTION, Wandsworth—Medical Officer.
- SWANSEA RURAL SANITARY DISTRICT—Medical Officer of Health: £250 for one year, and private practice. Applications, 1st Nov., to G. B. Haynes, Clerk to the Authority.
- THETFORD RURAL SANITARY DISTRICT—Medical Officer of Health: £70 for one year. Applications, Nov. 3rd, to E. N. Cole, Clerk to the Authority.
- TURTON URBAN SANITARY DISTRICT—Medical Officer of Health: £10 per annum. Applications, 29th inst., to Thomas Dawson, Clerk to Authority, Turton, near Bolton.
- WESTMINSTER HOSPITAL—Surgeon; Assistant-Surgeon. Applications, 28th instant.
- WEST SUSSEX INFIRMARY, Chichester—House-Surgeon and Secretary: £100 per annum, board, lodging, etc. Applications, 1st November, to P. A. Murdoch, M.B., House-Surgeon and Secretary.
- WILTSHIRE PAUPER LUNATIC ASYLUM, Devizes—Medical Superintendent: £600 per annum, furnished apartments, etc. Applications, 28th inst., to A. Grant Meek, Esq.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- LESH, W. J. H., M.R.C.S., L.R.C.P.Ed., L.M., appointed Medical Officer to the Fyfield District of the Andover Union, *vice* Hammond, resigned.
- *PARTRIDGE, Thomas, L.K.Q.C.P. and M.R.C.S.E., appointed Medical Officer of Health for Stroud and Bisley Urban Sanitary Districts.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

- ELLIS.—On October 21st, at Reynoldston, Gower, near Swansea, the wife of *Henry Vause Ellis, M.B., of a daughter.
- HASLEHUST.—On October 10th, at The Lodge, Claverley, near Bridgnorth, the wife of T. W. Haslehurst, Esq., of a son.
- KERR.—On October 18th, at Markyate Street, near Dunstable, the wife of *Norman S. Kerr, M.D., F.L.S., of a daughter.
- MORISON.—On October 19th, at Hamilton House, Pembroke, the wife of Joshua W. Morison, Esq., of a daughter.

MARRIAGE.

- WEDDELL—RATCLIFF. On September 3rd, at Holy Trinity Church, Burton-upon-Trent, by the Rev. W. F. Drury, M.A., Vicar, assisted by the Rev. Jno. Auden, M.A., Vicar of St. John's, Horninglow, James Call Weddell, M.D. and C.M., Birmingham, second son of J. C. Weddell, Solicitor, Berwick-upon-Tweed, to Emily Martha, third daughter of the late James Ratcliff, Burton-upon-Trent.

DEATHS.

- GODWIN, James, Esq., Surgeon, at Twyford, near Winchester, on October 3rd, aged 42.
- GORDON, Adam, Esq., M.R.C.S.Fng., for many years Parochial Medical Officer and General Practitioner in South Ronaldshay, Orkney, aged 55, on September 25th, suddenly, of heart-disease (angina pectoris).

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Churton, of Erith, will bring forward a Case of Suppurative Pericarditis, etc., with Specimen; Mr. A. E. Durham, F.R.C.S., "A Case of Foreign Body in the Pleura, accidentally introduced through opening made for Empyema, and successfully removed; Dr. Routh, "A Case of Stone impacted in Kidney, with Specimen"; Dr. Purcell, "A Specimen of Calculus in the Pelvis of Kidney."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Miller Ord, "On a Case of Duchenne's Pseudo-hypertrophic Muscular Paralysis"; Dr. C. J. B. Williams (President), "On the Acoustic Principles and Construction of Stethoscopes and Ear-trumpets."

FRIDAY.—Clinical Society of London, 8.30 P.M. Sir Wm. Gull, "On Anorexia Hysterica, and on a Cretinoid State supervening in the Adult"; Dr. Guinier, of Montpellier, will show a New Method of Gargling the Larynx, illustrating this upon himself.

EXPECTED OPERATIONS AT THE HOSPITALS.

ROYAL FREE HOSPITAL, Saturday, October 25th, 2.30 P.M. Excision of Tongue, by Mr. Gant.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MACKINTOSH's request shall be complied with.

MR. A. McKENAN (Belfast) appears to have been treated with great, but no doubt unintentional, injustice. He should write to the editor privately.

DR. DERRIS (Rugby) writes to express the opinion, that the case recorded last week as being believed by the author of the paper to be one of "Abscess of Brain in a Child," was in truth only an example of acute hydrocephalus in the third stage.

MEMBER OF THIRTY YEARS' STANDING has omitted to furnish his name.

WE are much obliged to Mr. Michael for the prompt and valuable information.

ERRATA.—At p. 463, second line of second column, for "graver operations," read "other grave operations"; and in the same column, five lines from bottom, for "forms of disease," read "germs of disease".

DR. WEBB (Preston Pans).—There is a swindling university which has a nominal seat in Philadelphia, and which sells diplomas *in absentia*. The Charter has been annulled by Act of Congress, and the diplomas obtained from it by purchase are not registrable in this country, or recognised in courts of law.

— I did not write the article you copied from the *Cork Examiner* in your publication of the 18th inst., nor would I have sanctioned the publication of such a report. I am, etc., N. J. HOBAR, M.D.

8, Princes Street, Cavendish Square, W., Oct. 22nd, 1873.

The notes of "A Case of Rupture of the Heart by Violence," the third person I could throughout have been substituted for the first, as is usual in our hospital reports. The alteration was only partially made in the MSS.

DR. STONE AND "OUR MEDICAL COLUMN".

At the moment of going to press, and after the foregoing pages have been despatched, we have received an advance copy of the *English Mechanic* for October 24th, in which we find it stated that, "not liking a weekly 'pulling over the coals,' and not wishing to trample professional etiquette under feet, Dr. Stone last week proposed a modified plan. We think, however, it is better to drop the Medical Column as a distinct department of the paper, and to insert any suitable inquiries that may reach us appertaining to life, health, and disease, as ordinary queries, leaving them to be answered by Dr. Stone or any other competent authority."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MR. G. TURNER'S (Portsmouth) letter shall be handed to the Parliamentary Bills Committee. Most of the difficulties mentioned arise from defects in the bye-laws, and in the determination of the authority to allow excessive terms of indulgence. They should consult some good sanitary lawyer, such as Mr. W. H. Michael, who would frame improved bye-laws and remove most of the suggested difficulties.

EXCELLENT INTENTIONS.

A SINGULAR tribute to the memory of the late Baron Liebig is published, in metrical form, in the *Grant College Students' Journal*, Bombay, No. 6, September 1873. The stanza runs thus—

"Had I but angels' wings, I straight would fly
To where, for aye, embosomed thou dost sleep;
Weave thee a crown of *Champaka* of my land;
The milk-white *Mogra* circle round thy neck;
And scatter roses o'er thy marbled dome!
For such, great Priest of Nature, is thy meed!"

We understand this to imply the most amiable intentions towards the great deceased chemist.

THE "REGULAR DEPARTMENT".

In a biographical memoir of Professor Redwood, in the last number of the *Chemist and Druggist*, it is stated that—"The subject of our narrative had at that time passed the period of his three years' engagement. He had gone from the 'putting-up counter' to the infusion and decoction department, and from thence to the 'regular department', which comprised the sending out of medicines that were supplied regularly every day, or every two or three days, to customers who took their medicine as they took their food, and thought it equally necessary. In those days medicines were largely prescribed in draughts, for those who could afford the luxury; and it was no unusual thing for the assistant having charge of the regular department to send out daily from ten to twenty sets of four or six draughts to patients who took them either twice or three times a day, and some of whom were thus supplied for years, without intermission. Where are these patients nowadays, or the physicians who prescribed for them? Does even the 'regular man' or his department exist now? We know not, but this we know, that draughts have been to a great extent superseded by mixtures, and mixtures by drops, with increased danger to the patient, and diminished profit to the dispenser."

LIFE ASSURANCE.

SIR,—The London Life Assurance Society, 81, King William Street, E.C., applied to me for a certificate of health for a gentleman proposing to insure in their office. I filled the usual form and sent it to the Secretary through the post. Receiving no fee, in due course I wrote on the subject, and received a lithographic reply informing me that I must claim my fee from the patient, and that the Society never paid for certificates from medical men. Imagining that such a practice on the part of assurance companies had become a thing of the past, I think it desirable to make it known through our JOURNAL that there is still existing an office which adopts the plan of first getting a medical certificate for the safe conduct of its business, and then declines to pay for services rendered. I am, etc.,

October 17th, 1873.

W. TOWERS SMITH.

AN APPEAL.

SIR,—After fruitless attempts to procure the admission of my daughter to the Royal School for Officers' Daughters, I now venture to ask the assistance of the Association which you advocate and propound, feeling assured they will not allow a member of the profession to be in difficulties. The British Medical Association will confer a lasting benefit on my daughter, whose schooling they will be the means of advancing. I am, etc.,

H. J. G. ATKINSON, Assistant Staff-Surgeon, H.P.

Lincoln Cottage, Freemantle, Southampton, Oct. 16th.

P.S. The increasing debility caused by paralysis and rheumatism of limbs unfits me for the exertion even of writing: I cannot always hold objects in my hands.

MR. G. NEWSTEAD (Eccleshill).—The only qualifications required for the appointment of a medical officer of health under the regulations of the Local Government Board, 11th November, 1872, are that the officer shall be registered under "The Medical Act of 1858," and shall be qualified by law to practise both medicine and surgery in England and Wales. The Local Government Board may, however, upon the application of the sanitary authority, dispense with the requirement that the officer shall be qualified to practise both medicine and surgery, if he be duly registered to practise either medicine or surgery.

THE CLIMATE OF AUSTRALIA.

SIR,—I should feel thankful to any of your readers who have had the opportunity of knowing, if they would kindly furnish me with their experience of the climate of Australia—I mean more particularly in the neighbourhood of Sydney and Melbourne—also the chances of success a young unmarried surgeon would have in either of those cities. I may mention that I have got friends in both cities, so that I would not go out entirely as a stranger. I should also like to know the scale of fees, and any other information bearing on the subject.

October 1873.

I am, etc.,

INQUIRER.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

THE DISPENSARY SYSTEM.

SIR,—This day commences (October 6th) the working of the dispensary system for the Reading Union. I want the fact recorded, that guardians and medical officers elsewhere may copy this example. In Reading, the proposal to adopt the principle was introduced by J. O. Taylor, Esq., the chairman, in which it was supported by the vice-chairman, R. C. Hurley, Esq. (soon to be elected mayor), and a majority of the Board. I ought also to add that every help has been afforded to the Committee for carrying out the decision by Mr. J. J. Henley, of the Local Government Board. It only remains that the Guardians modify the existing contracts slightly, and which I anticipate being able to report to you that they have done very shortly. After more than thirty years of providing drugs, and dispensing or providing a dispenser, to find at length that "the hour is come" for one's release, I feel hardly able to breathe deep enough. Well, thank God, seriously it is come. Reading, Oct. 6th. I am, etc., T. L. WALFORD.

MR. S. A. LANE ON TERTIARY SYPHILIS.

SIR,—There are two points in the valuable and graphic sketch of tertiary syphilis by Mr. Lane in your columns, to which, with some diffidence, I will call attention.

1. If mercury cures secondary syphilis by preying on that constituent of the blood which acts as the "gluten" of the "syphilitic fermentation", it would follow that a mercurial course given to a person suffering from Hunterian chancre would serve as a tolerably efficient prophylactic against secondary syphilis, or even that an efficient course of mercury administered during infancy would prove a more or less complete protection against the acquisition of future constitutional syphilis, just as vaccination does against small-pox; but in neither case does such a result follow.

2. If tertiary syphilis be a mere ruin left by a storm which itself has passed completely away, how is it that tertiary syphilis should occur, as I have often seen it, unpreceded by any manifest symptom of secondary syphilis? nay, why should it follow, as it sometimes unquestionably does follow, so closely on primary syphilis as to commence, and even attain a considerable development, before the primary lesion has had time to heal?

As to this important question of the relation of tertiary to secondary syphilis, my recollection of my own experience has induced me to take a different view of the determining influence which regulates the phase (secondary or tertiary) under which syphilitic phenomena are developed in individual cases, although I must admit that I have not yet collected any precise statistics on the matter. This determining influence to which I refer is the age of the patient.

This theory of mine, should it chance not to be new, is at all events one that I have never yet heard expressed. It comes to this: that secondary syphilis is the constitutional syphilis of youth; tertiary syphilis is the constitutional syphilis of middle age and old age; and equally so (whether the primary syphilis giving rise to it be ancient or recent, and whether (if ancient) the phenomena of secondary syphilis have or have not preceded, in youth, the development, at a later age, of tertiary syphilis.

The reason, in my view, why tertiary syphilis often, though by no means invariably, is preceded by secondary syphilis, while secondary syphilis is never preceded by tertiary, is not because the tertiary phenomena are either a later and fuller development, nor yet because they are mere sequelæ of the later phenomena, nor even because they are mere results of a depraved condition, which itself is no longer truly syphilitic, but because the patient must be older in order to become the subject of tertiary phenomena than he was when capable of producing secondary phenomena. If this be so, the terms secondary and tertiary, as applied to the phenomena of syphilis, cease to have any scientific value.

I of course claim a certain amount of variation of the limit of age, which I have inferred as dividing the secondary from the tertiary phenomena, since age, for the purposes of such a theory, is a question not of the years an individual may be able to number, but of the extent to which, in ordinary parlance, he has "aged".

I am, etc.,

BALMANN SQUIRE.

9, Weymouth Street, Portland Place, October 11th, 1873.

ELECTRISATION OF THE UTERUS.

SIR,—Since my friend Dr. Beverly Morris's short paper to the Association, and the subsequent correspondence which appeared in your columns, I have been applied to by several gentlemen for information relative to the instrument he described for producing premature labour, etc. The electro-galvanic conductor is a modification of Dr. Radford's instrument for producing uterine contraction in *post partum* hæmorrhage, for the invention of which he deserves of the profession and many patients the highest meed of gratitude and honour; and I am glad to have an opportunity of personally stating that under most distressing circumstances I have been repeatedly indebted to his invention in preserving the lives of patients under my treatment.

I have no doubt but for the excessive bulk and somewhat complex form of Dr. Radford's battery, his uterus-stimulator would have been more commonly resorted to in general practice. To remedy that inconvenience, I had made by Grey and Selby of this town, for my own use, the more portable and comfortable instrument which Dr. Morris described, which with Gaiffe's small battery may be conveniently carried in the pocket.

For uterine examination, production of labour, etc., the conductor may be passed through a medium-sized glass or other speculum, so as to obtain, during manipulation, a view of the undilated os. My modified instrument has of course all the advantages of Dr. Radford's original one for giving shocks to the uterus, to cause its immediate contraction in *post partum* hæmorrhage; whilst when dilatation of the os is required in producing premature labour, the spherical tip may be screwed off and changed for the small cone or the plain blunt point, with which it has to some extent the advantage of being usable as an uterine sound; whilst the neater size and improved curve of the stem admits of its ready passage through a speculum without the light being obstructed. By using Gaiffe's battery, with the box-case slightly altered, so that the lid may be closed during operation, it becomes less formal in appearance at the bedside, and consequently less annoying to timid patients not under anæsthesia.

The improvement in the case of this battery is quickly effected by first wrenching off the wooden stop, stuck on by the maker inside to prevent the lid being closed whilst the battery is in action (a caution necessary only to a very ignorant or careless person). Next, bore three small holes through the lid vertically, over those made for inserting the pegs at one end of the conducting cords for connecting the battery with the handles, etc. The pegs may then be inserted through the lid

whilst closed and the battery is in action instead of its being unnecessarily exposed.

In conclusion, I must in justice give credit to Messrs. Grey and Selby, the makers, for having produced a superiorly finished article, which they offer at a reasonable price. I am, etc., JNO. VAKLEY.

Nottingham, October 12th, 1873.

AFRICAN FEVER.

THE advice which Dr. McCormac (Belfast) tenders to Sir Garnet Wolseley, and the officers and others of the Ashantee expedition, has much good sense in it, if little novelty. His ideas of the treatment of African fever, however, are heroic; and we should dispute his dictum as to the general acquiescence in favour of blood-letting and active aperients. He writes:—

"The doctrine and the practice of medicine, for well-nigh two thousand years, have decided with tolerable unanimity that fever, when it does ensue, should, in general, be treated with more or less depletion. Bleeding will not remove the terrible reaction attendant on African fever; but a dozen or twenty ounces taken from the arm of a full-blooded, robust European will tend to abate that reaction, and help to keep it in bounds compatible with life. There cannot be a question about the propriety of clearing out, with some simple and sufficiently active aperient, the long tract of the intestinal canal. Sometimes, this being premised, a smart emetic will check the further progress of the fever at once. If not, I would administer quinine in twenty-grain doses—preferably during the remission, if happily a remission of the fever ensue. The hair should be cut or shaved, cold applications applied to the head, and a sheet wrung out of cold water to the body generally. The air must be carefully renewed, and the insatiate thirst properly appeased. Generally the fever abates, when it does abate, as rapidly as it began; but sometimes the remissions lead inexperienced persons to imagine—too often most erroneously—that the fever has departed altogether. The utmost prudence, therefore, must be exercised, since an ounce of solid food, premature effort, any incaution, in fine, may cost a life. Relapses, too, are not unrequent. In short, the convalescence, when convalescence happily ensues, has to be as carefully watched and diverted as the fever itself. Occasionally, however, the fever runs a more protracted course, and the sufferer then sinks into a condition of excessive prostration. In no case must watchfulness be omitted or hope given up—at least while life endures. It is hardly necessary to observe that in cases like these due warmth must be maintained, and such sustenance and stimuli had recourse to as are most judicious, practicable, and expedient to employ. The cummer-band or waist-belt, and the avoidance of evening and night-chills, prove great preservatives against dysentery. As for the actual treatment of dysentery, the same general rules—at least during the inflammatory period—subsist as with regard to fever itself: otherwise, the invaluable aid of topical, warm, moist applications, along with opium and ipecacuanha internally, is now too well appreciated to need insisting upon."

* * We should be glad to hear the views of some experienced African medical officers on this subject.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Oct. 15th; The Anti-Gam-Law Circular, Oct. 18th; The Northern Echo, Oct. 17th; The Daily Post, Oct. 21st; The Bedfordshire Mercury, Oct. 18th; The Eastern Daily Press, Oct. 17th; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. T. Grainger Stewart, Edinburgh; Dr. George Johnson, London; Dr. Lombe Athill, Dublin; Dr. J. Althaus, London; Dr. Jacob, Dublin; Mr. Balmanno Squire, London; Dr. Jacob, Dublin; Dr. W. D. Stone, London; Mr. Nicholson, Hull; Dr. Kelly, Taunton; Dr. Sargeant, London; Dr. Rutherford, London; Dr. Spiegelberg, Breslau; Dr. Davies, Duffryn; Mr. Purves, St. Andrew's; An Associate; Mr. W. H. Michael, London; Dr. Ogston, Aberdeen; The Secretary of the Royal College of Surgeons of Edinburgh; Dr. Rumsey, Cheltenham; The Secretary of the Clinical Society; Dr. Alexander Bennett, Edinburgh; Mr. Lawson Tait, Birmingham; Mr. Woodman, Exeter; Dr. Cayley, London; Dr. Holmes, London; Mr. Southam, Manchester; Mr. Partridge, Stroud; Mr. Randolph, Milverton; Mr. Sympton, Lincoln; Dr. D. Goyder, Bradford; M.R.C.S. Eng. The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. F. J. Brown, Rochester; Dr. Shann, York; Mr. Garman, Wednesday; Mr. Benson Baker, London; Mr. Harry Leach, London; Dr. Norman S. Kerr, Dunstable; Dr. James Ross, Waterfoot; Dr. Duffin, London; Dr. Macnamara, Dublin; Mr. Fairlie Clarke, London; Dr. Dieulafoy, Paris; Dr. Lonsdale, Carlisle; Mr. H. Nelson Hardy, London; Mr. Jeaffreson, Newcastle-upon-Tyne; Dr. Weir, Preston; Mr. Pans, N.B.; Dr. J. W. Moore, Dublin; Dr. Bryan, Northampton; Dr. Brown, Preston; Dr. Hobart, Cork; Dr. Creighton, London; Dr. Bradbury, Cambridge; Mr. Lawson, London; Dr. Styrap, Shrewsbury; Mr. Morison, Pembroke; The Secretary of the Royal Medical and Chirurgical Society; Dr. Procter, York; A Correspondent; Dr. C. Parsons, Dover; Mr. Johnston, West Bromwich; Our Dublin Correspondent; Dr. Edis, London; Dr. Farquharson, London; Dr. Angus Mackintosh, Chesterfield; Mr. Wright, Leeds; Mr. Callender, London; The Secretary of the Pathological Society; Dr. Dukes, Rugby; Mr. A. McKewan Belfast; Dr. Rutherford, London; etc.

BOOKS, ETC., RECEIVED.

On Accelerated Pulse in Consumption. By Edward Williams, M.D. Colchester 1873.
The Fourteenth Annual Report of the Convalescent Society for Newcastle-upon-Tyne and the Counties of Northumberland and Durham. Newcastle-upon-Tyne: 1873.

CLINICAL LECTURES

ON

THE TREATMENT OF OPERATION WOUNDS.

*Delivered at St. Bartholomew's Hospital, London.*By GEORGE W. CALLENDER, F.R.S.,
Surgeon to the Hospital.

I.—On Operating without Waste of Blood.

GENTLEMEN,—You are so accustomed to the recoveries which follow amputation and other operations, that it may be a surprise to some of you to hear it stated that there must be a considerable death-rate after operations, especially after amputating at the thigh and leg, and after the ligation of certain arteries. Now and again, no doubt, a patient must sink under a severe injury, or dies exhausted after an operation for the treatment of some chronic malady, but even in the face of such risks as these, there has been a death-rate in my wards after all operations, excluding hernie, of but three per cent.; and for four and a half years there has not been one patient lost as a consequence of amputation, although during that time, under Sir James Paget or myself, thirty-five consecutive amputations have been treated in the same wards.

I notice that in one of the recently given Introductory Addresses it has been stated that the death-rate after amputations in the largest metropolitan hospitals is one in three; and, further, that there is reason for believing, for some operations, that the death-rate, instead of diminishing, is yearly becoming greater; and, further still, I see that in the same address it is thought necessary to ask—if hospital surgeons remain content in losing one-third to one-half of all amputations and nine-tenths of some. In support of these statements, the figures and the accusations against large hospitals which were introduced by the late Sir J. Y. Simpson are quoted; and it is intimated that in the aggregation of patients in such hospitals is to be found the cause of this great mortality.

Now, I have already written that Sir J. Y. Simpson's statements are misleading, and I think I have exposed some of their fallacies, but, if they are still to be used in argument as accepted facts, and are not discredited by other hospital surgeons, then I claim that we, at least, may be divorced from so-called large and metropolitan hospitals, for I say of this, which, of old hospitals, is the largest and most ancient, that no patients can recover better than do those who lie in its wards.

It is not, in my experience, in hospitalism, that the cause of a high death-rate after operations is to be sought. But on this occasion I do not intend, in any direct way, to investigate the causes of such a death-rate, or to excuse it, supposing it to exist; for I propose, rather, to try to explain to you how it is that the recoveries we obtain are to be accounted for, and I think you will readily see that the results are due to a number of influences which have each very carefully to be considered.

If, then, you would take pains to ensure that your operations shall do well, you must adopt a code with some such headings as the following:

1. Leave nothing to chance.
2. Scrupulously prepare your patient.
3. Carefully locate your patient.
4. Attend strictly to details of treatment at and after operation.

On three of these counts I shall now say little. The first commends itself—as it foretells the others in my order, so it should always be uppermost in your thoughts. Those of you who have acted as my dressers know how important the second is held to be; how systematically each patient is examined, with the aid of the physician if a doubt exists as to the condition of any important organ; and how a record of pulse, of temperature, and of respiration is prepared before each operation to guide us in our estimate of the value to be set upon subsequent variations. But, further, in many apparently trifling details, the preparation of a patient has to be carefully considered, and in illustration of this let me ask you to remember that the child who was yesterday operated on for hare-lip had been, so to speak, trained by Mr. Champneys for subsequent treatment, having been accustomed for some day or two previously to the pressure and discomfort of the straps of plaster, which, as you saw, were needed after the operation to steady the two sides of the wound. The child fretted but little after the operation, because it

was already familiar with one, at least, and that probably the most irksome, of the necessary holdfasts.

Nor is the locating of a patient to be neglected. Never should you allow an important operation to be placed, for instance, between profusely suppurating wounds; beforehand the question of the bed which the patient is to occupy should be carefully decided on.

But I do not propose to-day to speak to you in detail upon these points, as it is my intention to pass rather to the consideration of the fourth of my headings—that which relates to the attention which must be given to details of treatment at and after operation.

These details may be considered thus:

1. To avoid waste of blood.
2. To ensure rest and ease.
3. To provide for warmth, cleanliness, and dryness.

And to-day the first of these shall have our attention.

It is not well to say off-hand that all loss of blood must be prevented, as is suggested by some advocates of Esmarch's treatment, for I take it that in amputating a limb after a severe injury, sustained by a healthy man, it is right to take away all the blood that the amputated part has claim to, and in such a case unless there have been severe hæmorrhage before the patient is operated upon, it would be undesirable to endeavour to remove from it the blood contained in the limb before amputating; but, with such an exception as this, all surgeons agree that the blood must be jealously husbanded, and certainly that there should be no waste of it. This is no new subject for consideration, and, consequently, in the lapse of time many suggestions have been made with the object of lessening blood-loss at operations.

By some surgeons, arteries have been tied before an amputation has been commenced, as, for instance, the common femoral artery, before amputating at the hip joint; and, quite lately, Dr. Podrazki has advocated (not that I approve of the proposal) tying the lingual arteries before attempting to remove the tongue (*Wiener Med. Wochenschrift*, December 14, 1872), so as to avoid risk from bleeding at the time of its abscission. In the same spirit, it has seemed to me desirable to divide the muscles of the soft palate some day or two before repairing the deformity from a cleft, so as to avoid that loss of blood which, if it be not embarrassing to the operator, is apt to be exhausting to the patient when occurring at the end of a somewhat tedious operation.

A more common help is found in the use of compresses. You saw that bleeding was controlled, in operating upon the hare-lip, of which I have already spoken, by fast-holding each side of the lip with a pair of forceps, adapted to the case, and you will constantly notice how thoroughly bleeding may be restrained during the removal of large tumours by an assistant who follows the knife with a piece of dry linen cloth or some similar appliance by which the surface of the wound is compressed until the vessels can be picked out and twisted. Indeed, in this way, with wounds of small size, as in those for ovariotomy, bleeding may be completely controlled until each vessel is taken up with torsion forceps; and here we may remember that another reason, besides our desire to avoid blood loss, induces us to be very careful against hæmorrhage in these cases: we want to prevent the blood from trickling into the sac of the peritoneum. It does harm there if it get there, that is if it be suffered to remain—as it should not be; so it is well to guard against the occurrence. The well-doing of that patient who suffered from a large renal abscess, which some of you may recollect I opened by incision through the peritoneum, is to be attributed to the care we took to prevent blood or discharge from finding its way into the serous sac; and, if you have the opportunity, as I presume you shortly will, of seeing an operation for gastrotomy on a man suffering from stricture of the œsophagus, whose case Dr. Andrew has asked me to see with him, you will observe how completely the wound through the abdominal wall will be dried before the sac of the peritoneum is incised on the way to lay open the cavity of the stomach.

What I advocate on a small scale, and by the help of torsion, M. Verneuil (*Gazette Médicale de Paris*) has proposed to do, using ligatures, for such large wounds as those made in amputations, for cutting slowly through the tissues he ties each artery and vein as it is divided. In part his object is to save blood, but he further advances a singular reason for the procedure, fancying that the pressure of a tourniquet is apt to give rise to changes in the veins, such as thrombosis. But no vein should ever be compressed by a tourniquet, as you will presently see; and I confess the treatment pursued by M. Verneuil scarcely commends itself to my mind.

In the same blood-saving way, Esmarch of Kiel (*Sammlung Klinischer Vorträge*. Volkman, September 1873; *London Medical Record*, October 10th and 29th) has practised bandaging the limb to be operated on by an elastic roller, so as to press out its blood, compressing the artery by an elastic band—an operation which is practically simplified by the ingenious contrivance of Mr. Cripps, and which

you here see—a simple elastic tube which can be coiled three or four times round the extremity, and is then rolled up the limb when worked by these handles. I do not know that there is absolute novelty in this proceeding. It attracted little attention when brought before the surgeons at Berlin, probably because others had had somewhat similar experiences, as I am told Mr. Clover in this country has had; but Billroth, to whom I am indebted for an obliging note on the subject, has warmly advocated it, trying it, amongst other cases, in an amputation at the hip, the final compressing band being carried round the perineal and gluteal regions, but, in this instance, without success (*Wiener Med. Wochenschrift*, July 19, 1873). The cases in which it seems best to answer, or in which the practice, advocated in Edinburgh, of raising the limb before operating, and, after the blood has run out, placing a tourniquet on the main artery, are such as operations upon carious bones of the foot, or cases of necrosis of the bones of the leg or arm. In one instance, Dr. Hermann Weber informs me, it was useful in this way—in cutting through an os calcis, the bone, pale from abstraction of its blood, was seen to be laden with tubercular deposit, and the operator, deciding that such bone had better be removed, converted the intended Pirogoff into a Syme amputation. You will notice that in using Mr. Cripps's apparatus it is desirable to pad the popliteal space, so as to ensure pressure upon the artery, as the elastic tubing coils along this portion of the limb.

As the catching term associated with it of "bloodless operations" is likely to lead to a very general use of this arrangement for lessening the loss of blood, you ought to have in mind that there are some conditions for which it is doubtful if its use is desirable. Cases where there is any suspicion of local vein-disease are, I think, of this class; so, too, are cases in which primary amputation is required for crushing of tissues, as in such the torn veins are closed with clots which might possibly be displaced by the compressing bandage, and so pass into the larger vessels, causing embolism; and so also are cases of gangrene, or cases of rapidly extending cellular inflammation; at least, I may say this, that I should not be disposed to use it in such cases, or to recommend its employment. There is, however, no reason to suppose that it engenders risk of after-sloughing of parts, as of the skin flaps of amputations. Billroth, in fourteen cases, had no such consequence to report, nor has any such been heard of in our own experience of its use. Billroth's expectation that the compression might prevent pain has, however, been tested by him and has failed, the patient suffering greatly during the operation. But in quite another direction as a compress in the immediate treatment of poisoned wounds, it is not improbable that it may be serviceable.

Well, gentlemen, such are some of the means you should employ to save all the blood you can from being lost to your patient during an operation. You may ligature vessels before your operation proper is begun; your assistant may check bleeding by the use of compresses, or you may twist each vessel as it is divided, whether it be artery or vein; you may, in great part, empty a limb of blood by elevating it, or, better still, by using Esmarch's elastic bandage; and beyond these means you have an effectual preventive of waste of blood in the finger of an assistant, or by using a tourniquet for compressing a main arterial trunk.

The tourniquet is invaluable, if only it be properly applied; for, indeed, its application is by no means so simple a matter as, at first sight, it may appear to be. Speaking now of its scientific use, not of the rough appliances which, on an emergency, a surgeon may find himself justified in using, I would say that it should be employed only, or with rare exceptions, for the compression of the common femoral or external iliac (for these vessels, so far as tourniquet pressure is concerned, are needlessly distinguished by separate names), and for that of the abdominal aorta, and even for the first of these compression made with the finger is infinitely preferable. For all operations about the upper extremity the artery should be secured by the finger of an assistant; at least such is my practice; for, in such cases, a tourniquet is with difficulty applied so as to avoid pressure on veins and nerves, on veins more especially. Now, suppose you have to control the femoral as it turns over the pelvis, you take this Italian tourniquet and secure the large flat pad firmly by placing it beneath the tuberosity of the ischium; if the lesser pad be then lowered by the screw, it will fall with very little manœuvring over the femoral artery. You have no business to press this vessel as it passes through Scarpa's triangle, first, because, from lack of counter-resistance, you will find it difficult to control its pulsation; and, secondly and chiefly, because pressure here will also compress the vein or veins which lie beneath the artery, and this would occasion great waste of blood when the chief venous trunks come to be divided; you must then direct your compress so as to push the common femoral up against the bone as the vessel comes out from the pelvis; or, if you direct your pressure downward, it must be made over the external iliac

as it reaches the bone surface. But you must attend to yet another point: the pad of the tourniquet is always larger than suffices to cover the area of the artery; so you take a piece of lint, and fold it so as to make a compress the size of your index finger, and an inch or more in length, and you place this over the exact course of the artery. This is not so good as finger pressure, but it is the next best thing to it; and, when the moment comes for controlling the vessel, you will do so without affecting the flow of blood through the adjacent vein, and will consequently have done the best towards preventing undue loss of blood. And this precaution holds good yet more clearly for tourniquet pressure on the abdominal aorta, which is the vessel you control for amputations high up in the thigh, and for amputations at the hip joint. On two occasions on which I have applied the tourniquet for amputation at the hip, there has been scarcely any blood shed. You have to recollect the position of the vessel and that of the vena cava ascendens. On the front of the abdomen, the umbilicus gives a landmark, immediately below which the pressure is to be made, so as to fall upon the artery just above the origin of the iliac vessels. Higher than this it is not safe to go; there you come to the large branches given off to the intestinal canal; there lie the duodenum and the pancreas, and there, too, is the great network of nerves, with their ganglia, which are distributed to the viscera, and I have known hurt from pressure upon these structures; and in one case, in which the tourniquet was applied for some time for the treatment of an aneurism, some of the structures I have referred to were irreparably damaged. The line of pressure, too, should incline to the left side; you may thus command the artery, and you will avoid the vein. If you do not keep clear of the vena cava, there will be a gush of blood, when the operator divides the vessels of the thigh, from the entire iliac system of veins, which will be with difficulty restrained whilst the operation, including the securing of the vessels, is being completed.

By considering the requirements of each case, you may be sure you will be able, by some one or other of the means now referred to, to perform any operation with little loss of blood—certainly without waste of it; and, if your patient is to convalesce well and speedily, this is one detail not to be lost sight of. The stopping of bleeding, however, has yet further to be thought of; you have to secure a wound against recurrent bleeding, and you have to make sure that there shall be no secondary hæmorrhage. Here comes in the question of how bleeding may be stopped so as to ensure for a wound subsequent rest and ease.

ON THE PREVENTION OF UTERINE INFLAMMATION.*

By E. J. TILT, M.D.,
President of the Obstetrical Society of London.

I SHOULD think it waste of time to discuss that the most frequent cause of uterine inflammation is to be found in parturition and in abortion; the more so, as this professional conviction tallies with the patient's generally referring a serious attack of metritis to "a bad getting up" or to a bad miscarriage.

1. What are the symptoms of a bad getting up and of a bad miscarriage?
2. What are those organic lesions of a bad getting up, that lead to uterine inflammation?
3. How to prevent a natural function becoming a frequent source of metritis?

Such are the questions that I propose to briefly examine.

1. *What are the symptoms of a bad getting up?* General debility, showing itself in various ways, notwithstanding a fair amount of rest, food, and stimulants; an inability to stand or walk a few steps without feeling ready to drop; a sensation of bearing down and of uneasiness, rather than of pain, in the pelvis; the persistence of an abundant vaginal discharge, particularly if it be bloody or muco-purulent, three or four weeks after parturition, when the lochial discharge ought to have ceased. When such a disturbance of health arises in the midst of other circumstances or without known cause, it excites alarm, and is carefully investigated, but, because it has been clearly caused by parturition, the case is often inadequately attended to by the medical attendant. Change of air and tonics are the only things he recommends. The vaginal discharges are not inquired into; they are set down as leucorrhœa; and he does not even examine to ascertain, whether perchance the symptoms may not be caused by the inability of the womb to get

* Read before the Obstetric Medicine Section at the Annual Meeting of the British Medical Association in London, August 1873.

back to its proper size. The patient doubtless improves by tonics or the seaside, but frequently the benefit is not permanent; and either menstruation becomes too painful and too abundant, or there is a bad miscarriage or a succession of miscarriages; and, after several years of this kind of life, the patient is only cured when she meets with a practitioner who will take the trouble to ascertain what is really the matter. This is the plain account of what I have very frequently observed; and now, what would the medical attendant have found, if he had carefully examined such a patient, one month or longer after her confinement?

2. *What are those organic lesions of a bad getting up that often lead to uterine inflammation?* They are: *a.* Defective involution of the womb; *b.* Placental ulceration of the uterus; *c.* Contusion of the uterine tissues; *d.* Rupture of the uterine orifices.

a. Defective Involution.—As many medical men consider it wrong to investigate the causes of a bad getting up, we do not know more of defective uterine involution now, than when Sir J. Simpson wrote about it in 1852. I do not think obstetricians will, however, contest that this want of tissue-transmutation power may be caused by hypercongestion or subacute inflammation of the uterine tissues, or by inflammation of some pelvic organ, generally the peritoneum; that it is very frequent; and that it may last for years, yielding only to the menopause. One other point with regard to defective involution has not been noticed—the fact of its being the substratum of other uterine diseases—the stuff, as it were, out of which they are made—the soil on which they grow. It is the obvious cause of the too abundant and too prolonged discharges of the period that follows parturition. Not itself inflammatory, defective involution may lead to catarrhal inflammation of both uterine mucous membranes; and it enlarges the size of any ulcer that may form where the placenta was attached, thus causing one variety of internal metritis. Defective involution is the main cause of the displacements that so frequently follow parturition. I can now do little more than express my conviction that this condition is the first step to many uterine affections; and surely it is not reasonable to ask a medical man to make a careful examination of the size of the womb, towards the close of the puerperal month, when he finds that his patient is making a bad recovery. He would often find the womb double or treble its proper size; its external mucous membrane congested, sometimes excoriated, a wax bougie easily slipping in, through patulous openings, to a depth of from four to five inches, instead of being brought up at two and a half inches.

b. Placental Ulceration.—The ulceration of that portion of the mucous membrane to which the placenta was attached is a comparatively rare disease, but it should be mentioned as one distinctly originating in parturition. This form of endometritis is marked by the presence of an indolent ulcer covered by pulpy granulations—the “*fungosities*” of Recamier—the roughnesses felt by Dr. Atthill, before he swabbed them with nitric acid, in one of his cases. This ulcer is generally situated in the posterior surface of the uterine cavity, where the placenta generally attaches and has been so frequently met with after bad labours, in which it was necessary to peel away the after-birth, as to justify the belief of Stoltz of Strasburg and my own, that the disease can be accounted for by the laceration of the internal surface of the womb. The fact of having been obliged to tear away the placenta should be, therefore, an additional reason for ascertaining whether the womb be defectively involuted; for defective involution often coincides with placental ulceration, and, by enlarging its area, leads to the flooding of this form of endometritis.

c. Contusion of Uterine Tissues.—One may admit the wonderful recuperative power of the puerperal womb without ignoring the cases in which the uterine tissues have been so bruised that the usual tissue-transmutation changes are checked, and others set a-foot that lead to defective involution or to well marked cervical ulceration. At all events, should delivery have been a tedious one, it is the duty of the accoucheur to examine his patient at the end of the puerperal month, if there be uterine symptoms and her general state be unsatisfactory.

d. Rupture of the Uterine Orifices.—It is beyond doubt that, during labour, the os uteri is often lacerated in one or more portions of its circumference. This was contested by no one, in a recent discussion at the Obstetrical Society of London; and Dr. Phillips even estimated the occurrence of cervical ulceration during parturition at 10 per cent.; and he considers the percentage to be much larger after tedious labours. Most of these ulcerations heal by first intention; and they give to the end of the cervix a stellated appearance, of which the os uteri occupies the centre; or else there is a rather deep sulcus descending from one or the other angle of the os uteri. Sometimes I have seen the end of the cervix made up of angular projections divided by deep furrows, the os uteri being found in some out-of-the-way situation at the bottom of one of these furrows. In such cases, there was

always a history of forceps-delivery by incompetent hands. It seems to me that an accoucheur is thoroughly wanting in his duty if, before giving up his attendance, he omit to make a speculum-examination whenever a voluminous child has been suddenly expelled from the womb, and the mother is not recovering well after confinement.

I use strong terms, because I thoroughly go with Dr. H. Bennet in his belief that, in sickly women, some of the worst cases of chronic uterine inflammation have their origin in the unhealed portions of these lacerations, which put on an unhealthy appearance. Before quitting the subject, I note that Dr. Botrel of Rennes has sometimes observed the evident rupture of the circular fibres of the internal os uteri in women who died of puerperal lymphangitis a few days after delivery.

You will have remarked, gentlemen, that in discussing those organic lesions of a bad getting up that lead to uterine inflammation, I have only had parturition in view; and I must now show how far, in this respect, it differs from abortion.

There is less traumatism in abortion than in parturition to account for the rise of uterine inflammation; but I believe abortion to be more frequently followed by defective uterine involution. I explain this, by the fact that women resume the duties and pleasures of life too soon after miscarriages, and by the recurrence of the menstrual orgasm before the womb has recovered from the traumatism of abortion. The enlarged womb having thus become a centre of conflicting tendencies, I can understand its becoming permanently over-sensitive and congested, and such conditions merging into inflammation in weakly constituted women. At all events, abortion figures so largely in the etiology of long continued uterine disease, that, when investigating a bad case of metritis, in married women, I always expect to find it caused by a bad miscarriage or by a succession of abortions.

3. *How to prevent a natural function from being a frequent source of metritis.* If I have correctly estimated the organic lesions that are the frequent results of parturition and the no less frequent causes of uterine inflammation, its prevention is a logical sequence. Speaking generally, all improvements in midwifery, such as the judicious shortening of labour, by the skilful use of the forceps, will prevent the development of metritis by diminishing traumatism and by husbanding the strength of the womb for the completion of perfect involution. I therefore assert that the Obstetrical Society of London has done good work during the last few years, in pressing on Government the urgency of providing for the better education of midwives. Mr. Stansfeld's appreciation of the importance of this question gives hope that it might soon be brought to a satisfactory settlement, if the sister societies of Edinburgh and Dublin would give us their valuable support, by petitioning Parliament and memorialising Government. In like manner, the spread among medical men of more correct knowledge of diseases of women will ensure the early recognition of such of them, as may interfere with the recovery of health after parturition, so that they may be nipped in the bud. You will, I am sure, agree with me that, under the present rules of medical education, too little time is allotted to the study of midwifery and of diseases of women and children; and it can scarcely be doubted that this time would be ultimately extended, if the three Obstetrical Societies of the British Empire were to urge the extension on the Medical Council, Colleges, and Schools.

Turning to measures that lie within the immediate scope of every one of us, I shall proceed to exemplify the advice I have already given in my *Handbook of Uterine Therapeutics*. Three sets of women require somewhat different advice—1. Pregnant women who have previously been under treatment for uterine inflammation; 2. Women who are not making good recoveries from parturition; 3. Women who have miscarried.

1. When pregnancy occurs soon after the surgical treatment of uterine inflammation, or during the course of such treatment, it is best to leave it off, with the exception of a vaginal injection once a day if there be a leucorrhœal discharge. Such women should pass the puerperal month in bed or on the sofa; they should use a vaginal injection with a solution of acetate of lead, twice a day, so soon as the lochia cease to be red; and, should this continue to be the case for more than eight or ten days after parturition, they should direct the practitioner's attention to the fact. All such women should submit to a speculum-examination at the end of the puerperal month, in order to ascertain whether parturition has led to a relapse of cervicitis, because it most frequently does so.

2. When, without presenting signs of the more serious puerperal diseases, a patient is recovering badly from labour, the practitioner should ascertain the progress of uterine involution; and, if it be not progressing sufficiently quickly, he should put on a grave face, discountenance getting up, apply a tolerably firm abdominal bandage, and give ergot. Should the vaginal discharge continue red, it is better not to depend on sulphuric acid and astringents, but to make a digital ex-

amination; and, according to what he finds, he will order injections with acetate of lead, with alum and zinc, or with one of the infusions of vegetable astringents that Dr. Wiltshire has recommended in the third number of the *Journal of Obstetric Medicine*. If, at the end of the puerperal time, a woman remain weak, notwithstanding a fair amount of food, of stimulus, and of tonic medicine, if she cannot stand or walk a little without bearing-down sensations and back-pain, if she have still a red or a muco-purulent vaginal discharge, it would be folly on the part of an obstetrician to permit connexion, and to merely recommend change of air, without ascertaining what is really the matter with his patient. It is a great point to get a few months of rest from menstrual orgasm for a womb that has recently suffered from inflammation, or shows a leaning thereto; so I encourage nursing, provided the child do not suffer from lack of maternal milk or from its poverty.

3. It is the absence of some definite understanding between the profession and the public respecting the rules to be adopted after abortion, that renders it a fertile source of metritis. It is well understood by all women placed above the obligation of manual labour, that the month following parturition should be a period of convalescence, during which the wife should sleep apart from her husband. There is no similar understanding with regard to abortion; women think it right to get about so soon as they can possibly do so, and thus encounter influences that often check the process of involution. I am convinced that uterine inflammation would be frequently prevented by our persuading the public that a month's convalescence is not too much for even a moderately bad miscarriage, during which time matrimonial sequestration should be enforced. Even when there be no *post partum* flooding or signs of severe pelvic inflammation, and in ordinary cases of miscarriage at from three to five months, I should advise a practitioner to act very much as he would after a confinement. His object should be to keep his patient in bed or on the sofa for a few weeks. He can do so by talking seriously of miscarriages being worse than confinements, and of the great danger of one abortion being followed by others. There is often a considerable amount of cervical inflammation and of vaginitis about an ordinary miscarriage; so, as a rule, a miscarriage should be treated as a case of inflammation. Rest in bed is the most important means of cure. Warm linseed-meal poultices to the abdomen are most useful when they do not too much increase the blood-flow. Linseed-tea or poppy-head vaginal injections are very useful during the first week, and then injections made by adding one drachm of laudanum and of acetate of lead to the pint of tepid water. Supposing this to have been done, and the patient to have gradually resumed her usual mode of life, if there be then back-pain or pelvic pain on slight exertion, a discharge staining the linen yellow, and debility in spite of tonic treatment, then it behoves the medical man to warn the patient and her friends that he suspects that his best efforts to ward off metritis have only been partially successful, and that he ought to carefully examine the patient, to ascertain what is the real state of the case.

You all know how to treat internal metritis, and inflammation and ulceration of the cervix; the treatment of defective involution is far less satisfactory, so it must not be passed over; and, in the first place, unless it be detected and cured, in the three months that follow parturition, you will greatly increase the difficulty of doing so. It may be cured by a subsequent pregnancy, but not always; and it should be cured at once, if possible, for there is no telling what may occur to a woman with the body of the womb large enough for the sound to enter to a depth of from four to five inches. If there be the slightest doubt of active congestion in the womb, I apply leeches to the cervix, I give ergot, I order the lower part of the abdomen to be painted once a day with Mr. Marshall's oleate of mercury, and I always recommend acetate of lead injections, twice a day, if the mucous membrane be congested or excoriated, once a day if it presents nothing amiss. I do so because I know health to be just as contagious as disease, and that healthy action passes from a superficial to the underlying tissues; and my belief in the great value of well-made, long-continued vaginal injections is not in the least diminished by the little value allowed to them by other authorities. When defective involution has a longer date, in addition to measures previously mentioned, I try a cold water abdominal bandage, rather tightly applied; iodide of potassium internally, and tincture of iodine to the cervix: moreover, I do not discountenance connection, but it is obviously better to prevent the call for these tardy remedies, by following the rules I have laid down.

It is by this judicious management of lying-in women, and of those who are recovering from abortion, that you will persuade the womb to resume its proper size; that you will allay uterine irritation, reduce congestion, heal cervical lacerations, cure placental ulceration, check the recurrence of abortion, and thus stamp out uterine inflammation in its origin, or greatly diminish its acuity and duration.

ON THE ANTICIPATION OF POST PARTUM HÆMORRHAGE.

By LOMBE ATTHILL, M.D.,

Fellow and Examiner in Midwifery, King and Queen's College of Physicians; Obstetric Physician to the Adelaide Hospital, Dublin; Vice-President of the Dublin Obstetrical Society.

THE BRITISH MEDICAL JOURNAL for September 27th contains Dr. Whittle's paper on The Anticipation of *Post Partum* Hæmorrhage, which, though read just before the hour at which the Section adjourned, was listened to with great interest, and at the conclusion of which a short but animated discussion followed—a discussion in which the lateness of the hour when it occurred prevented several members from taking a part, and which unfortunately has not been published. The reason why this paper was listened to with such attention is obvious: every practitioner present, from personal experience, dreaded *post partum* hæmorrhage; and, while admitting the value of transfusion in extreme cases, rejoiced at the prospect of not being obliged even to think of such a troublesome, often difficult, means of saving life. Indeed, more than one member, during the debate which had previously taken place on transfusion, asked, "Could no means be suggested for rendering this operation unnecessary, by preventing *post partum* hæmorrhage from occurring?" Dr. Whittle's paper professedly is a reply to these queries; but, while admitting the value of his observations, it is, I think, important that the subject should be discussed more fully; otherwise I fear that many may be led into what will prove, in some cases at least, but a false security, by relying on one mode of treatment which, while often most valuable, is as often inefficacious.

In the first instance, I may remark that the value of the administration of ergot as a preventive in cases of anticipated *post partum* hæmorrhage has been long taught in the Dublin School of Midwifery. Not a session passes in which the practice is not impressed on the classes attending our lying-in hospitals. And the question as to the means to be adopted in cases in which *post partum* hæmorrhage may be expected, will be found over and over again in the printed papers issued by myself and other examiners to candidates seeking the licenses of the College of Physicians.

The questions I would raise in the present instance are these:—

I. What are the causes most commonly favouring the occurrence of *post partum* hæmorrhage?

II. Having ascertained these, can we prevent their occurrence?

III. Admitting that the symptoms enumerated by Dr. Whittle are frequently indicative of the occurrence of *post partum* hæmorrhage, is the administration of ergot always sufficient to obviate the danger; it being borne in mind that I speak only of hæmorrhage occurring after the birth of the child.

Leaving out of consideration for the present those cases in which the placenta is morbidly adherent, the causes most commonly producing *post partum* hæmorrhage are, I think, these.

1. Exhaustion of the uterus.
2. Exhaustion of the nervous system of the mother.
3. The too rapid emptying of the uterus, whether as regards the fetus or placenta.
4. The failing to give due support to, and the injudicious manipulation of, the uterus after the expulsion of the placenta.

These, in my opinion, are the most common causes favouring the occurrence of *post partum* hæmorrhage; to these other exceptional ones may be added, such as laceration of the cervix, a cause, I am satisfied, often overlooked; the existence of fibrous tumours embedded in the uterus, and a varicose condition of the cervix uteri. These, however, it is not my intention to discuss; they are foreign to the subject in the limited view which Dr. Whittle's paper embraces.

Foremost in the list, the most important, because the most common cause of hæmorrhage occurring after the birth of the child, is exhaustion of the uterus. The uterus is an involuntary muscle, called into action only for a special purpose, and capable of continuing its action but for a limited period. If it fail within a moderate time to expel its contents, it becomes exhausted; the pains, to use Dr. Whittle's words, "become short, quick, and cease suddenly", because the muscle, being exhausted, is unable any longer to culminate into that powerful tonic contraction, which is so distinctive a feature of a perfectly normal labour pain; the intervals too, as pointed out by Dr. Whittle, are prolonged, because the exhausted muscle is unable soon to contract again. Dr. Whittle's explanation of the cause of hæmorrhage in such cases is perfectly correct; "after the child is born, a relaxation follows;" after the placenta is expelled, "the uterus again relaxes, continuing the same tendency which existed before the delivery of the child."

2. But, in not a few women, exhaustion of the nervous system generally, is the first and most prominent feature. The patient complains of extreme weariness and languor, and, instead of resting in the intervals between the pains, is restless, tossing about from side to side, while the pains, at first normal, assume, subsequent to the occurrence of the symptoms just indicated, the short, indecisive character pointed out by Dr. Whittle.

3. But hæmorrhage, and that, too, of an alarming character, is met with in cases where the labour has been so rapid that no time has been afforded for the development of any premonitory symptom, the muscular tissue of the patient being so relaxed, that no opposition is offered either by the os uteri or by the perineum, to the expulsion of the child; one or two sharp, powerful pains suffice to terminate the labour; but relaxation of the uterus often subsequently occurs, and hæmorrhage follows. In like manner, I have repeatedly seen hæmorrhage follow rapid delivery effected by the forceps; the operator having failed to afford sufficient time to the uterus to contract. Again, hæmorrhage frequently follows the too rapid expulsion of the placenta. Indeed, I am satisfied that undue haste is in general shown by many practitioners in the removal of the placenta.

4. Lastly, hæmorrhage may occur from want of care in the management of the uterus subsequent to the complete emptying of its contents. Doubtless in some patients the uterus contracts so firmly and so perfectly that there is no need of fear; but in very many this is not the case. The abdominal walls distended by the size of the uterus, now that that organ has become so reduced in bulk, fail to afford it any support. The old-fashioned but eminently useful binding judiciously applied is most valuable; and its application should never be omitted; in some cases, a pad slipped under the binder after the third pin has been inserted is useful; but I have so often seen it injudiciously placed that I hesitated to recommend its use; the more so as by hiding the outline of the uterus, hæmorrhage into the interior of that organ may take place, and may for some time be undetected by the attendant.

II. Being aware of the causes most likely to produce *post partum* hæmorrhage, can we not guard against their occurrence? I believe we can. Thus we can, by the timely use of the forceps, prevent the uterus being exhausted. They should be used before the symptoms enumerated by Dr. Whittle occur, or, if they have occurred, be applied the moment such are recognised. Their use does not contraindicate the exhibition of ergot. I frequently give ergot and apply the forceps simultaneously; but I should be sorry to rely on ergot alone; often it acts most beneficially; as often it fails to produce any effect whatsoever; besides, it is essential to bear in mind what experience has abundantly proved, that once its specific action on the uterus has been established, the death of the fœtus speedily follows—a fact established so incontestably, that ergot has well nigh altogether ceased to be administered by Irish practitioners, with the view of hastening delivery. But use the forceps judiciously, and you will seldom have any hæmorrhage. Here I would, however, protest, as I did at the meeting of the Association, against the injudicious and indiscriminate use of the forceps. I believe, judging from published returns, that not a few practitioners apply the forceps simply to save time and to free themselves from an irksome delay. Lamentable consequences certainly must follow such a practice.

The occurrence of *post partum* hæmorrhage, the result of relaxation of the uterus depending on nervous exhaustion, is fortunately less frequently met with. It is much more difficult to anticipate, and, therefore, to treat, than the preceding form. The moment such symptoms as I have enumerated exhibit themselves, delivery should be effected with the least possible delay by means of the forceps. Ergot here is still more unreliable than in the previous class of cases. Strychnia promises much better effects. I generally combine it with ergot, giving ten drops of the liquor strychniæ (B.P.) with the first dose, and five with a subsequent one, if necessary. I can confidently recommend this combination.

Abnormally rapid labour, when it occurs spontaneously, cannot be prevented. The condition of the uterus in such cases, however, requires subsequently careful watching, as a marked tendency to relaxation of that organ, and consequent danger of hæmorrhage, exists; but the too rapid extraction of the head, when the forceps are employed, indicates a want of judgment on the part of the practitioner, which is highly to be reprehended; he should imitate nature and give full time for the uterus to contract as its contents are being expelled. If this caution be not exercised, *post partum* hæmorrhage is nearly sure to occur; hence an additional argument against the unnecessary employment of the forceps. Again, the same undue anxiety to terminate the labour which induces the needless application of the forceps often influences the treatment of the third stage of labour. Doubtless, the contraction of the uterus, which expels the body and legs of the child in a perfectly normal labour, frequently detaches the placenta also, but it does not in

general expel it from the uterus; on the contrary, the placenta remains in it for a time, and, acting as a foreign body, stimulates the uterus to contract still more and expel it into the vagina; time should, therefore, be given for this purpose. A skilful practitioner can at any moment, by well directed pressure, expel the placenta (traction on the funis is always objectionable), but he should not exercise this power till time be given to allow the uterus to contract; unless, indeed, the occurrence of hæmorrhage, or of some other urgent symptom, renders the removal of the after birth essential.

Finally, the third stage being terminated, hæmorrhage may be kept up by a portion of the membranes being left behind. An accident most likely to occur if the after birth have been removed by traction, by neglecting to give due support to the uterus by the application of the binder, or by the constant "kneading" of the uterus, which, by continually expelling the coagula which form round the orifices of the sinuses, induces a constant exudation of blood from them.

III. That the symptoms enumerated by Dr. Whittle are indicative of a tendency to the occurrence of hæmorrhage, will, I think, be admitted; but, seeing that the actual causes producing the hæmorrhage are numerous, it is evident, even did not experience prove it, that hæmorrhage may supervene without their previous occurrence. But of more importance is the question, Is the administration of ergot always sufficient to obviate the occurrence of *post partum* hæmorrhage when administered in full doses some time previous to delivery? I unhesitatingly affirm that it is not; and I look on the unqualified assertion that it is, as calculated to bring into disrepute an agent of the greatest value. It may restore energy for a time, but it cannot give tone to an exhausted uterus. It cannot, and it does not, restore to energy the exhausted nervous system of the patient; it will not counterbalance the ill consequences likely to follow the too rapid emptying of the uterus, or the injudicious treatment of that organ subsequently. In fine, I would conclude by saying, give ergot in cases of labour in which you suspect that *post partum* hæmorrhage is likely to occur, but do not rely on it exclusively. When symptoms indicating that the power of the uterus is flagging show themselves, prevent that exhaustion becoming excessive by the use of the forceps; when you do apply them, use them as *aids* to the uterus, not as *substitutes* for its action. Give the uterus time to contract after the birth of the child, and to throw off the after-birth, keeping up in the interval firm pressure on the fundus with the left hand; then support the abdomen by the good old-fashioned binder, and the risk of *post partum* hæmorrhage will be small. I do not mean to say that by the adoption of this or any other treatment *post partum* hæmorrhage will be entirely averted; that is impossible; but the risk of its occurring will be reduced to a minimum.

ON INFLAMMATION.

By WILLIAM ADDISON, M.D., F.R.S., Brighton.

RETROGRESSION of vascular tissue to its primitive embryo state for purposes of reparation is a proposition based on microscopical researches. Permit me to point out some surgical facts of healing in accord with, and to indicate some suggestions.

But, first, a few words on embryo-growth and its chief hindrances. About twenty years ago an American gentleman, Mr. Cantelo, exhibited a hydro-incubator in London; he furnished me with eggs for examination, permitted me to work in his exhibition-room, and allowed me to question him with respect to his hatching experiences. He told me he hatched his eggs at 106 deg. Fahr., and was very careful to preserve this temperature throughout the process.

"The more accurately," he said, "you keep the heat at 105 or 106 deg., the more successful will be the incubation, and the stronger the produce. An egg begun at a wrong heat is always injured, and the longer it is kept at that wrong heat, the more likely is the chick to be spoiled. The germ will develop at any heat between 95 and 110 deg., but at either of these extremes the chicks, if they do not die within the shell, are delicate little things not worth rearing for the market."

"The germ of a chilled or half-frozen egg is not prevented from developing, and the young chicks are hatched at the usual period; but they are never strong, many pine away and die within a fortnight, and the survivors never make fine chicken."

To see the effect of air upon the embryo, I have opened the shell of eggs at various periods of incubation: thus, on one occasion, I carefully opened an egg of seventy hours' incubation. The parts round the embryo were covered with innumerable blood-vessels, and the embryo heart was seen beating vigorously. In this state, a small thin watch-glass was placed over the broken part of the shell, and the egg returned to the warmth from which it had been taken. The following

day, twenty hours having elapsed, I visited the incubator. Mr. Cantelo told me he had looked at the preparation early in the morning, and observed the heart "was beating very feverishly;" and, when I looked, I saw a quick, hurried, and, as it were, impatient action, very different from that seen the day before.

The area covered with blood-vessels was now nearly twice the diameter it was yesterday; they had undergone great changes, were more densely crowded, and their arrangement was strangely divergent from the natural one—all within twenty-four hours.

The view was a suggestive one: the heart in feverish action, arteries carrying blood of one hue and veins blood of another hue, and an action greatly extending the vascular area—a sort of inflammation—in full swing from the inappropriate admission of air to a creature not three days old, and with nothing but globules or cells in its composition. Mr. Cantelo's experience and my experiments show, in a very marked manner, the injurious effects of a "wrong heat," and the admission of air upon embryo growth. I apply the facts to reparation.

In the human embryo, blood-vessels commence and grow at a high temperature, quite excluded from air and light.

In subcutaneous surgical operations, ruptured tendons and fractured bones, injured parts are excluded from air and light; an equable high temperature is secured by neighbouring parts, and the wounds heal without suppuration: because the conditions of embryo growth are fulfilled. On the other hand, external wounds are exposed to variable low temperatures, to air and light, and they suppurate, the action denoting spoiled material—spoiled by conditions unfavourable to embryo growth.

Perhaps the confluence of pustules of small-pox and deep pitting of the face might be mitigated if, on approach of the eruption, the face could be protected from cold and air. New vascular tissue of healing sores—granulations—will often fade and die away, among other reasons, probably from exposure to air and a "wrong heat." It may be, the use of suppuration is not only to throw off spoiled material, but also to form a covering to shield young granulations from cold and air. Cold air is as injurious, as much an irritant, to serous surfaces as hot water to the skin; if it be admitted to them, the parts immediately proceed to protect themselves by suppuration. In these cases, a high temperature and total exclusion of air are necessary to healing. I remember to have read somewhere an account of a boy who stumbled into a vessel of boiling pitch, burning his arms to above the elbows. The surgeon took off all the clothes he could; but found it impossible, from the hardening of the pitch, to remove the sleeves of the coat from the injured parts. Subsequently, he expressed extreme surprise at finding the parts he could not bring under his observation healed long before those parts he had been daily dressing and cleansing. In the same person, and in the same injury, those parts, secluded from air and kept at an equable warm temperature, healed without suppuration, and sooner than those exposed to cold and air, and dressed by the surgeon. Healing, to keep parallel with the embryo growth, must have parallel conditions.

Sometimes, in extensive burns, large sloughs have to be separated; and, upon the principles we are now discussing, the dressings ought to be as few and far between as possible; what is called cleansing the wound is often unnecessary. I should have no fear for vigorous granulations from *vibrios* or *bacteria*; for, in confluent small-pox, the ugly suppurating parts heal under temporary shields, the scabs, notwithstanding the nidus in a hot summer for eggs and germs.

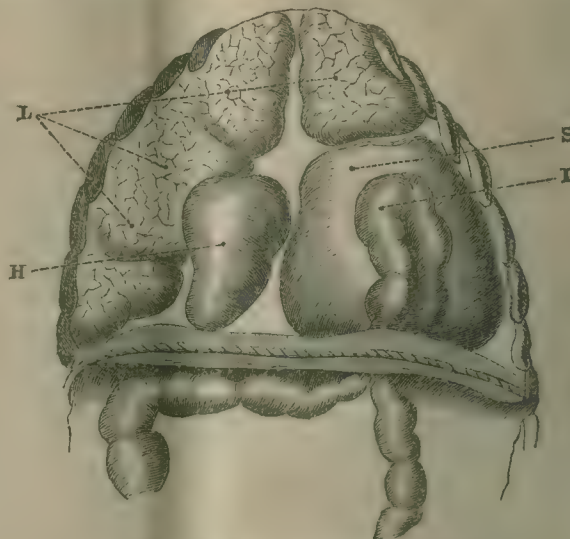
Healing in different parts corresponds in time with embryo growth; skin heals sooner than tendons, and tendons sooner than bones. Inflammation is the requisite preliminary action, fitting existing blood-vessels for a renewal of embryo growth; and, in correspondence with the heat necessary for embryo growth, parts in inflammation are of a higher temperature than surrounding parts.

DIAPHRAGMATIC HERNIA.*

By HENRY W. RANDOLPH, Esq., Milverton, Somerset.

I BEG to present to you for your inspection a specimen of hernia through the diaphragm on the left side, in a child $3\frac{1}{2}$ years of age, produced by an accident which occurred when he was a year and three months old. The opening is of an oval shape, about two inches long by an inch wide, through which had passed the entire stomach and about eight inches of colon into the left pleural cavity. The stomach, though it had lost some of its contents, was much distended with fluid, occupying nearly the whole of the left side of the thorax. There was no strangu-

lation of the structures within the ring; and the stomach, with the fold of intestine, was readily returned within the abdominal cavity. The lung on that side was in a state of atrophy, perfectly hepatised by the pressure of the intruding viscus, except just at the apex of the upper



L. Lungs. H. Heart. S. Stomach. I. Intestine.

lobe, which contained some aerated cells; it was wasted to about one-fifth of its proper size, and flattened against the vertebral column. The heart was healthy, and pushed considerably towards the right side. The right lung was larger than is usually seen—probably from the over-work it had to sustain in the absence of its fellow-labourer. The liver was much congested and somewhat enlarged. The intestines through their whole extent were highly vascular. The remaining viscera were in a perfectly healthy state.

The following history of the case has been furnished by my son, who made the *post mortem* examination, and had the conduct of the case.

The accident alluded to was occasioned by the boy creeping under a steam-engine belonging to a threshing-machine. The horses being attached, the driver, unconscious of the child's presence, drove on, and the little urchin was crushed between the fire-box and the ground, a space of about six inches. The details of this case, and even the accident, had escaped my recollection; but I am informed that I saw the patient immediately after its occurrence; that the child was put under treatment, and confined to bed, and in the course of a week was apparently well and running about. We never heard more of the case until last November, when my son was sent for early in the morning, the child having been seized with urging (though nothing was vomited) pain and hæmorrhage from the bowels. He was pallid, faint, with venous congestion about the lips. Astringent medicines and stimulants were administered. In the middle of the day we were hastily summoned, but before we arrived the child was dead. This led to a *post mortem* examination, and this interesting revelation of the cause of death was the result.

Since the period of the accident, now more than two years ago, the child suffered from dyspnoea, greatly increased by violent exercise, and always worse after a full meal. His mother tells me that ever since the injury he had frequently been seized with violent vomiting, lasting from two to three hours: at all other times his digestive functions seemed to have been well performed.

It is evident that the rupture of the diaphragm was occasioned by the accident, and that the stomach, which at the time was probably full, passed through the aperture. After each meal, doubtless more stomach was protruded into the chest cavity; and the lung, as it gradually became collapsed, offered less resistance to the protruding viscus. Had vomiting been effected during the last attack, the child's life might have been prolonged for a short period; but this not being possible, the pressure exercised upon the heart and lungs was, I believe, the immediate cause of death.

It is but seldom in a country practice we are enabled to make examinations after death, or to present to the members of the profession interesting matter worthy their consideration; but I cannot but think the case submitted to your notice is worth preservation, since it illus-

* Read before the West Somerset Branch.

trates the ill effects which may occur from an accident, though giving no evidence of their existence at the time.

One peculiar feature in connection with this case is, that the child should have lived so long after the accident in fairly good health. He partook heartily of his meals, was cheerful, and fond of play.

ON A NEW METHOD OF DETERMINING THE PRESENCE OF, AND RECOVERY FROM, TRUE RINGWORM.*

By DYCE DUCKWORTH, M.D., F.R.C.P.,

Assistant-Physician to St. Bartholomew's Hospital, and Demonstrator of Skin Diseases.

I THINK it will be conceded by all practical dermatologists, that there are cases of true ringworm, and also phases of this disorder, which are not immediately and distinctly recognisable, or which, at least, require some careful investigation before a decided opinion is expressed about them.

It is in such instances, and also for the determination of the amount of parasitic disease in any given patch, that I venture to recommend as an aid to the diagnosis, the application of chloroform to the affected part of the scalp.

A few drops are to be poured upon the head of the patient, who must be placed in a good light, between the operator and the window. On evaporation of the chloroform, the affected hairs, generally short, broken off, and twisted at their extremities, are seen to become of a yellowish-white colour, opaque, and like fine filaments of a vegetable lichen. The healthy hairs are quite uninfluenced by the chloroform. Not only upon the hairs is this change observable, but the skin in the immediate neighbourhood is commonly affected in a similar manner. Small whitish masses are seen upon the scalp, and especially at the point of emergence of the hairs. This effect is due, I believe, to debris of the parasite mixed up with the sebaceous-epithelial matter extruded from the hair-follicles. The parts look as if sprinkled with a film of highly divided sulphur powder, reminding one of vines that have been washed with sulphur lotion for grape-disease.

If ether be used, instead of chloroform, no such change takes place. And if the scalp and hairs be well rubbed and cleansed from sebaceous matters by ether, the specific effect is at once produced on the subsequent addition of chloroform.

As already stated, the opaque hairs become manifest immediately on the drying up of the patch, and thus the local application of chloroform becomes a perfectly accurate test of the infection, or the reverse, of the part. The change in appearance is generally very striking, and may be observed by an untried eye.

If these opaque hairs be examined microscopically, the spores can still be clearly seen in their interior. The shaft is desiccated, the oily matters are removed, and the fibre-cells are found somewhat split up at the margins. It would seem that the spaces which occur in the shaft, as the result of sporadic intrusion and development, and consequent disintegration of fibre-cells, become filled with air on the evaporation of the chloroform which had permeated the entire texture of the shaft. In this way I would in part account for the optical change which ensues, and I think it may be also partly due to some direct action of chloroform upon the mycelium and spores of the trichophyton. I believe that this action of chloroform upon parasitically affected tissues has not been observed before; at all events, the fact is not known to any vegetable histologists with whom I have communicated.

On adding dilute caustic potass to the hairs, the appearance is still maintained to some extent. Seen by reflected light the hairs seem white and frosted, while normal hairs, similarly regarded, appear transparent. I am not aware of any other chemical reagent that produces an effect upon these diseased hairs, in any way comparable to that following the application of chloroform. As already stated, ether has no such effect, nor has bisulphide of carbon. The latter is of some use as a reagent for showing the mycelium and spores in affected hairs. It renders them readily apparent without distending the hair-shaft; perhaps it may cause very slight shrinking of the fungus-elements.

Dr. McCall Anderson describes the hairs in ringworm as being naturally white. This is sometimes the case; but, even when this is so, the appearance is not always readily appreciable, and the action of chloroform intensifies it very markedly.

In tinea of the body (*Tinea circinata*) and in *Tinea versicolor*, the application of chloroform appears to indicate the presence of parasitic

elements, by the white powdery aspect which the patches assume on its evaporation. That this is not always a fallacious appearance, and due to frayed particles of epidermis which are frequently to be seen on these patches—hence the synonym *Pityriasis versicolor* for one of these affections—is proved by the fact that the surface, as shown by a lens, is sometimes perfectly smooth before the addition of chloroform. By this test, therefore, patches of pigmentary staining, melasma, and the dark portions of skin in leucoderma, may sometimes be distinguished from parasitic disorders, for chloroform has no action upon normal skin when thus momentarily applied.

The employment of this method is of least value, I believe, in such cases of ringworm as are attended with much heaping up of crusts or scales; and it is in these, too, that the broken off hairs are either few in number, very short, or entangled in the crusts. But the diagnosis in these instances does not usually present any difficulty, and the phase alluded to is probably due in great measure to over-stimulation or too irritating treatment. Even in these cases, after poulticing and liberation of the hairs, the test is quite effectual. I have had no opportunity of trying this method in cases of favus of the scalp, since these are rare in London; but I met lately with several cases of favus of the skin, in which I applied chloroform, but without any particular result. The diagnosis was sufficiently easy, and the microscope confirmed the first impressions formed. It is not, however, without interest to record that the action of chloroform upon the areæ and peripheral parts of porrigo decalvans is *nil*. If the latter affection be a parasitic one—a tinea—an opinion which I do not hold, and against which I have recently published my reasons at length (*St. Bartholomew's Hospital Reports*, vol. viii, 1872.), it might fairly be expected that chloroform would indicate the presence of the parasite; but such is not the case. No change of any kind occurs either on the patches, in the hair-stumps, or in the hairs immediately adjacent, and therefore presumably in the earliest stage of the disorder. This fact must, therefore, be taken as additional evidence against the parasitic theory of porrigo decalvans.

I believe the chief value of this test is to be found in the later stages of ringworm, when it becomes the duty of the practitioner to declare whether the disease is entirely removed or not. All who have practical knowledge of the difficulties which are in the way of forming an exact opinion upon this point, will welcome this method as a relief from a troublesome resort to the microscope, which has hitherto been indispensable. Not only is much time saved, but a more exact opinion may be pronounced upon the case; and there is the additional advantage that the attendants of the patients may always satisfy themselves as to the eradication of the disease, or the reverse, and may, therefore, withhold or continue the employment of suitable antiparasitic remedies.

ANELECTROTONUS OF THE DENTAL NERVES IN TOOTHACHE.

By JULIUS ALTHAUS, M.D.

Now that, thanks to the activity of instrument-makers in meeting the increased professional demand for constant batteries, fairly effective instruments of this kind are becoming household goods of the medical man, and are within the reach of even slender purses, I wish to suggest a routine recourse to the constant current for that very common affliction of mankind—toothache. I have never been consulted with the view of treating toothache by electricity, but have for many years past incidentally used the continuous current in a large number of such cases, and come to the conclusion that it is a ready and most effective means for the cure of odontalgia. Without wishing to enter here into the pathology of this "small misery," I may say that the mere decay of teeth appears, as a rule, only indirectly productive of toothache, which, indeed, is very frequently experienced in teeth that are perfectly healthy, and in decayed teeth not always, but only under certain contingencies. Chills and depressing emotions would seem to be the chief exciting causes of toothache. Now, the terminations of the dental nerves are more exposed to chills in decayed than in healthy teeth; and, under depressing emotional influences, the weak points of the system are chiefly apt to suffer. These considerations would explain why toothache is more frequently felt in bad than in good teeth.

What is the best mode of galvanisation for toothache? After numerous trials of various modes, I have come to the conclusion that the induction of anelectrotonus of the dental nerves, with complete avoidance of catelectrotonus in their neighbourhood, answers best. Pfüger has shown that a continuous current, which traverses a certain length of the nerve, divides this latter into two physiologically different sections or zones, one of which shows the condition of increased excitability or

* Read before the Medical Section at the Annual Meeting of the British Medical Association in London, August 1873.

catelectrotonus, while the other is in a condition of diminished excitability or anelectrotonus. The zone of increased excitability is in the neighbourhood of the cathode, while the zone of diminished excitability is in the neighbourhood of the anode. The condition of increased excitability is propagated from the cathode towards either side, and the condition of diminished excitability is propagated from the anode towards either side. This alteration of excitability in the extra-polar portions of the nerve diminishes in the same ratio as the distance at which they are from the electrodes increases, and at a certain distance it disappears altogether. Cyon has shown that Pflüger's researches, which were made on rheoscopic frogs' limbs, hold good for the nerves of the living man likewise; and the systematic production of catelectrotonus and anelectrotonus, for the purpose of increasing or diminishing the excitability of diseased portions of the nervous system, has thus been shown to be a therapeutical possibility.

These principles may be utilised in the case now under consideration by placing the large anode, armed with a moistened sponge, to the suffering cheek and jaw, and the cathode to the palm or the back of the hand. In this way, both the second and third branches of the fifth cerebral nerve are placed into the condition of anelectrotonus, while the influence of the cathode is neutralised by its great distance from the suffering parts. One application of a gentle, but plainly perceptible, current continued for five minutes is sufficient for curing almost every toothache; but, in very bad cases, a second application may be required for effecting the desired result. This may be had the same day, if practicable.

The same principles apply to the galvanic treatment of the different forms of neuralgia, which yield readily to the induction of anelectrotonus, if practised sufficiently early. In the later stages of neuralgia, the phenomena are not so simple as in the commencement of it, and the treatment then becomes more complicated, and less readily successful.

SURGICAL MEMORANDA.

M'INTYRE'S SPLINT: STARCH-BANDAGES.

In using M'Intyre's splint, two difficulties present themselves—first, of fastening it so that it should not be easily displaced; and secondly, if so fastened, of moving the patient up or down in the bed. Nothing can be more distressing to a patient than to be compelled to lie for two or three weeks in exactly the same place; and in certain cases it might lead to sloughing of the sacrum, and even death. To obviate these drawbacks to the use of this ingenious instrument, I have contrived and used in hospital practice a very simple apparatus. It consists of two upright pieces of timber, about three feet long, two inches wide, and one inch thick, fastened by thumb-screws to the end of a deal bed without posts—one at each side—and connected at their upper ends by a cross-bar revolving on pivots. The thumb-screws are placed about midway, and also serve as pivots on which the upright bars may turn. To the cross-bar the end of M'Intyre's splint is securely fastened by screws, and if it be required to move the patient towards the head of the bed, the cross-bar is pushed in that direction, and *vice versa*. This movement will of course depress the foot; but if that be undesirable, it can be remedied by shifting the cross-bar, for the upright bars are provided with four corresponding holes, to any two of which the cross-bar can be removed by simply loosening one of the thumb-screws. By means of this apparatus, which could be made for a half-crown, not only can the patient be shifted several inches up or down in the bed, but the foot can readily be placed at many different elevations.

M'Intyre's splint could readily be converted into a "cradle" by suspending it from a cross-bar, like the one just described, and from another placed about twenty inches higher up in the bed; and a small bar of iron attached to the lower end of the splint, rising above it to the height of six or seven inches, and then bent at right angles, should terminate in a pivot which should be made to play securely in a hole in the lower cross-bar. In the upper cross-bar a pulley should be put, just opposite the hole in the lower one, and, by passing a strong cord over the pulley and under the splint, and properly adjusting it, the splint would be swung like a cradle.

In converting the splint into a cradle, the shorter the thigh-piece the better. By means of the contrivance just described, not only could a leg be swung, but the patient could be lifted up or down as easily as when only a single cross-bar is used, for the supporters of the cross-bars can always be placed at the same angle to the sides of the bed, and consequently be always parallel. In like manner the cross-bars

working on pivots would always take the position required. It is unnecessary to go more minutely into a description of the apparatus now suggested, for enough, I trust, has been said to make it intelligible to the instrument-makers.

In simple fractures of the leg I have recently used a starch-bandage, consisting of two cotton stockings, with very satisfactory results. To apply a starch-bandage of the ordinary kind, requires considerable experience, tact, and judgment; and it is scarcely an exaggeration to say that many surgeons who could perform an amputation of a limb, would be unable to put on a starch-bandage properly. When I want to apply a starch-bandage, I take two common cotton stockings; the one to be drawn over the leg first, fine and elastic, slips over the leg without the least difficulty; the other, coarse and strong, requires to be drawn on slowly and carefully. The size of the stockings must of course depend on the size of the leg; but it would be better and safer that they should be too large than too small, for no force should be used in drawing them on. To the first stocking, which serves merely to protect the leg from irritation, no starch is applied; but when the second stocking has been drawn over it, plenty of starch should be rubbed in from the toes to the knee. It will be found when the starch has dried, that an elegant starch-bandage has been formed, with no trouble to the surgeon, and with no danger or discomfort to the patient. I have found two stockings thus applied after the third week quite sufficient to support the bones; but if they were to be applied earlier, it might be necessary to draw on a third stocking, and to starch it also: this should be done when the starch on the second one had dried. Instead of drawing on a third stocking, however, I would recommend a few turns of a roller, starched, to be applied over the seat of the fracture, which might be done without the slightest fear of causing swelling of the foot, and would in cases of oblique fractures be particularly useful.

It appears to me that fractures of the fore-arm and arm could be treated in a similar manner—cotton gloves, of course, being used instead of stockings; but having as yet no opportunity of trying this plan of treatment, I must leave it to others to test its practicability. When the stockings are getting limp the starch should be rubbed in again, and when they are to be removed the starch should be washed out; and, when dry, they may readily be slipped off, or, if preferred, cut open with a scissors. JEREMIAH DOWLING.

DISLOCATION OF THE RADIUS BACKWARDS.

A. B., aged 10, was brought to me on Saturday, September 12th. Twenty-four hours previously, he had met with the following accident. He had been playing with some other boys on a barley-mow, and was pushed off (no great height), and could not say on what part of his body he pitched. When I first saw him, the whole elbow was so swollen and tender that it was utterly impossible to feel the articulation, and the movements of the joint were impeded to some degree. From the commencement there was a look as if the elbow projected somewhat backwards, and the impression left on my mind was the possibility of a fracture through the condyles. There was no crepitus of any kind. Rest and spirit-lotions were continually applied, and the bowels well cleared out. The boy was seen in the course of the week by both Mr. Bleack and Mr. Hinton of Warmistear, without any definite opinion being formed as to the state of affairs. The swelling was but slightly lessened, and the pain certainly as bad as ever. About ten days after the accident, he was again seen by us together. The swelling had subsided slightly; and, on a careful examination, we came to the conclusion that the radius was dislocated backwards. The deformity of the bones did not appear very marked; the anterior external portion of the humerus near the joint was more plainly felt than in its sound neighbour; and, on deep pressure, there was the sensation of being able to pass the finger a little under it posteriorly. The head of the radius was felt projecting, but certainly not to the extent that one would have imagined; yet the finger passed down the arm appeared to impinge on the head. The following morning we placed the boy under chloroform, and, on extension of the arm and flexion of the joint, the radius went home with a very audible noise.

The interest of the case turns upon the rarity of the accident. Sir A. Cooper, in his work on the joints, gives a drawing of the deformity, but says he had never seen it in the living person. Fergusson says (but my edition is not the most recent) that he once saw it in the dissecting-room, undetected during life, the motions of the joint being very little interfered with. Dr. Cruikshank says it is extremely rare. The two points that seemed to us to demonstrate the nature of the case were the nearness of the anterior and external portion of the humerus to the touch, and the slight projection of the radius posteriorly. This, I have said, was far less marked than one would have imagined.

W. G. DAVIS, Heytesbury.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ESMARCH'S PROCEDURE FOR THE PREVENTION OF HÆMORRHAGE DURING SURGICAL OPERATIONS.

THIS method is being tried at most of the London hospitals, and is mentioned with strong approval by surgeons who have practised it. On the other hand, criticisms are not wanting; but these are mostly theoretical, and directed against detail; they do not attack the general principle. In fact, the essential advantage of the method—the prevention of hæmorrhage—has been sought by thoughtful surgeons for years past—notably by Mr. Hilton at Guy's Hospital. When about to perform amputation upon an anæmic subject, Mr. Hilton was wont to have the limb bandaged for some minutes beforehand with an ordinary calico bandage, from its extremity to the part at which the tourniquet was to be applied. He then kept the bandaged limb elevated until the commencement of the operation. This proceeding is of considerable advantage to the patient, though it does not render the tissues so thoroughly anæmic as when Esmarch's elastic bandage is properly applied. But, besides this primary object, the saving of the patient's blood, which Professor Esmarch's ingenuity has thus accomplished with a thoroughness never hitherto attainable, certain secondary benefits are secured to the operator and the patient, which were referred to in the JOURNAL last week (p. 488). The deep parts of the wound are not obscured by escaped blood. Hence the operator suffers no interruption from the application of the sponges; his view of the structures bordering upon the line of incision is as unimpeded as it ever is upon the *post mortem* table, and fewer assistants are required. In cases where it is necessary to distinguish healthy from diseased or dead tissues, as in operations for the removal of necrosed bone or of tumours, for the excision of joints, etc., the chief secondary advantages of the procedure are most apparent. An instance of the kind, as will be reported in another column, was mentioned by Mr. Edmund Owen, of St. Mary's Hospital, at the last meeting of the Harveian Society. The principal fears have not been realised, as far as present experience goes, though perhaps sufficient operations have not yet been performed to enable one to speak confidently upon this point. If any untoward symptom has been observed, it is, perhaps, a tendency to slough which has been suspected upon the part of the edges of the flaps in the cases of amputation. Certain modifications have been practised by English surgeons in the mode of application of the bandage and cord, to meet different contingencies. Of such adaptations, some are mentioned in the accompanying report of the cases in Guy's Hospital, in which this method of operating has been adopted.

GUY'S HOSPITAL.

Esmarch's method for the performance of bloodless operations has now (October 27th) been used twenty-four times. Nearly all the surgeons and assistant-surgeons have practised it since the first occasion of its employment during an excision of the knee-joint by Mr. Howse on September 16th. [The 24 operations have been the following:—For necrosis, 12; amputations of the thigh, 3; amputations through the knee-joint, 2; amputation of the leg, 1; amputation of the arm, 1; excisions of the knee-joint, 2; excisions of the elbow-joint, 2; removal of exostosis from the first phalanx of the index-finger, 1. The following varieties in its use have been employed. In one case of secondary amputation through the thigh for compound comminuted fracture of tibia and fibula, no elastic bandage was applied lest septic materials might be driven into the general current of the blood, but the India-rubber cord was simply used instead of an ordinary tourniquet. In another case of similar injury, a small bandage was first applied from the knee downwards to the fracture, then the larger elastic bandage from the knee upwards in the usual way. Again, in the case of the

exostosis already mentioned, Mr. Durham first bound separately the index-finger and thumb with a narrow elastic bandage, and then included all the fingers and thumbs in the wider bandage, with which the limb was bound from the finger-tips up to the point at which the elastic cord was applied. At Guy's, an elastic cord or rope is substituted for the tourniquet, not the India-rubber tubing which is in general use.

In five of the seven amputations, the edges of the flaps have sloughed, one of the two which escaped the sloughing was the only one of the seven cases not amputated under the carbolic acid spray. For the removal of necrosed bone and excision of the joints, the advantage of the method has been most evident, as it was also in the case of removal of the small exostosis, before alluded to, where the presence of blood would have much increased the difficulty of the operation.

We shall at an early date publish further particulars concerning this interesting subject. (*Brit. Med. Journal.*)

KING'S COLLEGE HOSPITAL.

MODIFICATION OF THE OPERATION FOR HARE-LIP BY SIR WILLIAM FERGUSSON.

ON two successive Saturdays, Sir William Fergusson has recently demonstrated to the students of King's College a novel modification of the ordinary operation for hare-lip. The cases in which he carried out this plan were of the usual type, the fissure being, as in the majority of instances, on the left side; and in both it was considered advisable to take away the intermaxillary bone. This adds to the success of the operation, not only by removing an occasional obstacle to primary union, but because the teeth, which are subsequently developed from the projecting knob, are worse than useless, by reason of their deficient development and faulty position. Instead, however, of removing the portion of bone readily with the knife or bone forceps, it had occurred to Sir William that it would be much better to operate subcutaneously, so to speak, by stripping off and retaining the mucous membrane; and accordingly this was done with perfect success, the bone shelling out readily from its investment; not only will this procedure greatly accelerate the subsequent process of healing, but the advantage is obvious, of retaining a thick and firm mucous surface in preference to the more artificial substitute of cicatricial tissue. (*Brit. Med. Journal.*)

WEST BROMWICH HOSPITAL.

A CASE OF SIMULTANEOUS FRACTURE OF THE PATELLE.

(Under the care of Mr. SUTCLIFFE.)

WE are indebted to Richard Johnston, M.R.C.P., L.C.S.I., etc., Resident Surgeon West Bromwich Hospital, for the following notes of an interesting case of this somewhat rare form of accident.

M. G. A., aged 33, housekeeper, was admitted into hospital on August 7th. As she was leaving the room with some plates, her foot caught in a mat which was at the door, when in the act of falling forward, she distinctly heard a crack, and felt something give way; and, on trying to get up, found herself unable to do so.

State upon Admission.—Both knees were much swollen, and at first sight it looked like a case of double synovitis; but, on passing the hand along the anterior surface of the limbs, the fragments could be felt separated by about three-quarters of an inch, which was still more marked upon flexion, the lower portion of the upper fragment being tilted upwards. From the swollen state of the parts, it was not deemed advisable to place the limbs in any apparatus. Warm fomentations were accordingly ordered; and, as the patient complained of great pain, a hypodermic injection of morphia was administered.

August 8th. The patient had slept well, and had not much pain. There was great ecchymosis. The fomentations were ordered to be continued.

August 9th. There was no pain, and the swelling was gradually subsiding.

August 10th, 9.30 A.M. The swelling having subsided to a great extent, it was determined to put up the limbs. The right, in which the displacement was the greatest, was put up after the method devised by Dr. Sambourne of Lowell, United States (*vide* Hamilton on *Fracture*, p. 433); the left, after the method known as Sir Astley Cooper's.—9 P.M. The patient complained of great pain in the left limb; the right was comfortable. She was ordered: R. Liq. opii sedativus mxxv; spt. chloroformi mx; aquæ ad ʒiiss. M. Ft. haust.

August 11th. The patient slept well. There was no pain in the right, slight pain in the left limb.

August 25th. The bandage on the right limb having become somewhat loose, it was reapplied; and, from this date up to September 28th, nothing was done but to tighten the plaster by twisting; on

which date the bandages, etc., were removed; and, on examination, it was found that in the right limb bony union had taken place, while in the left there was a space of about a quarter of an inch, filled up by ligamentous tissue. As might be expected, the patient was unable to bend the limbs. She was ordered knee-caps.

October 4th. The patient was gradually gaining the power of flexion. Knee-caps were applied.

October 6th. The patient made an attempt to walk, and was able to do so with assistance.

October 10th. The patient was discharged.

REMARKS.—This case presents a good example of fracture due to muscular action; and it is questionable whether transverse fracture of the patella is ever the result of direct violence, although Hamilton quotes a case which he states to have been caused by the latter. It also presents a fair field for the comparison of the two modes of treatment.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 1ST, 1873.

SURGICAL STATISTICS.

WE propose to pursue with earnestness the subject which was opened in our recent discussion of Mr. Erichsen's address at University College. No more important matter can occupy the attention of surgeons. We gave reasons then, which may be worth much or little, for doubting seriously the conclusion that an excessive mortality of operations in hospital is a necessary incident of treatment of surgical cases in nosocomial establishments. The communication which we recently published from the pen of Mr. Callender, and the lecture by the same surgeon, published to day, describing recent results at St. Bartholomew's Hospital, go to strengthen our argument. We are promised a further communication from Professor Erichsen, in the form of a lecture, giving some of the information for which we recently asked, as concerning his own practice; and we would ask our surgical readers, who cannot fail to feel a deep interest in this question, to aid us in two ways—by tabulating, analysing, and favouring our readers with the statistics of their *consecutive experience*, first in hospital operations over a series of years, and then in private practice. The latter will be highly valuable. Is pyæmia a hospital disease, and to what extent? How far does it occur in private practice? What is the experience of hospital surgeons as to the occurrence of so-called hospital diseases in private houses? What is their rate of mortality for the various operations in private practice compared with hospital practice? We want to have complete records as well as separate clinical studies. Very momentous issues rest upon the decision of this question—if it can be decided. If it cannot for a long time be decided, contributions to it of the whole and entire experience of each man in respect to it will be of the highest value. Mr. Callender's contribution is a most important one, and we shall expect with great interest that which we are promised from Mr. Erichsen. If we might appeal to Mr. Lister for the results of his experience up to this date in the Edinburgh Infirmary, that would be a statement of first-rate value; and there are other surgeons of experience, whom we shall not now signalise by name, who could largely assist the profession with data to determine what is the disturbing influence of a hospital upon recovery from operations. If there be any such influence in well arranged hospitals, what are the successful means of averting it? How far are hospital affections (so called) after operation peculiar to hospitals?

THE CLINICAL SOCIETY OF LONDON.

A VERY interesting meeting of this Society was held on Friday evening last. Before commencing the business, Sir William Gull rose and asked leave, before the Society proceeded with their scientific labours, to express on his own behalf and that of other members of the Society, their deep sense of the loss which the Society had sustained in the premature death of one of its members, which had occurred since the last meeting. During his two years of office recently, as president, he had been in frequent communication with the late Dr. John Murray, in his official relation to the Society. He bore testimony to the manly, genial, and generous character of that young physician, which had won for him the confidence and affectionate regard of all with whom he was brought in contact; and he could not rest content without taking that opportunity of expressing feelings which he knew were shared by the members of the Society at large. These remarks were received by those present with respectful and universal sympathy; and the president rose to associate himself, on behalf of the Society, with the tribute which had been paid to the memory of Dr. Murray by Sir William Gull, and to desire that due intimation should be conveyed to the parents of Dr. Murray of the feelings which had been expressed, and of the sympathy which the members of the Society felt for them in their bereavement. This has been done.

Like many of the marks of affectionate feeling and of heartfelt regret, which have been evoked by the premature and sudden decease of our lamented colleague, this unprepared and spontaneous expression of sympathy from so distinguished a Society is an unusual and almost unprecedented tribute of esteem; and is most highly prized by those to whom the memory of Dr. Murray is most dear, and who were most intimately bound to him by ties of relationship, affection, and association. Remarking truly, that in the battle of life the survivors must presently press on, whoever falls at their side, the President called on Dr. Guinier of Montpellier, to furnish a promised demonstration of the method of so gargling as to bathe the larynx and vocal cords in the fluid used. This Dr. Guinier easily effects by a simple act of vocalisation, described elsewhere; and the rather surprising spectacle of the upper part of the larynx filled with fluid, while the upper cords show through it, was shown by the demonstrating laryngoscope to all the members of the Society.

Sir W. Gull then read two papers, of considerable clinical interest; one on Hysterical Anorexia, a condition of which disgust for food and consequent emaciation are the leading symptoms. The cases were striking and well marked, and illustrated by photographs, "As I was," and "As I am," which graphically summed up the clinical history of the cases; the clinical moral was to enforce feeding, even at the risk of seeming harshness. As to etiology and therapeutics, Sir W. Gull regarded the pneumogastric cases as nervous vagaries—vagaries of the sympathetic, and was disposed to dismiss the cases, as this title indicates, to the limbo of "hysteria." There was a "loss of mental equilibrium" in some of the cases, and a tendency to mental alienation in some of the families; but he, of course, distinguished these cases from those of insanity with refusal to take food, which are of an altogether different character.

Dr. Quain, who belongs to the more hopeful and positive school of medicine, rejected the hysterical hypothesis, and the theory of nervous vagaries. He had satisfied himself that in many of these cases there was in the state of the stomach and mucous membrane an actual physical cause for the disgust for food, which was capable of being removed by treatment. He related a striking case ending in recovery. Indeed, it appeared that, although not unfrequently bringing the patient to death's door, hysterical anorexia is very rarely fatal. This loathing of food by young girls, as a single symptom, unaccompanied by evidence of disease of vital organs, which is now to be called Hysterical Anorexia, is an old disease under a new name.

A second paper by Sir W. Gull, on a Cretinoid Affection in Adult Women, was also a valuable contribution to clinical medicine; the

affection described being certainly rare, and not hitherto discriminated under any special title. A further paper by Dr. George Johnson, on Poisoning by Camphor administered by a Homœopathic Practitioner, was left over from pressure on time; no time having been left for any debate on Sir W. Gull's second paper, which was well worthy of discussion. Thus the night was well filled. It was, however, elicited by a question of Dr. Althaus, at the commencement of the evening, that this opulence sprung out of a dearth. Dr. Althaus asked how it was that the papers to be read had not been announced in the diary of the weekly medical journals of the previous Saturday, as is usual; and the officers were fain to explain that, at the date when the usual notices for the diaries should have been issued, there were no papers in hand. So the secretaries had then to go out and look for papers, with the excellent results we have described. From this, two conclusions may be drawn: First, that it is very desirable that members of this most valuable Society should prepare their contributions, and send them in early in the season, instead of delaying them until later in the year, when there is apt to be a crush of papers. Secondly, that the secretaries will do well to use their exertions to arrange for papers before the day for announcing the arrangements comes round.

SANITARY ADMINISTRATION.

DR. ROBINSON'S report to the Combined Sanitary Authorities of East Kent is a document of such general interest and value at the present juncture, that we do not hesitate to republish it entire in a subsequent page. It shows what may be done by a zealous and highly qualified officer to remedy some of the most striking defects of the Public Health Act (1872); and it also proves that, well-considered as such efforts may be, they are only palliative of the disorder, confusion, and failure caused by the errors of recent legislation and administration. In this instance, Dr. Robinson seems to have had an intelligent and willing audience, for the ten recommendations with which his report concludes formed the basis of resolutions, all of which were carried by the assembled authorities.

The main feature of the reforms proposed at this meeting was the formation of a Combined Representative Authority for the whole of Dr. Robinson's district, so that all the separate authorities, rural and urban, who have agreed to appoint him, may, at least once in the year, constitute a single body to hear and act upon his Annual Report. Small as is this measure of reform, liable to rejection as it obviously is by any constituent Local Authority, and difficult of execution as it must prove if the district of the supervising health-officer extended into more than one county, it is nevertheless a step in advance, and may help to convince the President of the Local Government Board that it is absolutely necessary to create proper administrative bodies over larger county areas.

There are four other decisions of this meeting to which we are glad to call attention—(1) the adoption of an uniform system of forms, returns, and statistical tables, for the several included districts, authorities, and officers; (2) the appointment of certain days in each month for the systematic visitation of each sanitary district by the chief medical officer; (3) his authorisation, by each authority, to institute and carry on proceedings under Section 48 of the Sanitary Act, 1866; and (4) the adoption of a memorial to the Education Department of the Privy Council, proposing a bye-law to provide that "where schools are closed in consequence of the epidemic disease, a proportionate diminution should be made from the number of attendances required in ordinary cases to obtain the Government grant"; so that, in fact, the closing of a school for sanitary purposes should not prejudice the school managers in their financial arrangements with the Privy Council. This last measure suggests the propriety and advantage of leaving National Health and National Education under one central authority, as they were left when the Privy Council superintended both matters under the

Vice-President of the Committee of Council on Education. The change made in 1872 does not seem in this respect to have conferred any benefit on the community.

The wise course taken by the East Kent Authority contrasts strikingly with the discreditable conduct of the Derby Sanitary Authority, which has the audacity to advertise for an officer of health at a salary of £20, the population now considerably exceeding 50,000! If all medical men were true to their profession, so insolent an offer would pass as undeserving of notice. If the Local Government Board did its duty, it would at once refuse to sanction, so disgraceful an evasion of the Public Health Act. To show the enormous disproportion between this and other salaries, we may cite the case of Malton, urban and rural, where, with a population of less than half that of Derby, the officer receives £300—the ratio of remuneration at Malton being, to that offered at Derby, as thirty to one!

Another instance of contrast with East Kent was reported recently in a contemporary by an officer of health, who (plucky fellow) signs himself "Nil Desperandum." It seems that, on application to his Sanitary Authorities, asking them to request the medical officers of the union and the various registrars to make such returns to him as would enable him to fill up the quarterly returns of sickness and mortality required by the Local Government Board, the Chairman informed him that "they should not take any trouble in the matter, or ask for returns from the gentlemen above named, because if they did they might have to pay for them; and so it would be for the health-officer to write and get them if he could, and pay for them if he felt disposed, out of his own pocket." Will the suffering officer submit to this *dictum*, and pay for the facts? or will he return the forms, leaving significant blanks, for the benefit of the Local Government Board? How long are Local Boards to be allowed to play these pranks? *Quousque tandem abutere, Catilina, patientia nostra?*

CONTAGIOUS DISEASES ACT.

THE Naval Medical Blue Book, issued this week, contains some valuable information bearing upon this subject. The following are observations by different medical officers bearing on the working of the Contagious Diseases Act. It is observed by the Director-General that, although but few officers have recorded their views with reference to the results of recent legislation, there is a perfect unanimity amongst them as to the advantages which have accrued to the public service from the operation of the Act even in its present limited application, and a wish is strongly expressed that it may be still further extended.

The surgeon (John Coogan) of the *Asia* observes:—

There were altogether a hundred and twelve cases of various forms of venereal disease added to the sick-list, including seventy-one of gonorrhœa, and seven of epididymitis, which number, as far as I can ascertain, shows a slight increase on the previous year. Of this number, ninety-seven were contracted in Portsmouth districts, five in Southampton, two in China, two in London, one in Bristol, one in Andover, two in Gosport, one in Plymouth, and one in Dorchester. At the end of the year there were five hundred and eighty-six prostitutes known to the police, and under police supervision, and about a hundred and ninety brothels in the Portsmouth district. The greater number of the women, many of whom are of the lowest class, reside in the vicinity of Queen Street, Portsea, and I am informed that since the contagious Diseases Act has come into operation there has been a gradual improvement in their habits of cleanliness and their general conduct. The majority, in fact nearly all the cases of primary syphilis that have been under treatment on board, presented a very mild form of the disease, the sores being of the simple or non-indurated class, and yielding to local treatment. In most of the cases sent to hospital for treatment the inguinal glands were involved.

The medical officer (Staff-Surgeon Fred. W. Blake, M.D.) of the *Duke of Wellington*, furnishes comparative tables of venereal diseases for the years 1870 and 1871, and with reference to them he remarks:

The above tables show that the cases of primary syphilis and gonorrhœa contracted in the port have been exactly the same as last year,

but the daily average of the crew for 1871 has been seventy-six more than for the year 1870, showing some improvement in the amount of disease contracted. The secondary affections are reduced by one half, and one only of the twenty cases refers his primary disease to Portsmouth, a conclusive proof that the character of the disease, as met with in this port, is gradually becoming less virulent, under the influence of police supervision and hospital treatment. More than one-half of the three hundred and thirty-eight cases entered in this year's venereal reports, have been contracted beyond the neighbourhood, when men have been on leave for short periods, conclusively showing how much more this class of disease prevails in other parts of the country deprived of the benefit of the Contagious Diseases Act. I sincerely trust that the Act may still continue in force. So many sound arguments in support of its sanitary and moral advantages have lately been published, that I feel any remark I could add would be superfluous.

The Staff-Surgeon of the *Hercules* (Robert Hervine) says:—

Of the working of the Contagious Diseases Act for the past year, I have had but little experience, the ship being so much out of England; but I am quite sure its beneficial effects on the constitution of the men is every year becoming more apparent. We seldom see that syphilitic cachexia, which used to be so common, and stricture, amongst six hundred and fifty men and officers, was almost unknown. I trust the outcry against this Act will not prevail. If it does it will be a sad day for the public services.

The Staff-Surgeon (Robert Creighton) of the *Invincible*, stationed at Hull, in remarking upon the prevalence of venereal diseases among the ship's company, observes:—

From the above state of things, it is evident that Hull is badly infected, and loudly demands protection, if reason could only overcome ignorant prejudice. The great influx of a foreign sea-faring population in this rising town must always keep up a great amount of disease, and from this focus it naturally spreads to inland towns, in these times of facilities of intercourse far and near. Thus, till every seaport is taken under protection, and the benefits of the recent Acts extended, there is little hope of permanent relief to the kingdom at large; and even in the more fortunate and favoured seaports where the Acts are in operation, their immediate improvement is more or less retarded by the occasional supplies obtained from distant sources.

The Staff-Surgeon (John Cockin) of the *Minotaur*, the flag-ship of the Channel Fleet, says:—

The number of cases of syphilis that have occurred in this year has been very great, and the great mass of the disease was contracted in the home ports, particularly at Portland. At this place there is no supervision of any kind over the loose women, who collect, when any men-of-war come into port, from all the districts in the neighbourhood for many miles, as far as Yeovil on the one side, and Southampton on the other. In most of these places there is no supervision over the females, and they are frequently diseased. Under these circumstances, when the ship was at Portland, in August last, there was a very large influx of these cases, as many as thirty having been put on the sick-list in a very short time. Some of them were very severe, entailing secondary affections; others were of a more simple character. The number mentioned does not include cases of gonorrhœa, of which disease also a number of cases were put on the sick-list, and others were treated without being placed on the list. . . . The disease at Portsmouth appears to show a marked improvement in its character, and evidently the health of the loose women has been materially ameliorated. There might, however, be a much greater improvement if the Contagious Diseases Act could be stringently carried out, but the opposition to it, which is much to be deprecated, will materially prevent any further move in this direction. At many ports abroad the beneficial effects of the strict working of the Act are evident; Lisbon, for instance, appears very much improved of late years, the number of cases applying for treatment after leave given at that port being very small. At Gibraltar, also, there appears to be very little disease, the men not having suffered much from their visit to that place. These ports contrast most favourably with the English ports, and in the cases that occurred at them the disease did not appear to be so virulent.

At Sheerness, the Staff-Surgeon (T. J. Haran) of the *Pembroke* remarks, in connection with the subject of venereal contagion:

The loss of service entailed by disease communicated from this source amounted to nearly one-fourth of that resulting from all other causes during the period, and as it is to be presumed that all other ships on the Home Station, as well as soldiers in garrison throughout the United Kingdom, must have suffered in a somewhat equal ratio, such losses become not only a question for serious consideration, but a

far from inconsiderable item in the national expenditure, placed on the debit, or wrong side of the account. Statistics prove that a very considerable reduction in the number of cases of syphilis and gonorrhœa treated in the public service has taken place since the Contagious Diseases Act came into operation, and that the more its scope has been extended by subsequent legislation, the more marked the benefit conferred by it has become. . . . I have mentioned in former remarks and reports that infecting virus conveyed from unprotected towns inland has been the principal source of the propagation of venereal disease for the last few years at Sheerness, and my experience of its action during the period of these remarks confirms this fact.

At the last meeting of the Committee of Council, one hundred and sixteen new members of the Association were elected.

THE French medical papers announce the death in Paris of "*Sir John Margaret*, a celebrated English surgeon, who leaves many esteemed works." We are a little puzzled by the announcement, not recognising the name.

A BIOGRAPHICAL notice of the late Dr. John Murray, with an engraved portrait from photographs by Fradelle and Marshall, will, we believe, appear in an early number of the *Graphic*.

THE Edinburgh University Club will dine at the St. James's Hall Restaurant, 69, Regent Street, W., on Wednesday, November 12th, at a quarter before seven o'clock. Dr. Wilbraham Falconer of Bath will take the chair. The quarterly general meeting will be held at a quarter after six punctually.

MR. EDWARD FORBES LANKESTER has been the successful competitor for the exhibition of £120 a year given at St. Paul's School to the first scholar for the year after competition. Mr. Lankester has also obtained, after examination, a scholarship worth £80 a year at Lincoln College, Oxford, where he is now pursuing his studies. Mr. E. F. Lankester is the son of the Coroner for Middlesex, and brother of Mr. E. Ray Lankester, Fellow of Exeter College, and Deputy of the Linacre Professor of Physiology, Oxford.

THE LATE DR. JOHN MURRAY.

At a special meeting of the Weekly Board of Governors of the Middlesex Hospital, it was resolved unanimously—"That this Board desires to record its deep regret on the occasion of the death of Dr. John Murray, Assistant-Physician, whose connexion with the hospital has been largely conducive to its interests in the past, and also gave great promise for the future. The Board feels that the loss it has sustained is one not easily repaired. The marks of universal respect which have been paid to Dr. Murray's memory are a proof that the loss is not that of the hospital alone, but of the profession of which he was so prominent a member. The Board desires to express its condolence and sympathies with Dr. Murray's family in the irreparable loss which they have sustained."

TOBACCO-POISONING.

A FATAL case of poisoning by tobacco is reported in the Naval Medical Report just issued. It occurred in the person of a boy of the *Implacable*. He had been frequently punished for chewing tobacco, and had often presented himself at the sick bay complaining of debility, giddiness, and faintness, which were traced to the poisonous influence of tobacco. On two occasions, he had swallowed pieces of tobacco to prevent detection. On the night of his death, he went to his hammock, telling his messmates that he felt sick. About ten minutes afterwards, the occupant of the next hammock to his heard him breathing stertorously, and immediately tried to awake him. Finding he could not, he was conveyed to the sick bay, and at once seen by a medical officer, who found him moribund. The pupils were insensible to the influence of light; and the pulse, which was scarcely perceptible, in three minutes ceased to beat. On *post mortem* examination of the body, two small pieces of tobacco were found in the stomach.

LONDON HOSPITAL.

We are glad to learn that Mr. Hutchinson has consented to resume his duties as surgeon to this hospital for the present. There could be no doubt as to the feeling of the students in the matter, as at the introductory lecture he met with an enthusiastic reception. His clinical lectures, which are so much valued by them, will now be delivered without interruption.

THE CHOLERA IN EUROPE.

THERE has been a slight increase in the number of cases in Vienna lately. From the 8th to the 15th of October, there were 72 cases; the mortality amounts to 72 per cent. There have been reported, thus far, in Berlin, 996 cases, of which 669 have proved fatal. There were 64 deaths in Havre from the 10th to the 17th of October. Sixteen deaths from cholera are reported during the week in the Paris hospital in the *Progrès Médical*.

CHOLERA IN FRANCE.

We are indebted to M. Lutaud, Resident Medical Officer of the Hôpital du Havre, for the following authentic statement:—The first appearance of cholera in France was at Havre towards the end of July. Although the means by which it was transmitted have not been perfectly ascertained, everything leads us to believe that the epidemic came from Hamburg, where it was raging with intensity. By the middle of August, the number of cases was really considerable, and ten deaths a-day were attributed to cholera. All the characteristic symptoms were observed: diarrhoea, whitish vomiting, cramp, etc. There could be no doubt that we had really to deal with an epidemic of Asiatic cholera. A few days after its appearance at Havre, the epidemic spread to Rouen, where it made equally great ravages; from there it went to Paris, by following the valley of the Seine. I will not tell you anything concerning the capital, the medical journals have kept you *au courant*. You know that the epidemic maintained itself, and that, at least, sixty deaths a-week were noted. Towards the end of August, the cholera appeared in Caen, a town situated nine miles away from, but in daily communication with, Havre. There its ravages were really great. From September 22nd to October 23rd, there were nearly three hundred deaths attributed to this scourge, and this is really enormous for a town of forty thousand inhabitants. We are glad to announce that now the mortality has greatly diminished, and that the epidemic has almost disappeared. There were a few cases also at Cherbourg and Fécamp, and in many other towns of the Côte. The sanitary condition of Havre is now improved in a marked degree; in the week just passed there were only twelve fatal cases. It is estimated that there have been at most five hundred victims to this epidemic. The cases have been particularly remarkable for the rapidity of the symptoms and the short duration of the disease. I have seen sixty patients succumb, and with them the shortest duration of the disease was thirty-two hours. Amongst the cholera patients admitted to hospitals and treated, the mortality has been 50 per cent.; but in the town we estimate that it has been higher.

THE ISOLATION OF CHOLERA PATIENTS.

The Société Médicale des Hôpitaux of Paris has recently discussed at two sittings the question of *Isolation and Special Hospitals for Cholera Patients*. The discussion terminated by the adoption of two propositions thus conceived:—The Society considers isolation illusory when attempted in buildings employed for the treatment of ordinary maladies. Consequently, it expresses the desire that, in all hospitals where isolated pavilions do not exist, huts or tents should be erected, exclusively devoted, some to doubtful cases of cholera, others to cases of confirmed cholera. It expresses, besides, the desire that the hospital staff (sisters and ward-attendants) should be special for the wards reserved for cholera patients. In case the epidemic should be greatly extended, the Society demands that new special buildings be established (barracks or hut-buildings), in proportion to the wants of each quarter of the city.

A TRANSLATION.

WE have been requested to furnish a translation of the lines which we published last week commemorating the premature death of the late Dr. John Murray. We subjoin a version of them, not without regret that for any medical reader it should be necessary. The schoolmaster has not yet done his work in the profession.

"And didst thou think, O death, to gain
A victory by having slain
One so young, so full of skill?
Ah, no! for he is living still.
He lives enshrined in many a heart,
Friend, brothers, debtors to his art.
Present thus, though absent, he
In dying, death, will conquer thee."

THE COST OF INQUESTS.

CAPTAIN MORLEY having renewed his quarterly attack upon the accounts of the Coroner for Central Middlesex, and stated that they are greater than those of "any of the other coroners", Dr. Lankester has refuted the charge by publishing the following rather interesting extract from the judicial statistics of 1872. "Mr. Payne, Coroner for the City of London, each inquest, £4:18; Mr. Bedford, Coroner for Westminster, £3:17; Coroner for Tower Hamlets, £3:17; Dr. Lankester, Coroner for Central Middlesex, £3:16." It is of the highest importance to the ends of justice that inquests should be satisfactorily conducted, and that proper inquiries should be made by competent experts in doubtful cases. There is too much reason to believe that autopsies and chemical examinations are frequently omitted where they ought to be made, and that thus crime is favoured with facilities for escaping detection. It is really contrary to the duty of a magistrate to throw obstacles in the way of a judicial officer in the performance of important duties, and we hope that the good sense and spirit of justice of the Middlesex magistrates will discourage the repetition of these groundless attacks.

LONDON SLAUGHTERHOUSES.

DR. DUDFIELD, the medical officer of health to the Kensington Vestry, reports that he has recently made a complete inspection of the slaughterhouses and cowsheds in the district, in anticipation of the general licensing. He found fifty-four in the district, and he apprehended that few were established thirty years ago, when the Act for the regulation of these places, for the protection of the public health, was passed. He mentions as "curious evidence of the general ignorance of the Act of 1844, that every slaughterhouse established in the parish since that date has been established in violation of the law," inasmuch as they were within forty feet of the public way, or fifty feet from a dwelling-house. He stated, too, that the defects of the slaughterhouses and the manner of conducting the business of slaughtering were in many cases very objectionable, and he gives some of the objectionable features:—"Thus, for instance, it is not uncommon to find horses stabled in the slaughterhouses, or a stable directly connected with it; so that the ammoniacal fumes must needs affect the meat offensively. Very often the lairs are part and parcel of the slaughterhouse, and then the same objection arises. Sometimes there is no lair at all, or the lairs are so situated that the slaughtering is done in the sight of the living animals, which, to say the least, is an undesirable state of things. In a few instances, the slaughterhouses are ceiled, as when a stable has been converted to this use, and the rooms overhead are inhabited contrary to the existing regulations. One slaughterhouse is an underground cellar and stable combined. Very precise regulations are made as to the trapping of drains, but they are often disregarded, and I have no doubt that in some instances the blood is commonly allowed to run into the sewers, where its decomposition adds needlessly to the amount of foetid gases they contain. In several slaughterhouses, both this year and last, I found the drains untrapped. Bell-traps are generally used, and, as these are not fixed, there is no difficulty in removing them during business hours. Some slaughterhouses are not sufficiently attended to in point of cleanliness, though they may be whitewashed as frequently as

the regulation requires; for sometimes the 'cleansing' is effected by covering without any attempt at removing the impurities on the walls. Then, again, some of the slaughterhouses are so close to the dwelling-house, that they may be considered part and parcel of them. With one or two exceptions, the buildings do not appear to have been erected with any reference to the special purpose for which they are used, and hence many of them are wholly unsuitable. A washhouse in the rear of the dwelling, a simple shed, or a stable, has, in many instances, been converted into a slaughterhouse, and serves the additional purposes of stable, lair, and coachhouse. In not a few there is no access to the slaughterhouse save through the house or shop itself, through which accordingly the animals have, with more or less difficulty, to be driven." When the fifty-four cases came before the Licensing Bench, only about half were permitted to continue the trade, the rest being put back for sanitary amendments, while others were refused altogether. As to the cowsheds, Dr. Dudfield opposed licenses being granted to places where the water used was from wells, and not laid on. The opposition was successful, and the sheds were not licensed until a supply was laid on. Cowsheds and stables were also successfully opposed having a licence where there were dwelling-rooms overhead, the medical officer holding that such places should be open to the roof.

HOSPITAL SUNDAY IN NEWCASTLE.

THE committee of the fund, in presenting their third annual report (1873), state that, during the past year, the sum received through the agency of this fund has been the largest in amount yet obtained, and, inclusive of the workmen's collections, has exceeded by more than £600 the amount of last year's contributions. In 1871-2, as a result of the appeal made on the special Sunday, £1,750 were given to the charities. This year £2,304 have been divided amongst the same institutions. The following sums were voted by the distribution committee to the several hospitals:—The Infirmary, £1,217; Newcastle Dispensary, £306; Convalescent Home, £414; Sick Children's Hospital, £143; Gateshead Dispensary, £98; Lying-in Hospital, £50; Hospital for Poor Women, £8; Eye Infirmary, £19; Homœopathic Dispensary, £12; Hospital for Skin Diseases, £28; North Shields Dispensary, £4. It is to be hoped that the success of the Hospital Sunday movement may now be considered as established.

SANITARY CONDITION OF WOLVERHAMPTON.

JUDGING from the discussion which took place at the last monthly meeting of the Town Council of Wolverhampton, it would appear to be the opinion of this sanitary authority, that all matters relating to the public health of their town should be deemed private to the borough, and that their discussion in public and scientific journals is a gross injustice to the members of the Council. The meeting was a curious one. Speeches were made and statistics were quoted by various members of the authority, with a view of proving that, although the deaths during the past quarter had been at the high rate of twenty-nine per thousand, and had been to a considerable extent made up of a mortality from enteric fever and diarrhoea, yet that there was no town in England in a more healthy condition. And yet, at the same moment that such statements as these were made, a memorial from persons admittedly representing the principal residents and the leading intelligence of the place, was read, calling attention to the anxiety which existed amongst the inhabitants of the town concerning its sanitary condition, and urging upon the Town Council the prompt removal of nuisances, the closure of wells polluted with sewage, and such structural works as should prevent the escape of sewer-air into houses. The report of the present Medical Officer of Health for the past quarter was further laid upon the table. It also called attention to the prevalence of infectious diseases and of diarrhoea; it enumerated the steps which it had been necessary to take, and which had in advance carried out some of the recommendations of the memorialists; and it drew especial attention to the fact, that as many as three hundred and thirty-two notices had been served upon persons to abate nuisances. In the face of facts such as these, it is surely a waste of time for the Town Council

of Wolverhampton to argue that, because similar ailments prevail in other towns where the ordinary causes of infectious diseases are unfortunately but too rife, therefore their own town is to be deemed healthy; it would be far better for them energetically to follow up the action which it appears they have felt themselves obliged to carry out since the recent epidemic prevalence of enteric fever, and so to get rid of the numerous sanitary evils which are known to exist. We consider it particularly unfortunate that their Medical Officer of Health should endeavour to explain away the prevalence of an infectious disease, which, as his own report shows, has been due to the usual well-known causes, by a vague statement that "at this season of the year there is a change in the vital powers predisposing to fevers." Even if he has succeeded in ascertaining the existence of such a "change," it would have been far better to have impressed upon the authority, that by removing and stamping out the exciting causes of fevers, the mere existence of a theoretical predisposing cause would become of but trivial importance.

THE ADULTERATION OF FOOD ACT.

THE following public analysts have been appointed; viz.: Dr. Henry Letheby and Dr. Charles Meymott Tidy, for East Suffolk; Mr. William Baker, F.C.S., for the West Riding of Yorkshire; Mr. George Jarman (Professor of Chemistry, Huddersfield College), for Huddersfield.

HEALTH PROGRESS IN INDIA.

WE gather from a notice of a report on "The Moral and Material Progress and Condition of India during the Year 1871-72," some interesting statements. Several causes are enumerated which tend to retard the increase of the native population of India. Much of the disease in that empire is attributed to bad water and bad drainage. The new water-supply at Calcutta has had a very marked influence in improving the health of the city, and a similar result is confidently expected from the works at Madras. The great drainage scheme at Cawnpore is also progressing. A very important sanitary question has long been under consideration, with reference to the effect of irrigation-canal on the health of the districts through which they pass. In 1847 it was found that an extensive epidemic influence had pervaded a large portion of the North-Western Provinces for some years, and the disease was observed to be more general and severe in the irrigated districts than elsewhere. A committee which investigated the subject recommended that irrigation should be stopped at a distance of two hundred yards from the villages, and that a double row of trees should be planted round the unirrigated space. It was found that the percolation of water caused an efflorescence of soda to rise up on the surface of the land, destroying the fertility of the soil, and giving rise to some injurious physiological results. At present there are several water-logged tracts in Saharanpur and Muzaffarnagar, where the people are fever-stricken. Fever is by far the most general source of death in India, carrying off—except in years when cholera is raging—far more than all other diseases put together. The returns, exclusive of Bengal and the North-West Provinces and Burma, give upwards of 900,000 deaths from fever in 1871, so that the total number in all India is supposed to be nearly a million and a half. "At least half these lives," we are told, "might be saved, if we could put quinine retail into every native druggist's shop at one rupee per ounce." In some localities fevers are breaking out with unprecedented violence. Mortality is also fearfully aggravated by the passion of the people for pilgrimages. Persons of all ages and both sexes traverse vast areas, and die by hundreds on the route. Hospitals and dispensaries are somewhat numerous, and much care is taken to bring the benefits of proper medical treatment within the reach of the whole population. At Bareilly and Naini Tal, women are regularly trained in medical and surgical science, and one or two have set up successfully as private practitioners. In the matter of diet, Dr. Forbes Watson shows that the natives in mixing certain dry grains and Indian pulses, combine these two classes of food in their dishes in such proportions as to give the same amount of nourishment as would be afforded by wheat.

SCOTLAND.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

At the annual meeting of this body held on October 15th, Dr. Andrew Wood was unanimously re-elected their representative in the General Council of Medical Education and Registration of the United Kingdom for the period of three years from October 8th. The following office-bearers were also elected for the ensuing year. *President*, James Simson, M.D. *Treasurer*, John Gairdner, M.D. *Secretary*, Robert Omond, M.D. *Librarian*, Archibald Inglis, M.D. *President's Council*: James S. Combe, M.D.; Andrew Wood, M.D.; James Duns-mure, M.D.; William Walker; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D. *Ex Officio*, John Gairdner, M.D. *Examiners*: Archibald Inglis, M.D.; James Duns-mure, M.D.; Peter David Handy-side, M.D.; James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; David Wilson, M.D.; John Smith, M.D.; D. M. C. L. Argyll Robertson, M.D.; Joseph Bell, M.D.; Thomas Annandale; William Stephenson, M.D. *Assessors to Examiners*: William Brown, James Spence, John Gairdner, M.D., and William Walker. *Conservator of Museum*, James Bell Pettigrew, M.D. *Clerk*, James Robertson. *Officer*, John Dickie. *Assistant to Conservator*, James Grandison.

GLASGOW: OPENING OF THE MEDICAL SESSION.

THE medical session in Glasgow University was opened on Monday, October 27th, the usual address being delivered by Dr. G. H. B. Macleod, Professor of Surgery. The session in the Andersonian was inaugurated by an address by Dr. M'Call Anderson, Professor of the Practice of Medicine. There was a very good attendance upon both of these occasions.

IRELAND.

At a late meeting of the Guardians of Middleton Union, County Cork, Dr. John Barry, late Medical Officer of the Carrigtuohill Dispensary District, which post he has held for the past twenty-one years, was unanimously given the full retiring pension allowed by the Super-annuation Act.

At a meeting of the Council of the College of Surgeons held last week, Dr. J. Emerson Reynolds was elected a Professor of Chemistry in the room of the late Dr. Barker. The other candidates were Dr. Cameron, City Analyst, and Dr. Davys, Professor of Medical Jurisprudence to the College.

THE salary of Dr. Duggan, Medical Officer to the Turloughmore Dispensary District, County Galway, has been increased from £100 to £130 *per annum*. Dr. Dobson, Surgeon to the Workhouse of Mohill Union, County Leitrim, has had his salary increased from £75 to £100 yearly. Dr. Stephenson, Medical Officer of Tramore Dispensary District, has had his income increased by £20 a year.

UNIVERSITY OF DUBLIN.

MR. WHARTON, Surgeon to the Meath Hospital, has been appointed by the Board of Trinity College to do temporary duty for Mr. Robert Smith as Lecturer on Surgery in the School of Physic.

ROYAL COLLEGE OF SURGEONS.

THE new form of examination which was published in the Students' Number of the JOURNAL, it is confidently expected will first come into operation in December next. It has been openly stated that the Council of the College have already passed a resolution to this effect; but they are reticent, and it is so difficult to obtain any special information from the officials of the College, that the matter still remains

in a very uncertain condition. The hardship is great to those students who are going in next examination, as they are unaware whether they will be examined in Chemistry and Botany, two additional subjects which are included in the proposed examination, but have been absent from the old.

KINGSTOWN SEWAGE BILL.

THE Town Commissioners of this fashionable watering-place have deemed it necessary, for promoting the health of the township, that application should be made in the next session of Parliament for a special Act, to authorise the construction of an intercepting outfall sewer, and for perfecting the sewerage-system; also for powers in relation to its water-supply, the establishment of markets, etc. There is little doubt but that the Bill will be of incalculable advantage to the residents of Kingstown, a town which, with its natural advantages, ought to be one of the best drained towns in the kingdom, instead of one of the worst, as it undoubtedly has the misfortune to be.

THE LATE DR. ROBERT W. SMITH.

THIS distinguished member of our profession died at his residence in Eccles Street, Dublin, on Tuesday, October 28th, after a severe illness of some weeks. The affection from which he laboured was hepatic disease, complicated with ascites; and for some time past it was known that there was no chance of recovery, and that the case was a perfectly hopeless one. He was Professor of Surgery in the University of Dublin, and had a wide reputation far beyond the limits of his own country, as a gentleman of very considerable surgical skill. His work on *Fractures and Dislocations* is a standard one, and his contributions to surgery at the Pathological Society of Dublin, of which he was secretary, were numerous and of considerable interest. He also published several excellent monographs in the *Dublin Quarterly Journal*, and other medical periodicals. Within the last few weeks he resigned the surgery to the Richmond Hospital, and was appointed a consulting surgeon to that institution.

THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

At the meeting of the Royal College of Physicians, London, on Thursday evening, after the admission of Fellow and members, a communication was read from the University of London, offering co-operation (under the sanction of the recent Act of Parliament) in carrying out the joint scheme of examination, which was cordially and unanimously accepted. The following names were submitted for the College Lectureships of the ensuing year:—The Harveian Oration, Dr. West; the Goulstonian Lectures, Dr. Payne; the Croonian, Dr. Murchison; the Lumleian, Dr. Sibson.

THE PROVINCIAL MEDICAL SCHOOLS.

WE have received the following returns of the number of students at present engaged in professional studies in the provincial medical schools:—

Birmingham School of Medicine.—Number of students attending, 98; new entries this session, 35.

Bristol Medical School.—Number of students attending, 30; first year's students, 8.

Leeds School of Medicine.—Number of students attending, 95; new entries this session, 28.

Durham College of Medicine.—Number of students attending, 60; first year's students, 22.

Sheffield School of Medicine.—Number of students attending, 18; first year's students, 8.

Manchester Royal School of Medicine (Incorporated with Owens College).—Number of students registered, 138; new entries, 38.

"OUR MEDICAL COLUMN."

THE last phase of the connexion of Dr. W. H. Stone with "Our Medical Column" in the *English Mechanic* was presented in the number of that journal for Friday, October 24th, when there appeared an editorial announcement that, in consequence of the objections expressed by the medical journals, Dr. Stone had last week proposed a modified plan of carrying on "Our Medical Column". "We think, however," says the Editor, "it is better to drop the Medical Column as a distinct department of the paper, and to insert any suitable inquiries that may reach us appertaining to life, health, and disease, as ordinary queries, leaving them to be answered by Dr. Stone or any other competent authority." Thus the precise position of the matter appears to be, that Dr. Stone, after repudiating as unreasonable the objections of the "clique or class to which he belongs" to his conducting such a department in a popular paper, and declaring that they are not binding on him, proposed to continue it with modifications; whereas the editor thinks it better to shut it up altogether, and to insert medical queries in the ordinary correspondents' column, and to leave it to Dr. Stone or anybody else to answer them. We cannot profess to think this a satisfactory conclusion. Insomuch that the abatement of the nuisance is avowedly stated to be due to the objections expressed by the medical journals, it is, of course, a significant commentary on the obstreperous declaration of Dr. Stone that he did not "care one iota" for whatever they might have to say. But, although his rapid retreat from that position of splendid defiance, and the covering movement of his editor, sufficiently show the unwisdom of that outburst, they are far from solving the question. A worthy and dignified journalism neither seeks nor takes pleasure in such poor triumphs. The question raised was not really that of the courage or wisdom of an individual, or it might have been disposed of much more briefly and quietly. It was as to the correctness and justice of a professional principle. That principle has been and remains most openly impugned by a fellow of two most important professional bodies. His latest public declarations before the public and the profession maintain its unsoundness. The clumsy sort of retreat which has been effected is avowedly in fear of us, and not in deference to the wisdom of that principle. That is a sort of avowal which does not seem to us professionally satisfactory. It is of course doubtful, however, in the changed position of affairs—Dr. Stone having retreated in this irregular and grumbling fashion—whether the College of Physicians or the staff of St. Thomas's Hospital will now think it worth while to take any further notice of the matter.

THE GENERAL MEDICAL COUNCIL.

A MEETING of the Executive Committee of the General Council of Medical Education and Registration was held at the Rooms of the Council in Soho Square, on October 23rd. There were present: Dr. Paget (the President), Dr. Acland, Dr. Bennett, Dr. Quain, Dr. Sharpey, and Dr. Aquilla Smith.

The most important subject for consideration was the habitation of the Council. It will be remembered that the Committee of the Council had an interview some time since with the late Chancellor of the Exchequer, Mr. Lowe, on the subject of the propriety of the Government allotting quarters to the Council in a public building. Mr. Lowe fully discussed the subject with the deputation, and admitted frankly that it would be proper; the ground being that the Council is a body called into existence by an Act of Parliament chiefly for public purposes, and to carry out an Act intended, as its preamble states, to protect the public from fraud, by framing a public register of persons holding diplomas qualifying them to practise, and preparing a national *Pharmacopæia*. The archives of the Council include numerous public documents of importance and the materials of the public register, which, in its printed form, is furnished to all our courts of justice and public departments. Mr. Lowe mentioned the premises occupied in St. Martin's Place by the Provident Institution as possibly suitable for the Council. Recently the President of the Council received a communication from the Treasury stating that those premises would be free at this

date, and inviting the Council to ascertain whether they would be suitable. As a matter of fact, it is found that they are not suitable. This letter, however, may well have caused no small astonishment in the Council—for it invited them to offer terms of rent, fixing a very high rent as that which my lords were advised was the value of the rooms. This would seem to intimate a forgetfulness of what had already passed. The late Chancellor of the Exchequer had, after a careful scrutiny of the question, admitted the propriety of lodging the Council, as other State bodies are lodged, in public apartments free of charge. The Medical Council is a body which has done an immense amount of work for the State, and expended large sums mainly for the public advantage and convenience, the funds being furnished wholly by the tax on the profession. It would be hard, indeed, that a decision in its favour by so rigid an economist as the late Chancellor of the Exchequer should be revised by his successor. It is, moreover, contrary to ordinary precedent. We prefer to anticipate that it will prove that there has been some forgetfulness or misapprehension of the footing on which the matter had been left, and that a satisfactory result will be arrived at. We may say that the College of Chemistry, Oxford Street, is a Government building which has now for some time been vacant, and, we believe, well fitted for the purposes of the Council. The President has communicated further with the Treasury, and the Treasurer and Registrar are empowered to make such temporary arrangements as to apartments as they shall find most advisable.

THE HEALTH OF THE NAVY.

THE statistical report of the health of the navy for the year 1871, just issued from the department of the Medical Director-General, Sir Alexander Armstrong, K.C.B., shows that there was during the year a decrease in the ratio of cases entered on the sick list, and of the men invalidated out of the service, while the death-rate was only 8.5 per 1,000. In this report are published, for the first time, a series of tables, which Dr. Mackay states have been prepared with great labour, showing the cases, invalidings, and deaths from the various classes of disease and injury, arranged under five decennial periods of age, from 15 to 25 up to 55 to 65. Further tables, based upon these age tables, are inserted under the total force, showing the influence of age upon the cases, invalidings, and deaths from the various diseases. From these tables it appears that, of the mean force of 47,460 officers and men serving during the year, 50.04, or one-half, were between the ages of 15 to 25; 35.61, or more than one-third, between 25 and 35; 11.66, a little over one-tenth, between 35 and 45; 2.50, or one-fortieth, between 45 and 55; and an infinitesimal number at the last period, of 55 to 65. Taking the total cases or entries on the sick list, it appears that more than half were in men of from 15 to 25; more than a third in men of 25 to 35; about one-twelfth between 35 and 45; and one and a-half per cent. between 45 and 55. The most prevalent causes of entry on the sick list were diseases of the cellular and cutaneous system, including boils, abscesses, ulcers, and various forms of skin-disease, which caused nearly one-fourth of the total cases; one-fifth resulted from wounds and injuries; one-sixth from diseases of the digestive system, including diarrhoea, dysentery, and stomach complaints; a little over one-tenth from diseases of the respiratory system; one-twentieth from rheumatism, and a similar proportion from diseases of the urinary and generative systems. The various forms of fever, including small-pox, caused about 6 per cent. of the total cases. From the table of invalids, which shows the men who are permanently removed from the active list, and were, therefore, lost to the service, it appears that the largest proportion—nearly one-seventh—were invalidated for nervous affections, while phthisis or consumption, diseases of the heart and blood-vessels, and diseases of the digestive system each contributed from one-eighth to one-ninth per cent. Notwithstanding the large proportion of entries on the sick list for wounds, they caused but a slight permanent loss to the service—only one-twentieth of the total invalidings—thus proving that, although men go on the sick list for slight hurts, the incapacity for duty is only of a temporary nature. Of the deaths, on the other hand, one-fourth were due to wounds and injuries, a term which includes all cases of wounds in action and all deaths from drowning. The most fatal disease during the year was consumption, causing one-sixth of the total deaths, while diseases of the heart stood next in order, causing nearly fourteen deaths in every hundred. Eruptive fevers, including small-pox, caused seven and a-half per cent. of the deaths; but, in explanation of this, it is pointed out that the year 1871 was the period in which the small-pox epidemic occurred on shore. Scurvy, at one time the scourge of the Royal Navy, is reported to have almost disappeared, only four cases occurring out of the 47,460 men, three of which were in the persons of Kroomen.

ASSOCIATION INTELLIGENCE.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING will be held in the Music Hall Buildings, Aberdeen, on Wednesday, November 5th, 1873.

Papers have been promised by Drs. Greig, A. D. Davidson, Dyce Brown, etc.; and a proposal to alter the laws of the Branch so as to have a boundary mutually advantageous to it and the Northern Counties Branch, will be brought forward.

ALEXANDER OGSTON, *Secretary*.

Aberdeen, October 20th, 1873.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Squirrel Hotel, Wellington, on Friday, November 7th, at 5 P.M.

The following question has been settled by the Council as the one on which each member should be asked to express his opinion at the said meeting after dinner:—"Is Club Practice conducive to the interest and welfare of the Profession?"

Gentlemen who intend to be present at dinner, or who may have communications for the meeting, are requested to send notice thereof to the Secretary.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, October 15th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Fountain Hotel, Canterbury, on Thursday, November 6th, at 3 o'clock P.M.; Mr. H. G. Sadler in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

The following papers have been promised. 1. Dr. Kersey: Case of Irregular and Deficient Development in a New-born Infant.—2. Mr. Bowes: Case of Cardiac Disease.—3. Dr. Robinson: Some Remarks on the Carriers of the Contagium of Enteric Fever.—4. Mr. Clement Walter: Case of Ligature of the External Iliac.—5. Mr. Rigden: On the advantage of the Obstetric Forceps in some cases in which they are not considered absolutely necessary.

Gentlemen who intend to be present at the dinner are particularly requested to inform me on or before Tuesday, the 4th inst.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James Street, Dover, October 21st, 1873.

MIDLAND BRANCH.

THE autumnal meeting of the above Branch will be held on Tuesday, November 11th, at 7 P.M., at Messrs. Crossley and Clarke's, Medical Library, Leicester.

Several gentlemen have promised to read papers and bring cases forward for discussion. Any member who is desirous to assist at this meeting is requested to communicate with me without delay.

THOS. BLUNT, M.D., *Hon. Sec.*

Leicester, October 29th, 1873.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above District will be held at the White Hart Hotel, Lewes, on Friday, November 14th, at 3 o'clock. RICHARD GRAVELY, Esq., in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

By permission of the Committee of the Sussex Archaeological Society, the Museum at the Castle will be thrown open to members and their friends for inspection.

Papers have been promised by Dr. Moon of Brighton, "On the Therapeutics of Pythogenic Fever", and on "Stricture" successfully treated by "Holt's" method at the Newick Cottage Hospital, by the Chairman.

Dinner will be provided at 5.30 P.M., at the White Hart Hotel; charge, 5s., exclusive of wine.

Notice of intended communications is requested by the Secretary on or before Thursday, the 6th instant.

THOMAS TROLLOPE, M.D., *Honorary Secretary*.

35, Marina, St. Leonards-on-Sea, October 28th, 1873.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

A MEETING was held on Thursday, October 16th, at Laker's Hotel, Redhill. Dr. Holman presided, and twenty-five members and visitors were present.

An excursion was made to the Earlswood Asylum, where the party were received by Dr. Grabham, the resident physician, who took them over the institution, showing its general arrangements, etc., and pointing out several cases of interest. The return to the hotel was made by 6 P.M. Most of the members remained to dinner; and the Mayor of Reigate and Dr. Grabham were present as guests of the Chairman.

A hearty vote of thanks was accorded to Dr. Grabham for the pleasant and instructive visit of the afternoon.

EAST YORK AND NORTH LINCOLN BRANCH.

THE following is an abstract of the President's Address read at the autumnal meeting of the above Branch, held at Cleethorpes on Wednesday, September 24th, 1873.

MR. MORLEY having given a brief statement of the business transacted by the Council, together with a general account of the late meeting of the Association in London, invited the opinion of the meeting respecting a question which had arisen in his practice as a Poor-law medical officer, viz.: "The right of payment for cases when medical relief is granted on loan."

From the correspondence read, it appears that Mr. Morley had attended a man named Marris (who had walked a mile to his house immediately after having sustained a fracture of the arm) without an order, and that within a week he received an order from the relieving officer, which was confirmed by the Board of Guardians at their next meeting, when he was relieved in the ordinary way for a month, and then the relief hitherto given was granted on loan for a fortnight, and afterwards recovered from the patient. After Mr. Morley had sent in his quarterly account for payment of extra fees, the clerk informed him by letter "that Marris did not become chargeable to the union until several days after the date when the treatment of his arm commenced, and the relief subsequently given to Marris was only given on loan. Under these circumstances, the guardians are of opinion that the charge cannot properly be made against them."

On appeal to the Local Government Board respecting this case through the Board of Guardians, Mr. Morley asked, Was not medical relief included in this loan? Two months afterwards, he wrote to the Board of Guardians, informing them that he had not yet received an official reply, but had been verbally informed by their clerk that the Local Government Board had instructed them that he had clearly no legal right to the fee, and had granted it to him as a gratuity. He therefore requested it to be forwarded with a copy of the resolution respecting the same, to which the clerk answered, that he was directed by the board not to furnish the copy asked for, and at the same time enclosed a cheque for £1 awarded as a gratuity. To which Mr. Morley replied by acknowledging the receipt of a cheque for £1 awarded as a gratuity under Article 172 (which provides compensation for "extraordinary services") in answer to his claim for payment of the fee provided for treatment of a fracture of the arm by Article 177, and stated that as this is a question affecting the medical profession in general, and Poor-law medical officers in particular, he respectfully declined accepting as a favour what he claimed as his right, and returned the cheque.

An animated discussion arose (several Poor-law medical officers being present) on the following questions.

1. Have the guardians power, having confirmed the order of a relieving officer on a case specially provided for by Article 177 of the General Consolidated Order of the Poor-law Commissioners of July 24th, 1847, to repudiate payment by subsequently giving relief on loan?

2. Could he consistently with his appeal for services rendered as above stated, accept payment in the form of a gratuity?

On the motion of Mr. KEETLY, seconded by Mr. DIX, it was resolved unanimously that Mr. Morley was clearly entitled to his fee as a right, and an opinion was expressed by a majority present that it would have been better had he accepted the fee under protest.

It was also recommended that the representatives in the Council should urge upon the Poor-law Committee of the Association the importance of memorialising the Local Government Board, that on all future appeals an answer be forwarded direct to the medical officer instead of to the clerk of the union only, it being impossible under the present arrangement to obtain an exact opinion respecting any question submitted for consideration.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 21ST, 1873.

Sir WILLIAM JENNER, Bart., M.D., K.C.B., President, in the Chair.

Traumatic Separation of Epiphysis of Great Trochanter.—Mr. M'CARTHY brought forward a case, chiefly on account of its rarity, occurring in a child suffering from lumbar abscess. The child died from pyæmia three hours after admission. After death, the epiphysis was found separated, but held in position by the tendons and capsule. Ten days previously, the child fell on the floor and injured the hip, but yet managed to walk to the hospital.—Mr. KEY described a similar case where a child fell on a kerbstone and died soon after, probably from pyæmia, where the same injury was found.—Dr. GOODHEART asked if the separation were primary or secondary to acute osteitis.—In reply, Mr. M'CARTHY said there was no evidence of previous disease of the bone.

Recent Fracture of the Atlas and Odontoid Process of the Axis without Immediate Death.—The case occurred in a man who fell down the hold of a ship. He had paralysis, priapism, loss of sensation below the third rib, but no displacement of the vertebrae was detected. Twenty-four hours after, he recovered sensation in the arms, trunk, and thighs, but the motor paralysis remained. On *post mortem* examination, the atlas was found to be broken in four pieces. The cord was carefully examined, but there was no evidence of pressure, laceration, or blood-clot. The origin of the phrenic nerve was not implicated.

Foreign Body in the Crico-Thyroid Pouch.—Dr. DOWSE exhibited the larynx and trachea of a patient who had died. The patient was a woman, emaciated, and very exhausted, with numerous cicatrices over the body and an open ulcer on the right arm. She suffered from laryngeal breathing and paroxysmal dyspnoea. Little could be detected by the laryngoscope. The glottis was always open. Tracheotomy was contemplated, but not performed. She had clonic convulsions, commencing with an aura; after the paroxysm she became conscious, but destitute of physical power. She was found to be suffering from diabetes; there was general consolidation of the right lung, with cavernous breathing at the apex. After a sudden attack of dyspnoea, death supervened. On *post mortem* examination, a piece of necrosed bone, which appeared to be the tuberosity of the palate bone, was discovered lying in the crico-thyroid pouch, being very fetid, like necrosed syphilitic bone.—Dr. HARLEY doubted whether the bone had not come from the nasal passages; possibly it might be a bone that had been derived from without. He remembered an instance of a lady many years ago who was supposed to have phthisis. She had consulted several others before applying to him. After months of suffering, she coughed up a fish-bone, and all the symptoms disappeared. She then called to mind that, one day when out at a dinner-party, something went the wrong way; and, not liking to call attention to herself, she suppressed the inclination to cough, and it was not until nearly a year afterwards that the bone was expelled.—Dr. DOWSE briefly replied that he was perfectly aware fish-bones in the larynx were not uncommon. He did not think it was necrosis of the arytenoid cartilage; it seemed to be the tuberosity of the palate-bone; this, however, had not been verified by a careful examination.—Dr. DOUGLAS POWELL asked if the Committee might report upon the case. Referred.

Traumatic Degeneration of the Spinal Cord.—Dr. DOWSE exhibited a specimen of this taken from a patient who had been admitted into the Highgate Infirmary with paralysis of the body from the fourth rib downwards, the result of a fall from a scaffold thirty feet high. Nine months afterwards, the patient came under Dr. Dowse's care. The intellect was not impaired. No reflex movements could be excited, although there were certain automatic movements, the patient being found at times with his legs hanging out of the bed. If the feet were struck, pain was referred to the abdomen. He subsequently became exhausted; a sloughing sore formed over the sacrum; the respiration at times was difficult, but there was fair respiratory power, and the patient could expand the chest fully. On *post mortem* examination, the cord, when removed and placed on a table, became flattened from the second to the ninth dorsal nerve, and seemed to be nothing but connective tissue. Above this, in the cervical region, there was red inflammatory softening. The lungs were engorged and filled the chest when the sternum was removed. He would like to ask the condition of the lungs in cases of accident where the phrenic nerve was involved.—The PRESIDENT did not see why the lungs remained distended when the chest-walls were removed, as there was no mechanical impediment.—Dr. LOCKHART CLARK remarked that lesion of the cord at the

second dorsal vertebra was much below the phrenic. Dr. Lockhart Clark and Mr. Kesteven were requested to examine the cord and report upon it.

Aneurism of the Aorta forming a Large External Tumour.—Dr. PRACOCK exhibited and described the specimen from a man aged 52, who had been admitted into St. Thomas's Hospital in February last. He had never seen such a large sac.

Hernia of the Vermiform Appendix.—Mr. CAMPBELL DE MORGAN exhibited a singular specimen. A man who had worn a truss for a rupture for forty years, a fortnight before admission, felt ill, and was troubled by the lump, so remained in bed. On examination, a tumour the size of an orange in the scrotum, hard and doughy, was detected, the neck of the sac being of considerable size. The testicle was felt in its normal position, and there was a hydrocele present. There had been no vomiting, only slight tympanitis; there were no symptoms of strangulation. The lump felt like omentum. Next day, there was tympanitis, the countenance was drawn, and it was decided to operate. The scrotum was thick and massy; and on cutting further, he came down to thick dense structure. A director was passed in, and pus, which had evidently been there for some time, escaped, but no hernia was detected. The sac was three-quarters of an inch thick, and dense as cartilage. When the parts were divided, it was difficult to bring them together again. A small puckered opening was discovered, which, on being slit up, proved to be a mucous tract imbedded in hard tissue the size of a pencil. Chloroform was given, dyspnoea occurred, and the patient sank three hours after from congestion of the lungs. After death, by separating the adherent layers of the sac, a peritoneal pouch was found in front of the neck, behind which was the bowel and vermiform appendix, forming part and parcel of the thickened larger wall of the sac; there was no peritoneal pouch behind, only cæcum. The hernia was quite incapable of having been reduced, inflammation had occurred, and pus formed, and there was thickening of the cæcum as if it had been subject to pressure; the testicle was healthy.

Destruction of the Common Bile-Duct.—Dr. SILVER related the history of a case occurring in a man aged 53. The first symptom of his being ill was the fact of his being told by his fellow-workmen that he did not look well. The jaundice was slight. On examination, the liver was found to be enlarged; there was no distinct tumour in the epigastrium, nor any nodulation of the liver. The case was thought to be one of catarrh of the ducts. After death, on opening the bowel, a small plug of mucus was discovered where the common bile-duct enters; it was soft, adherent to the wall, but easily displaced—not a sufficient cause to explain the obstruction. The liver was distended with bile, which poured out when section was made, the vessels on the surface being quite varicose. The gall-bladder contained a gelatinous dark-brown material, giving no reaction of bile. Where the cystic and hepatic ducts united, there was a mass of new growth, soft and easily removed from the wall, carcinomatous in nature, blocking up both ducts. No cancer was found elsewhere.—Dr. GIBBON asked Dr. SILVER whether the duct was constricted as well as occluded.—Dr. W. LEGG stated that a similar case was reported in 1831. He asked if the cells had been examined.—Dr. G. HARLEY thought this was an exceedingly rare case; there was probably not another on record.—Dr. SILVER stated, in reply, that the obstruction was exactly at the junction of the two ducts, and bile never passed it. There was thickened altered bile in the bile-ducts. Pettenkofer's test had not been employed.

Specimen of Diseased Liver.—Dr. SILVER brought forward the case as a clinical puzzle. The patient was aged 47. He complained of bringing up his food in a grumous, sometimes acid, condition. The abdomen was ascitic. In the left side was a hard mass, the nature of which was difficult to determine. The diagnosis of ascites due to cirrhosis was made. The abdomen was tapped, and the fluid removed; but the patient sank and died. After death, the left lobe of the liver was found to be cirrhotic; there were hydatids of the liver, some semicretified, some young and translucent; there was cancer of the pancreas and stomach behind; there was no connection between the cirrhotic lobe of the liver and the cancerous mass behind. The case was chiefly interesting as regards diagnosis. Dr. Silver related a case of a man, aged 32, who had suffered from cough for six months; had brought up blood, and had other phthisical symptoms. After death, a cavity was found in the apex of the lung, and there was an aneurism of the pulmonary artery.

Large Glandular Tumour of the Parotid.—Mr. WAGSTAFF exhibited a specimen of the above, weighing sixteen ounces, which had been removed from a man, aged 50. It had been growing for fifteen years, but had rapidly increased of late. It was first a small nodule near the facia parotidis. On admission, it was the size of two fists projecting from the cheek, attached firmly, superiorly projecting backwards and upwards, causing pain by pressure on the nerves. On section, it was

found to be honeycombed with cysts; these latter being partly due to the development of true cysts, and partly to degeneration. Microscopically, was seen a framework of connective-tissue, the cells undergoing cruetification; there was no evidence of bony or cartilaginous growth.

Myeloid Tumour of Femur.—Mr. GODLEE exhibited a specimen from one of Mr. Berkeley Hill's patients, a man aged 18. At first, it had been mistaken for white swelling of the knee-joint; but, on examination, the swelling was found to be confined to the upper and outer part of the joint, there being distinct, though slack, pulsation perceptible. In November, 1872, he had experienced pain in the knee, not severe, thought to be rheumatic. He had been confined to bed since February of the present year, the symptoms having increased in severity. The knee was semiflexed, nearly immobile; there was a kind of dislocation downwards of the leg, which was much atrophied; there was no pain when the limb was at rest. Amputation of the thigh at the middle third was resorted to. On examination, the tumour was found to be projecting into the joint, though not involving it; it was confined to the bone; the cartilage being stretched over a soft and elastic framework. The shaft of the bone was inflamed and vascular. The stump healed in five weeks, and one or two glands, which had previously been enlarged, diminished. Under the microscope, it presented the ordinary appearances of myeloid.

Photograph of Vesical Calculus.—Dr. CAYLEY showed one removed from a boy, aged 11, weighing half an ounce. It was of the kind known as "mulberry." The boy recovered.

The PRESIDENT presented the volume of the Society's *Transactions* for the past year.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 24TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

BEFORE the minutes were signed, Dr. ALTHAUS inquired of the secretaries why the usual notices of the meeting had not appeared in the medical journals of the previous Saturday.—The PRESIDENT said the omission was due to the fact that the names of the papers were not then known to the secretaries.—Sir W. GULL said that before the regular business of the evening was begun, he desired to speak of the great loss which the Society had sustained by the death of Dr. Murray. When he (Sir William) was lately President, he noticed with the greatest pleasure the regular attendance, urbanity, and scientific culture of Dr. Murray, and the impartiality with which he reported the proceedings. He could not express the feelings of sorrow with which he learnt the fact of Dr. Murray's death, after an illness of only two or three days, contracted in the practice of his profession. It would be unjust to the feelings they entertained not to notice publicly the loss the Society had sustained by Dr. Murray's death, whilst doubtless the members would desire to express their deep sympathy with all his friends and relatives.—The PRESIDENT desired to corroborate every word which Sir William Gull had spoken, well knowing that he could not express with greater feeling the sorrow experienced by the Society at large, and by himself personally, on account of Dr. Murray's death. He hoped that Dr. Murray's friends then present would be so good as to convey to his family the sympathy of the Society at his loss. After a pause, the President, rising again, said, "Unluckily, as in all the affairs of life, we must this evening mingle business with sorrow, and pass on to the subjects set down for discussion. Such is life; whatever happens, we must go on, still doing our duty. It is a battle, and whoever falls by our side, we must always advance, whilst a comrade steps into the vacant place. At length the turn will come to each one of us to lie down to rest."

New Method of Gargling the Larynx.—Dr. THEODORE WILLIAMS, in introducing Dr. Guinier of Montpellier, said that his method of gargling had several advantages. Firstly, in the ordinary method expiration is carried on at the same time as the gargling, and prevents the gargled liquid from getting into the larynx. Secondly, the head is thrown back, and, therefore, involuntary deglutition of the liquid occurs. Thirdly, the gargled material, water, or whatever it may be, does not go into the larynx. In Dr. Guinier's method there is no respiration during the process; the head is not moved backwards; voluntary deglutition can be managed during the act; and the gargle bathes the whole of the pharynx, passes beneath the epiglottis to the vestibule of the larynx, to the arytenoid cartilages, to the ventricles of the larynx, and to the true vocal cords, so that if the laryngoscope is used at the same time, and the gargled material is transparent, the vocal cords can be seen shining through it.—Dr. GUINIER, speaking in French, then stated the chief advantages of his method. He also demonstrated upon himself the

different methods of gargling. In the course of his remarks he said, "It is not generally known that the pharynx and uvula are insensible to ordinary touch in every one; nevertheless, such is the case." Certainly his own palate and pharynx seemed to be quite insensible.—The PRESIDENT tendered the best thanks of the society to Dr. Guinier for his very interesting demonstration; he doubted, however, the assertion that the soft palate and uvula are completely insensible.—Dr. R. LIVEING said that those parts are not quite insensible, but are far less sensitive than any of the other mucous surfaces in the neighbourhood. With practice, he thought they might be rendered almost insensible.—Mr. PUGIN THORNTON inquired what kinds of gargle Dr. Guinier had found useful; and whether he had tried mineral waters for the purpose. In the common method of gargling, the liquid comes into contact with the upper surface of the vocal cords, as was shown by a physician in Paris about ten years since. He used a gargle of tannin, then brushed the vocal cords with a solution of iron, when the black colour which was produced demonstrated the fact that the gargle had reached the same locality.—Dr. BURNBY YEO considered that the liquid in the ordinary method of gargling entered the upper part of the larynx, because the usual noise then produced was caused by air ejected from the larynx passing through the liquid. People who are taught to vocalise early in life, members of choirs, etc., possess great power of lifting the soft palate. An ordinary country labourer, not so taught, has almost paralysis of the soft palate, and often cannot gargle. Gargling is a mere matter of education.—Dr. THEODORE WILLIAMS believed it to be a matter of education, and thought that any one who would take the trouble to teach himself would soon arrive at the same pitch of perfection in gargling that Dr. Guinier had attained to. Young people can be more easily taught than older persons. In reply to Mr. Thornton, he might state that the object of the paper was not to dwell upon the different therapeutical effects of gargles, but upon the mode of gargling.

Anorexia Hysterica (Apepsia Hysterica).—Sir W. GULL said that in the Address in Medicine delivered at the meeting of the British Medical Association at Oxford in August 1868, and published at the time in the medical journals, he had referred to a form of disease occurring mostly in young women between the ages of fifteen and twenty-three, and characterised by extreme emaciation, and often supposed to be due to latent tubercle, mesenteric disease, or so-called atrophy. This state he proposed at the time to call *apepsia hysterica*, and added in a note appended to that address: "I have ventured to apply this term to the state indicated, in the hope of directing more attention to it." In the paper now brought forward, the word *anorexia* had been preferred to that of *apepsia*, as more fairly expressing the facts, since what food is taken, except in the extreme stages of the disease, is well digested. Dr. Laségue, of La Pitié Hospital, Paris, in April last published remarks on this state (translated into the *Medical Times and Gazette* of September last), which he also called *anorexia hysterica*. Dr. Laségue seems not to have known of the reference to this morbid condition which was made by the author of the paper at the time named; therefore Dr. Laségue's observations are the more confirmatory, having been made from an independent point of view. The author believed that the want of appetite was due to a morbid mental state. He had not observed, in the special cases in question, any gastric disorder to which the want of appetite could be referred. He believed that the origin was central, not peripheral. It was notorious that certain mental states were apt to destroy the appetite, and it would be admitted that young women of the ages named were especially obnoxious to mental perversity. We might call the state hysterical without committing ourselves to the strict etymological value of the word, or maintaining that the subjects of *anorexia hysterica* had any of the common symptoms of hysteria proper. The author then gave details of two well marked cases of this malady, with photographs of the patients in the stage of extreme atrophy, and after they had recovered their weight and strength. In the starvation stage, when the patients were for the most part brought for advice, all the functions were found to be below the normal standard, but otherwise normal. Temperature half a degree to a degree below normal; respirations 12; pulse 56 to 60. An examination of the viscera of the chest and abdomen discovered nothing texturally abnormal. In fact, the clinical characteristics were those of starvation only, without any signs of visceral disease. It was remarkable how long this condition often continued, and with how little change in the vital functions, the pulsations and respirations remaining at the low standard named for a year or two or more. Such patients, though extremely wasted, complained of no pain, nor, indeed, of any *malaise*, but often were singularly restless and wayward, if the prostration had not reached its extreme point. In one case only had a fatal issue occurred, though sometimes the exhaustion was so great as to make possible recovery seem very doubtful. In this fatal case, throm-

bosis took place in the femoral veins; the patient became feverish, and died. Death followed from the thrombosis and the starvation only. The *post mortem* examination discovered no tubercular or other lesion. The author insisted that the diagnosis of these cases was to be made from the slowness of the pulse and breathing, from the slightly depressed temperature, and the absence of any sign of visceral disease in the chest and abdomen; whilst the emaciation was explicable by the fact of chronic starvation. In reference to treatment, he contended that the patients require moral control; and that, if possible, a change in the domestic relations should be made; that, from the beginning, food should be given at short intervals; and that patients should not be left to their own inclinations in the matter. If the exhaustion had reached an extreme point, then it might be necessary to apply external heat to the body, as well as to administer food; as Chossat had long ago shown that starved animals, when the inanition was extreme, could not digest food without the aid of external heat. One of the best ways of applying heat in such cases was that suggested by Dr. Newington of Titchhurst, by an India-rubber tube, having a diameter of two inches and a half, and a length of about four feet. This tube, filled with hot water, and placed in the bed along the spine of the patient, is often of great value. The author had not observed much advantage from the administration of drugs, whether tonics or alteratives. Believing the disease to be due to a want of mental equilibrium, he would rather trust to moral influences and to feeding than to medicines, though these might still be amongst the *adjuvantia*.

Dr. QUAIN was very glad Sir William Gull had brought forward this subject, for these were cases with which he (Dr. Quain) had been long familiar, and which he thought of great interest. His experience, however, differed from Sir William Gull's in this respect, that some of the cases he had seen were more severe than those narrated in the paper, and he saw no evidence in some of them to connect them with a merely nervous origin. In fact, the words "anorexia hysterica" were but names. He narrated one case which he regarded as typical. Some years ago, a young lady, who was gradually losing all inclination for food, was sent to him from Lancashire. The disinclination for food progressed, and became so great that at last she altogether ceased to take food. She was an amiable girl, and by no means of a nervous temperament. She became so reduced, that in appearance she resembled nothing so much as one of the mummies in the British Museum. The skin of the front of the abdomen became so sunken that it reached the backbone; the abdomen contained almost nothing; and the bones everywhere seemed covered with skin only, a bed sore exposing the sacrum. She lost all power of voluntary movement, and at length became insensible. Under the persevering use of essence of beef-tea, flavoured with cloves to resemble medicine, with the brandy mixture of the *Pharmacopœia* in the intervals, she rallied and recovered. After a time, a slight relapse occurred; from which she again recovered. A few months ago, Dr. Quain was consulted with regard to her marriage, she being then in perfect health. Now that, which was the worst case of the kind witnessed by Dr. Quain, for which reason he had narrated the particulars, could not be called "hysterical"; there was simply a loathing of food. Dr. Quain had always looked upon these cases as due to some local condition of congestion of the mucous membrane, and was inclined to consider the real cause as peripheral rather than central.—Dr. GREENHOW mentioned two cases in which he had been consulted; and in his treatment always insisted upon the necessity of making an alteration in the moral surroundings of the patient. Called to see a young lady at St. Leonard's, emaciated to the last degree, he had at once arranged for her removal from home to the house of a private family near London, where the whole course of her daily life was changed. She shortly began to eat, and in six weeks was well. She had a relative who was of unsound mind. Dr. Greenhow's second case came of a family in which insanity existed. The girl was greatly emaciated; but, upon being removed to the house of a doctor, she at once improved. She then returned to her family, and had a relapse; but, upon removal from home, again recovered. From the day that the moral surroundings were altered, she became better. The moral management of these cases is to be insisted upon; medical treatment is of little use.—Mr. BRUDENELL CARTER had, many years ago, witnessed the great success which attended the late Mr. Mackenzie's treatment of these cases by the taking of them from home, and therefore advocated the moral management of the patient. The beginning of the disease is a desire to obtain sympathy from friends; for this purpose, some repulsive idea is conjured up by the fancy when food is presented, so that it is set aside with abhorrence. In one case which had come under Mr. Carter's observation, the patient always thought of putrid cat-pudding when pressed to eat; thus food caused her to vomit, and she gained her own way. At length, however, the vomiting beat her; then she became frightened, and gave in, confessed how she had caused the dis-

like for food, began to eat, and recovered.—Dr. POORE inquired if any of the symptoms proper to starvation were present in any of the cases. It would be remembered that, in the case of the Welsh fasting girl, when the patient was watched and food was really withheld, she soon became restless, her temperature and pulse rose, and she had factor of the breath.—Dr. SYMES THOMPSON thought it difficult to draw a line between these cases and certain cases of insanity in which disinclination for food is a prominent symptom. A patient, about whose sanity he had been consulted, was put under restraint and sent to Bethlehem Hospital, as otherwise she would have starved herself to death. She at once improved, and, after six or eight weeks, was sent home. She became worse, and finally succeeded in starving herself to death. Starvation is often, as in such a case, the most manifest sign of insanity. Dr. Thompson considered that there was no symptom of hysteria in the cases they had discussed; the malady was more mental than physical.—Dr. GREENHOW stated that, in both the cases attended by him, there was restlessness at night, but the temperature and pulse were not elevated. There was no mental alienation in either case; but simply a disgust for, and inability to take, food.—Dr. THEODORE WILLIAMS thought Sir William Gull's cases exhibited disease of the mind rather than disease of the body. He asked whether the introduction of food into the patient's stomach against her will would fatten the body? Is fattening of the body possible against the patient's will? He advised recourse to the use of nutrient enemata in extreme cases.—A MEMBER narrated the case of a young lady whose tastes varied; at one time she exhibited a great aversion to bibles; then she passed on to show a strong dislike to food. She had none of the ordinary symptoms of hysteria, and seemed to require no sympathy. Her father had died "out of his mind," as it was said.—Dr. EDIS spoke of a young lady who had lost a dear relative, and had disgust for food. She was accounted insane, and was sent to an asylum. Refusing food at the asylum, she was nourished with enemata. At first she seemed apathetic, but soon began to take a little food by the mouth, and quickly recovered. Removal from friends, and perhaps the giving of enemata, are chief points in the treatment.—Dr. QUAIN begged to mention another case, one of the earliest he had seen, in which this loathing of food existed, and which, after the patient had been reduced to a state of extreme emaciation, was relieved by a copious discharge of fluid by vomiting and diarrhoea. The recovery in that instance dated from that event, and seemed to show that it was due to some relief of congestion by this spontaneous discharge. In some of these cases no special sympathy was sought for by the patients; they greatly desired to get well. It was not that they would not, but they could not, take food.—Sir WILLIAM GULL would not insist on the etymological meaning of *hysteria*, in applying that term to these cases. The nervous equilibrium of the patient is not quite right. Still, it would be unfair for the doctor to go into the world and say that they are of unsound mind. Some of the patients certainly had other symptoms of hysteria. Sir James Paget had seen one of the cases after her recovery from anorexia, and she was then suffering from hysterical hip-joint. The disinclination to take food seemed to be due to some vagary of the pneumogastric. Many nerves of the trunk may take on hysterical action, without much damage to the individual; but, when the pneumogastric is so affected, the results are serious. It is evident the patient must be prevailed upon to take food by some means or other. There seems to be some hysterical condition of the pneumogastrics, which Sir William Gull considers to be of central origin. There is no congestion of any part; the tongue is clean, urine clear. Then, as to the evidences of starvation, the Welsh fasting girl died not of starvation but of uræmia, after being deprived of drink for six days. Had only water been allowed her, she would have lived much longer. Without air, an individual lasts about four minutes; with air, but without food or water, he lives about eight days; deprived of food only, he lives for forty or fifty days. The cases which Sir William Gull had described were not strictly insane; there was, however, something wrong in the nervous equilibrium, and usually something queer in the family history.

A *Cretinoid State supervening in the Adult*.—Sir WILLIAM GULL further read some remarks on this subject. The observations on this morbid state were made on five cases. In two of them they had extended over several years. He had not seen the disease in men. In four of the cases, the changes named had begun between the ages of forty and fifty; in the fifth, the history was not conclusive as to how far it might not have existed to some extent in childhood. In one, if not in two, the malady began after the cessation of the catamenial period, and in two the catamenia still continued and were rather profuse. The morbid condition to which the author wished to call attention was a general and gradual increase of bulk throughout the frame; but especially the outline of the face was changed from oval to round, or became somewhat oval transversely, like the refracted disc of the

moon at rising. The complexion was soft and fair; the skin presented a peculiarly smooth and fine texture, which had a porcellaneous aspect; the cheeks were tinted of a delicate light rose-purple. The cellular tissue under the eyes became loose and folded, and that of the neck and under the jaws thickened; the lips were large and thick, and of a rose-purple; the nasi thick. The distance between the eyes appeared disproportionately wide, and the root of the nose depressed; this change gave the face a flattened, broadened character, which was quite peculiar, the whole expression being at the same time gentle and placid. The tongue grew broad and thick, the voice was guttural, and the pronunciation clumsy, as if the tongue were too large for the mouth. The hands had undergone a characteristic change, and became broad, thick, and spade-like, from thickening or infiltration of tissue. With this change in the face, tongue, lips, and hands, there was gradually increasing languor and disinclination to exertion; and the mind, from being active and inquisitive, assumed a placid and lazy indifference, with a liability to occasional outbreaks of temper. The intellect remained unimpaired. The integuments of the chest, abdomen, and upper and lower extremities were loaded with subcutaneous fat. A cursory aspect of one of these cases, without any previous experience of its peculiarity, would have led to the suspicion of some disease of the heart causing venous obstruction, or of a morbid state of the kidneys favouring oedema. Neither of these conditions was present in the cases under consideration. All the viscera were healthy. Although a large deposit of subcutaneous fat accompanied the changes named, the author contended that the mere condition of corpulency, obesity, or fatness would not explain the pathology of these cases. Common observation showed that, in ordinary polysarcia, there were no attendant changes which could be regarded as cretinoid. The author stated that his remarks on this state were rather tentative than dogmatical; but he believed that anyone who should observe the malady in question would regard it as substantive and definite, and as having special characters. That it was allied to the cretinoid state would appear from the facial expression, the changes in the tongue and hands, and the coincident change in the locomotive powers and in the mental activity. The author referred to Dr. Fagge's paper on "Sporadic Cretinism occurring in England." Dr. Fagge had cited a case beginning as late as the eighth year in a subject previously healthy and well-developed, and had speculated upon the possible supervention of the disease in the course of adult life. Rösch had recorded two instances of this disease beginning respectively at the ages of five years and between seventeen and eighteen. In the cretinoid condition in adults which the author had seen, the thyroid body was not enlarged in four cases; but, from the general fulness of the cutaneous tissues in the neck, he was not able to say whether the thyroid was wasted or not, as Dr. Fagge had found it to be in cases of sporadic congenital cretinism; nor was the author able to determine the presence of the supra-clavicular masses of fat outside the sterno-cleido-mastoid muscles first described by Mr. Curling, and specially noticed by Dr. Fagge as occurring in congenital sporadic cases. The author added that such masses of supra-clavicular fat in the lower triangular space of the neck were not infrequent in the adult, without any associated morbid state whatever. When the change which the author had described as occurring in adults had begun, so far as his limited experience went, it continued. Some advantage seemed to be derived from baths and frictions, fresh air and change of place—from such means, in fine, as stimulated the nervous system and quickened the peripheral venous circulation; but the results were very limited. This was specially shown by comparing two clinical reports made of the same case at an interval of seven years. The details singularly coincided, showing how little change had occurred in that time.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 20TH, 1873.

Dr. HABERSHON, President, in the Chair.

THE PRESIDENT delivered a brief address.

Dr. RICHARDSON read a Clinical Study of Stricture of the Oesophagus. After discussing its development and diagnosis, he proceeded to state his views of treatment as follows. After defining that such treatment should be accepted as palliative and alleviating only in our present state of knowledge, the author insisted on systematic feeding as the first rule of treatment. This would be admitted generally, but the difference was in the supply of food. The common practice was, to attempt to dilate the stricture to enable the patient to swallow; this he thought wrong, and considered that the first effort should be made to pass through the stricture a small tube by which food could be introduced, to get the parts accustomed to the tube, and to let dilatation follow. The reasons for this plan having been offered

the details of feeding were considered, and foods were classified according as they ought to be administered—by the stomach, through the feeding-tube, or by the rectum. Dr. Richardson showed that only foods of the crystalloidal and water types could be given with advantage by the rectum. Foods of colloidal character (albuminoid foods) were useless when thus given, the albumen was simply deposited on the mucous membrane and was decomposed, and occasioned flatulency and disturbance; these foods required to be digested in the stomach before they could be taken into the circulation. Fatty foods required the lacteal system for their absorption, and they also must be administered through the stomach; by the rectum, water can be introduced, and sugar, and alcohol with water: different formulæ were here described for foods requiring to be administered by either channel. For introducing food by the mouth through the stricture, a double-current tube was advisable, as the passage of gases from the stomach was often an obstacle to the passage of food. A tube, newly constructed on this principle, was exhibited. There was also exhibited another tube, through which the patient might swallow liquid food himself after the tube had been introduced; and a bottle for the feeding process, which bottle, by a change in arrangement, could be used for injection of fluids by the rectum. Directions for keeping up the temperature of the patient, and for the employment of alcohol, were noticed at length. In some cases, where there is profuse secretion in the oesophagus and accumulation of secretion above the stricture, it is advisable to clear the tube. To effect this, the author showed a tube fitted with a sponge in a sheath; the sponge answered well for absorbing and removing the secretion. Medicines could not, the author thought, be administered in cases of oesophageal stricture for the purpose of effecting a cure, but still medicinal measures were not to be despised; they were often of great value, especially those of a narcotic class. Indeed, to secure sleep was not less important than to provide food and warmth; the stomach, however, should never be troubled with medicines; they should be introduced either by subcutaneous injection, or by enemata, or by inhalation; for procuring sleep, the author preferred the method of inhalation of a volatile fluid—bichloride of methylene and pure methylic alcohol in equal parts formed the best combination for this purpose. The question of dilatation of organic oesophageal stricture in certain cases was now brought under consideration, and objection was taken to all dilators that act as wedges, and which press the strictured part downwards. Mr. Durham's dilators were commended as the best up to the present time. A new dilator, by the author, in which lateral dilatation was secured by air or water pressure, was laid before the Society as an instrument promising to do a great service. It was quite impossible, the author believed, to tear or rupture the oesophagus with this dilator. On the performance of the operation of gastrostomy, Dr. Richardson spoke with reserve; it could, he thought, never be more than a doubtful and temporary measure, so long as we fail to control the progress of the disease in the oesophagus. If we could find means to control the progress of the stricture, then we might have to consider this operation more earnestly. The author would himself prefer to open a communication into the small intestine (if an operation were demanded) through the parietes rather than into the stomach. Dr. Richardson, in conclusion, referred briefly to the experiments he had made for the purpose of being able to feed by the veins; but, as his researches on this subject were incomplete, he proposed, with the permission of the Society, to bring them forward, at a future time, as a distinct communication.—In the discussion which followed, Dr. SEMLE narrated several cases in which the cachexia, so usually seen in cases of malignant disease, was absent.—Mr. MASON had treated very successfully traumatic stricture following oxalic acid poisoning by forcible dilatation.—Mr. DURHAM also discussed, from an extensive series of statistics, the relative proportion of non-malignant strictures, about twenty per cent. being traumatic; he described and demonstrated his improved bougie dilators, made by Krohne and Sesemann; and mentioned several highly successful cases.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

ON November 18th, there will be an election at Balliol College, Oxford, to a scholarship on the foundation of Miss Hannah Brackenbury, "for the encouragement of the study of Natural Science," worth £80 a year (and tuition free) for four years, open to all such candidates as shall not have exceeded eight terms from matriculation. At 10 o'clock A.M., papers will be set in the following subjects: (1) Mechanical

Philosophy and Physics; (2) Chemistry; (3) Physiology. But candidates will not be expected to offer themselves in more than two of these. There will also be a practical examination in one or more of the above subjects, if the examiners think it expedient. Candidates are requested to communicate their intentions to the Master of Balliol by letter, on or before Monday, November 10th, inclosing testimonials from their colleges or schools, and (if members of the University) certificates of their matriculation, and stating the subjects in which they offer themselves for examination.

CORRESPONDENCE.

PROVIDENT DISPENSARIES.

SIR,—I have read with much pleasure in one of the Coventry newspapers—the *Herald and Free Press* of October 10th—an extract from your JOURNAL describing the benefits of provident dispensaries, and especially of the one at Coventry, now numbering nine thousand free members, who contributed last year £1,251, divided amongst the medical officers. I am confident that the principles upon which these institutions are founded are capable of much further adoption than during my father's lifetime, who for so many years devoted his time and energies gratuitously to the establishment of them in so many towns throughout the kingdom. The institution at Coventry was one of the first that he founded, amidst considerable opposition and the prejudiced dislike of some of his profession; yet, in spite of all, he succeeded, and the result you have before you. Dr. Nankivell of Torquay, whom you name as founder, was only one of the first medical officers, who successfully and with much ability carried out for some years my father's plans; but we feel sure he would disclaim being the originator of them.

In the Twenty-seventh Annual Report of the Coventry Provident Dispensary, read at a general meeting in St. Mary's Hall on May 3rd, 1859, occurs the following. "The Committee much regret to have to notice the death of the founder of provident dispensaries, Mr. H. L. Smith of Southam. He assisted at the establishment of this institution in the year 1831. He was a kind-hearted, generous-minded man, and has been the cause of good to thousands. At his request, a meeting was held at St. Mary's Hall on the 21st October, for the purpose of assisting the Society for Promoting a Knowledge of Provident Dispensaries, when those present will not soon forget the excellent paper he read, and the kind philanthropic spirit he evinced." Again, the sixth resolution is in these terms: "That this meeting desires to record its admiration for the character, and deep respect for the memory, of the late Mr. Henry Lilley Smith. The Coventry Provident Dispensary, in common with all similar institutions, owes its origin to his untiring zeal and earnest heartfelt philanthropy; and the meeting desires to convey to Mrs. Smith and the family their sincere sorrow for a loss which will be long felt by all who are interested and occupied in promoting the well-being of the poor around them."

The ascription in your paper of the merit of being founder of the Coventry Provident Dispensary to Dr. Nankivell is, therefore, a mistake which, in memory of the lifelong services and sacrifices to that cause of my respected father, I write, hoping that (either by the publication of this letter or in some other manner), you will do me the kindness to correct.

I am, etc., W. L. SMITH.

Dorsington Rectory, Stratford-on-Avon, October 25th, 1873.

REST IN PULMONARY CONSUMPTION.

SIR,—In a paragraph which appears in the BRITISH MEDICAL JOURNAL of Oct. 4th, it is mentioned that Dr. Berkart has instituted a novel plan of treating pulmonary consumption by the application of mechanical compression made in such a manner by strapping and bandaging as to control the respiratory movements and prevent contact of the atmosphere with the inflamed portion of the lung. Will you kindly allow me, in justice to Dr. Horace Dobell, to state that I have for several months had constructed, at his request, what he designates a "lung-splint", which acts on precisely the same principle as Dr. Berkart's strapping and bandages, with the additional advantage of being able to regulate the amount of compressing force?

Dr. Dobell's "lung-splint" consists of two padded metal plates adjusted to the anterior and posterior surfaces of the thorax at the affected pulmonary region, and held together by a thin steel band, the force of which can be easily increased or diminished at will.

Wimpole Street.

I am, etc. HEATHER BIGG.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

PROPOSITION OF DR. ROBINSON FOR CARRYING INTO OPERATION THE PUBLIC HEALTH ACT, 1872, IN EAST KENT.

AT a meeting of delegates from the various Urban and Rural Sanitary Authorities of the combined district of East Kent, held at Canterbury, on Saturday, October 18th, Dr. Robinson read the following report:—

"In order to secure the entire services of an officer who should be debarred from private practice, the Urban Sanitary Authority of Dover, with the Rural Authorities of Thanet, East Ashford, Blean, Eastry, Bridge, West Ashford, Elham, and Dover Rural, following the course advised by the Local Government Board, and pursued in many other parts of England, united together for the purpose of appointing a Medical Officer of Health; but, after the appointment was made, the Central Committee, composed of representatives from the several authorities concerned, ceased to act further in their collective capacity. Inasmuch, however, as for the original purpose the act of this Combination Committee required and received the confirmation of the several authorities involved in their proceedings, so a like course can probably be adopted with advantage for other purposes, if the separate authorities are pleased to do so. In the administration of the new powers conferred by the Public Act of 1872, it is not unnatural to suppose that conferences (of those who, like chairmen and other gentlemen connected with the different Boards, take the most active part in their respective capacities, and upon whom necessarily falls the greatest share of the work and responsibility) should be deemed advantageous, as such conferences would afford opportunity for mutual counsel, the free interchange of ideas and suggestions, and the promotion of a healthy stimulus to action. Chairmen, too, would, on return to the occupation of their respective posts, feel more confidence in commending to their Boards measures for adoption, which had been carefully considered and decided upon at such representative meetings, and, on the other hand, the various Boards might reasonably be expected to take more decided and regular action from a knowledge that they were not pursuing a separate and distinct course of procedure, but one in unison with a large and important combination, acting in furtherance of a common interest in the limitation of disease and exaltation of the tone of the public health. Again, the work of the medical officer of health would be considerably facilitated, if, instead of reporting to the several authorities, he could communicate simultaneously with the representatives of all to whom he might make his reports, and from whom he could receive his instructions. In order to give effect to any proceedings, all that appears to me necessary to be done would be, that each authority represented should by resolution endorse the acts of the Combination Committee, as was the case in the appointment of the medical officer. Since the time you conferred upon me the honour of appointing me as your sanitary adviser, I have been engaged chiefly in making myself acquainted with the general leading characteristics of the districts, by personal visitation and collection of information from all available sources; without entering into details, I will merely say, that there is work, neither trivial in character nor extent, to be done, and that the object of this meeting will be attained, if the base of operations is to-day well established. From an analysis of the requirements contained in the instructions issued by the Local Government Board, it appears that there are three prominent matters which require arranging, viz., 1st, the collection and tabulation (for convenient reference) of facts; 2nd, reports on same to sanitary authority; 3rd, administration of sanitary acts. 1st, the facts to be collected are the number of deaths and causes of same, cases and causes of sickness, nuisances deemed to be prejudicial to the public health. The mortality returns can be furnished by the registrars, on forms similar to the one now produced and compiled by myself (No. 2 Form). A bill was introduced last session, providing for the supply of these returns to sanitary authorities on payment of 2d. per case, which will probably be again brought forward and passed. In the meantime, it is desirable to arrange for their present supply, and payment of the same. I should now have been in possession of the returns for the entire combined district, had not some question arisen as to the legality of payment for their supply. The Local Government Board has just issued instructions, requiring medical officers of health to tabulate and arrange on forms provided the cases and causes of sickness of the pauper and hospital population. I shall be able to compile these, if the returns on Form 3 are sent to me under instruction of the

clerks. In addition to meeting the requirements of the Local Government Board, these returns will prove of great assistance to me in my work; they have already been partially supplied to me through the courtesy of the clerks and medical officers. The inspectors of nuisances have made returns on forms, supplied before the appointment of a medical officer; but, by their use of Form 5, in addition to those already adopted, the record of nuisances will be tabulated in a convenient way for report, reference, and information. Form 4, for weekly report by the inspectors of nuisances, will keep the medical officer of health informed on those matters where his intervention is chiefly necessary. The next question for consideration is in what way the authorities desire reports to be made to them—*i.e.*, whether separately or collectively, and the frequency with which such should be rendered. The Local Government Board direct that they shall be made, from time to time, and also annually, the subject matter being mortality and sickness within the district, and the measures required to be adopted for the improvement or protection of the public health. Closely connected with the above is the form (Regulation 13) of the book or books to be provided by the sanitary authority for recording visits, notes of observations, etc. The administration of the Sanitary Acts involves those proceedings instituted directly by the sanitary authority, and the action taken also under special or general direction by its officers. The proceedings of the sanitary authorities will be very much influenced by the reports and advice of their officers; and I would here observe that nothing is more calculated to bring the Public Health Act of 1872 into contempt than the enforcement of hasty, costly, and ill-conceived alterations of premises; for what will be the indignation of an owner of property if, after obeying the mandates of an officer, he finds his first outlay to have been lost money, and that the work must be done anew? Hence the importance of the sanitary authorities discussing and settling the principles upon which sanitary alterations are to be made. The most important of these in the rural districts relate to water-supply and excrement disposal, and these questions, sickening from their subject matter and oft repetition, yet need again and again reiterating; for, notwithstanding all that has been said and written on the subject, I found during my rural visit wells, ponds, and streams polluted by both human and animal dejection, used for drinking purposes; and poor people actually imbibing again their own excreta; in some instances the first intimation to their understandings of the fact being severe nausea and diarrhoea, although, from the position of the water-supply, together with the colour and odour of the fresh-drawn water, one would have imagined that the ordinary senses a merciful God has given would have been sufficient to warn them of their danger. I mention this for showing the scope for paternal care and oversight on the part of the authorities in respect to water-supply and sewage, and the immense importance of seeing that every village and hamlet is provided in the best manner, according to its natural position and resources, with these, the first of sanitary requirements. Another matter will be the provision of hospital accommodation for infectious diseases, and means for isolation and disinfection. The want of such has already been felt. Then, again, the application of urban powers, when the rural authorities cannot exercise sufficient control over new buildings, will require consideration. This power is already urgently required in the suburban parts of Margate and Ramsgate, in Broadstairs, and in Whitstable. The power vested in rural authorities to make bye-laws is of a very limited character; but they have received the careful consideration of your legal advisers. Forms for notices, etc., have alike been prepared. With regard to the action taken by your officers under any special or general direction, considerable trouble has been saved by the issue of special instructions by the Local Government Board. The inspectors of nuisances have for some time been actively and zealously engaged in searching for and remedying nuisances, and, I presume, also charged with the duty of serving notices. I have in many instances been consulted by them. In two cases it was necessary to institute proceedings before the magistrates, both of which were successful. They have also apprised me of the occurrence of infectious diseases in their districts; in two instances only did these diseases acquire any large proportions, and these were where the disease (scarlatina) had been introduced and spread before I was apprised of its existence. Instead, however, of the inspectors being authorised to dictate verbally to owners or occupiers of property, the kind of alteration required to remedy a nuisance, when structural alteration is necessary, I think it desirable that such cases should be reported to the sanitary authority before action is taken; and, in the case of common and ever-recurring nuisances, the principle of remedy to be adopted should be settled by the authority, and no notice given, except in writing, which should always be in duplicate. Further, the inspectors of nuisances should be instructed that it forms an equally important part of their duty to find out and report a dirty, overcrowded, ill-ventilated, or sick house, as it is to discover evils external to dwell-

ings. The apportionment of time for attendance by the medical officer of health in each district would, if settled by mutual consent, prevent any future misunderstanding. I suggest the following as the most convenient division of each month, *viz.*: the first three days in the Dover Urban District, followed consecutively by two days in Eastry, two in Thanet, two in Blean, two in Bridge, two in East Ashford, one in West Ashford, one in Elham, and one in Dover Rural, Fridays and Saturdays being reserved for transcribing notes to report and record books, tabulation of statistical matter, correspondence, preparing reports, etc. In the event of any important epidemic breaking out in any one of the districts, special attention would be required there, to the temporary suspension of attention to other districts, and *vice versa*. As ordinary proceedings under the Nuisances Removal Acts are tedious, and involve delay, the medical officer of health might be authorised generally, under section 48 of the Sanitary Act, 1866, which provided that, by resolution, any officer may institute and carry on any proceedings which the nuisance authority is authorised to institute and carry on. This would meet the requirements of special emergencies, such as epidemics, etc. There is one other question involved in the administration of the Sanitary Acts which is worthy of your consideration. I refer to the difficulty I sometimes experience in securing the closing of State aided schools, where infectious diseases break out, owing to the fear the masters and committees have of losing the Government grant, which is only secured on proof of a certain number of attendances on the part of the scholars. I think, if this matter was properly represented, the Education Department would relax the strict requirement of full attendances, when the certificate of the medical officer of health was produced as a reason for temporary suspension of work. From the foregoing statement it will be seen that the questions for consideration are—1st, agreement as to similarity in forms, returns, statistical tabulation, and notices; 2nd, system for collecting and arranging same; 3rd, consideration of bye-laws; 4th, mutual agreement as to division of medical officer's time for days of attendance in each district; 5th, frequency of reports and mode of reporting, *i.e.*, whether respectively to each authority, or collectively to a representative committee; 6th, authorisation of medical officer under section 48 of Sanitary Act, 1866; 7th, specific instructions to inspectors; 8th, principle of excrement disposal recommended to be adopted in villages; 9th, provision for hospital accommodation for persons suffering from infectious diseases, isolation for such cases, and means of disinfection; 10, memorial to Education Department."

DIFFICULTIES OF A MEDICAL OFFICER OF HEALTH.

SIR,—As you have expressed a desire to receive from medical officers of health statements as to difficulties, etc., with which they may meet in the execution of their duties, perhaps the few following facts may indicate one which has been overlooked.

The Township of Tranmere, for which I am medical officer, is spread over a very extensive area (1043 acres), has a population of over 16,000 persons, and is included in the Parliamentary Borough of Birkenhead. In the execution of my duties, I sent to all medical practitioners known to be practising in the township cards (of which the enclosed is one), on which they might report to me any cases of infectious disease or removable nuisance with which they might meet in their practice in the township, accompanying the cards with a printed circular explanatory of their purpose, and stamped and directed envelopes for their transmission.

All seem to have received them in the proper light, and some expressed themselves highly pleased, with the exception of some one unknown to me, who has returned them with a small piece of note paper, upon which, in pencil and without signature, in backhand writing, are the following words:—

"The medical officer of health for Tranmere had better attend to his own duties."

I make no comment on the above, but leave you and your readers to make their own.

I am, etc., yours truly,

W. G. LAIDLAW,

Medical Officer of Health for Tranmere.

. We can assure Dr. Laidlaw that his difficulty has not been overlooked. It has been pointed out frequently in our pages, and predicted by many who disapproved of the machinery created by the Sanitary Commission and the Public Health Act of 1872. Considering that the district of Tranmere contains more than 16,000 inhabitants, and therefore probably not less than half-a-dozen practitioners, we think Dr. Laidlaw fortunate in having found only one to decline supplying him with gratuitous information; though we by no means defend the manner in which this refusal was made. Contributors of facts relating to death

and disease are equitably entitled to moderate remuneration for any particulars they are asked to supply to the health-officer. The cost ought, of course, to fall upon the *sanitary authority*. Rivals in practice cannot reasonably be reckoned on as hearty co-operators, without any proper acknowledgment. As to the "extensive area" which Dr. Laidlaw mentions, we think the acreage of his district small relatively to the population, which is nearly twenty times as dense as that of the County of Chester, in which it is contained.

A NORTHERN SANITARY DISTRICT.

WE have received an interesting communication from Dr. Young, the medical officer of health of Malton Sanitary District. He informs us that he acts for two boards, urban and rural, whose conjoint districts comprise 110,010 acres and 22,882 inhabitants, residing in more than thirty villages and a Parliamentary borough. From the joint authorities he receives £300 a year, engaging to devote two-thirds of his time to his official duties. He seems to work his extensive district with great energy, and to inquire minutely into the condition of the houses and premises within it. He analyses water qualitatively, and calls in an expert in forensic examinations. He does not say whether he is supplied with the facts of disease and its causation from the other resident practitioners, or whether he obtains all his information for himself by personal visitation. If the latter, we are sure that, for so wide an area (171 square miles), he well earns his salary. He considers his district "a model for size." To us it appears, we confess, neither, on the one hand, to afford the advantages of that close sanitary inspection, that prompt observation and announcement of facts, which are in the power of the union medical officer, in close contact with *foci* of disease, and acting as deputy for his own district; nor, on the other hand, to supply sufficient information for general sanitary conclusions, such as might be drawn by a skilled officer in chief from the statistical returns and local reports collected in a much larger population. Supervision and generalisation are important objects of any sanitary organisation. The best feature of this case is the union of the urban and rural portions of the district; thus abolishing the absurd division of authorities made by the Public Health Act.

THE ADULTERATION OF FOOD ACT.

AT the ordinary fortnightly meeting of the Hackney District Board of Works, held on Friday evening last, Dr. Tripe, the public analyst and medical officer of health of the district, submitted his first quarterly report in reference to the working of the above Act. He stated that, in accordance with instructions from the sanitary committee, he commenced the analysis of food in July last for the purpose of ascertaining the quality of the articles sold in the district. He began with milk first, as being a very important item of diet for infants and children and invalids. He found that not one of the first eight samples contained more than 107 grains of solid matter instead of from 125 to 135 grains per 1,000 grains of milk, while the butter varied from 20 to 28 grains per 1,000. In the second lot, consisting of six samples, the quality was much better, as in one half the total solids were 118 grains and above; indeed, the quantity of cream was so large in all these as to induce a belief that the inspector was known and the milk taken from the top without previous stirring. The percentage of cream was from 14 to 18 per cent., and of fat from 31 to 33 grains per 1,000 of milk. He made another set of analyses of milk in September, and found the quality not so good as in the August samples, but, with one exception, not so very bad. He laid the certificates before the Committee, and, with their consent, took action before a magistrate against the person whose milk was considerably adulterated. He sent notices in July last to all vendors of food in the district, and trusted that now it is known that tradesmen who adulterate will be prosecuted, the quality of milk and other articles sold in the district will improve. He also examined eight samples of bread, but without detecting any adulteration, except a trace of alum in four. The quality of flour used was only second rate in these four; in the others it was good. He had also analysed four samples of mixed tea, and found the green to have been "faced" in all instances. In two the amount of foreign matter was nearly 2 per cent. in mixed tea. He did not find any sand or iron filings therein. Dr. Tripe also mentioned that the articles analysed were all procured by the inspectors, as in all instances parties bringing food for analysis objected to pay the fee fixed by the Board. In the course of a discussion which followed, the analyst was recommended to direct special attention to drugs and to obtain his samples by private means.

OBITUARY.

SIR HENRY HOLLAND, BART., M.D.

THIS eminent physician, philosopher, man of letters, and traveller, died at half-past four p.m., on Monday last, the 27th Oct., being his eighty-sixth birthday, at his house, No. 72, Lower Brook Street, Grosvenor Square. Not content this year with a visit to Nijne Novgorod in Russia, he set off to Naples soon after his return to London in September last. On his way home he stayed a short time at Rome and Paris, and on Saturday last he arrived at Brook Street rather unwell, but did not begin to sink till Monday morning. After that, he then gradually lost the power of speech, but was conscious of the presence of his family, and his peaceful, although active life, ended without pain and suffering.

Sir Henry was born at Knutsford, Cheshire, on October 27th, 1788. He began his education under the Rev. Wm. Turner at Newcastle-on-Tyne, and in his *Recollections* speaks warmly of the great benefit he there derived; acquiring a taste for natural science and travelling. Thence he proceeded to Bristol, and at sixteen years of age, at his own desire, became an articled clerk in a mercantile house at Liverpool, with the privilege of studying two years at Glasgow University, where he eventually became a regular student, on relinquishing commerce. In 1806 he entered the medical school in Edinburgh, and in 1810 he began his long continued series of foreign travel by a voyage to Iceland. In 1814 he spent a year on the continent, travelling in attendance as physician to the Princess of Wales. In these annual journeys he visited several times every capital in Europe, made eight voyages to the United States, besides exploring very many of the more unfrequented portions of the globe. During his travels he as much as possible laid aside the name and practice of his profession. At Edinburgh, he acquired the lifelong friendship of Brougham, Sydney Smith, Horner, and other eminent Whigs, and retained a close intimacy with the leaders of the party up to the time of his death; frequently supplying articles to the *Edinburgh Review*. He was also very intimate with Walter Scott, Miss Edgeworth, and other *literati*. His *Recollections of Past Life*, published in 1872, abounds with interesting details respecting the friends he made during his long practice among the upper classes in London, and his yearly autumnal tours. Sir Henry began his professional life at a house in Mount Street, in January 1816, whence he removed four years after to the house in Brook Street where he died. He had a prosperous career, and certainly belied the vulgar notion, that a physician ought to be ignorant of every thing but medicine. The busiest part of his professional life was from 1830 to 1848. He became physician in ordinary to the late Prince Consort from August 1840, and was in attendance on the Prince at his decease in December 1861. Sir Henry was appointed Physician in Ordinary to the Queen in 1852. How highly he was esteemed by those illustrious persons is well known. In 1822 he married a daughter of James Caldwell, Esq., of Linley Wood, Staffordshire, who became the mother of the present Baronet, born in 1825; she died in 1830; and in 1834 Sir Henry married Saba, the daughter of his old friend Sydney Smith: their happy union ceased at her death in 1866. Sir Henry's *Medical Notes and Reflections* (published in 1839), and his *Chapters on Mental Physiology* (1852) are well known to the profession; and his collected review articles, published as *Essays* in 1862, form a very interesting volume. In 1815 he was elected a Fellow of the Royal Society, and in 1816, contributed to the *Philosophical Transactions* a memoir on the manufacture of sulphate of magnesia at Monte della Guardia, near Genoa, besides various papers to scientific journals. In 1815 he published his celebrated *Travels in the Ionian Isles and Greece*, of which a second edition appeared in 1819; a work abounding in classical, antiquarian, and statistical information, interspersed with interesting details respecting manners and customs, scenery and natural history. Sir Henry was created a baronet in 1853. After thirty-four years' membership, he was unanimously elected President of the Royal Institution of Great Britain, in 1865, on the decease of Algernon, Duke of Northumberland, coming thus into more immediate intercourse with eminent scientific men, especially Faraday, whom he had known intimately from the commencement of his brilliant career. Sir Henry devoted himself most heartily to the duties of his office, attending all the meetings of the council, and taking the chair at the evening meetings up to the close of the last session. We need hardly say, that his amiable manners endeared him to all with whom he came in contact. To the promotion of the great object of this institution—experimental scientific research—Sir Henry zealously devoted both his time and influence. For fifteen years he gave forty pounds annually to a fund specially set apart for this purpose;

and his name will be perpetually associated with valuable apparatus purchased by means of the "Holland Fund". Sir Henry was especially kind to young students in philosophy; and, when any one of these had been timidly giving an account of his experiments at the lecture-table of the Institution, on a Friday evening, Sir Henry would invite him to his house the next morning, listen attentively to his explanations, and encourage him to prosecute his research. Sir Henry most especially welcomed the advent of Professor Tyndall to the Institution in 1853. Great will be the number of those who will join in deep regret that society has lost a man so rich in knowledge, wisdom, and in love to his fellow-men.

THOMAS LAWRENCE PRIDHAM, ESQ., OF BIDEFORD.

MR. Thomas Lawrence Pridham, who died lately, was born at Topham in the year 1803 (his father being a surgeon of that place), and was educated at Iloniton. He studied at St. Bartholomew's, passed his examinations at the College of Surgeons and the Apothecaries' Hall in 1825, and first practised at Thorverton. He afterwards removed to Bideford, where, for nearly forty years, he resided, and had the medical charge of the district nearly the whole of that time. He was a skilful surgeon and an advanced sanitarian. His essay upon the effects of imperfect drainage and impure water on epidemic diseases was well received at Birmingham in 1857 by the National Association for the Promotion of Social Science. He published a pamphlet upon the epidemic diseases which prevailed in Bideford in 1857 and 1858, and this had a great influence in stimulating the authorities to carry out the necessary improvements in the town. Among his published works are essays and papers upon asthma, convulsions, the use and abuse of stimulants in typhoid fever, mania, and gunshot wounds. He published, in 1855, a pamphlet upon the successful treatment of cholera by nitrous acid. In 1865, he was elected President of the South-Western Branch of the British Medical Association. His last work was the *Celebrities of Devon*. By the poor his name will long be remembered with affection. He was a man of quick perception and untiring energy, and had a great love for poetry and art generally. He was never happy unless doing something for his own improvement or that of others, and was always ready to give a helping hand either in sickness or trouble.

WILLIAM BLAKELY COCHRANE, M.R.C.S.

MR. COCHRANE, M.R.C.S., only son of the Rev. William Cochrane, of Netherhend, Brierly Hill, Staffordshire, was born at Spamount, near Belfast, on June 16th, 1848. He studied medicine at Sydenham College, Birmingham, where he took the medal in surgery, and the first prize in medicine. He was for a considerable time a resident pupil in the Birmingham General Hospital. Shortly after obtaining his diploma he was elected one of the resident surgeons to the Birmingham General Dispensary. This appointment he held for more than two years. He then became assistant to Mr. Evans, surgeon, of Tir Phil, near Cardiff. About six weeks after he had entered upon his duties, typhoid fever became epidemic in the village. In one street of about twenty houses, he had, at the same time, no fewer than fifteen cases. He exerted himself to the utmost to arrest the progress of the epidemic; but he himself very soon became its victim, and died on September 30th, at the early age of twenty-five. It will, no doubt, afford some little consolation to his friends to know that in his new home he had already gained for himself general respect and esteem. In an obituary notice *The Western Mail* states: "He had only resided in Tir Phil about three months, and in that short time secured the affection of all around him. He was ever ready, night and day, to attend to the call of the sick, and his geniality and tender-heartedness endeared him to all with whom he came into contact."

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 23rd, 1873.

Chum, Thomas Robert Hood, Mauntell, Pembroke
Denton, Thomas John, Bridlington, Yorkshire
Ransford, Thomas Davis, Guy's Hospital
Rigby, James Arthur, Preston, Lancashire
Twort, William Henry, Tunbridge Wells

The following gentleman also on the same day passed his primary professional examination.

Hopgood, William Charles, University College

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the October examination meetings of the College, held on the 14th, 15th, and 16th of October, the following were the successful candidates for the License to practise Medicine.

Bourke, George Dean
Horne, Patrick
Kelly, Michael James

Kelsall, Edward William
Stoney, George Legge Buchanan
Wolfenden, Joseph Hines

For the Midwifery Diploma.

Bourke, George Deane
Kelly, Michael James
Kelsall, Edward William

Stoker, William
Stoney, George Legge Buchanan
Wolfenden, Joseph Hines

MEDICAL VACANCIES.

The following vacancies are announced:—

BAWNBOY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballinamore Dispensary District: £90 per annum and fees. Applications, 5th instant, to James M'Govern, Clerk of Union.
BIRMINGHAM AND MIDLAND EYE HOSPITAL—House-Surgeon: £80 per annum, apartments, board, and attendance. Applications, 15th inst., to James C. Gell, Secretary.
BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Acting-Physician: Acting-Surgeon; Surgeon-Dentist; Extra Acting-Physician: £60 per annum. Applications, 4th instant.
BUCKS COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, with board and furnished apartments.
CASTLE WARD RURAL SANITARY DISTRICT—Medical Officer of Health for the Ponteland Division.
CASTLE WARD UNION—Medical Officer for the Workhouse: £30 per annum.—Medical Officer and Public Vaccinator for the Ponteland District: £20 per annum, and fees. Applications, 1st inst., to Thomas Arkle, Clerk to Guardian Highways, Morpeth.
CLIFTON UNION—Medical Officer to the Workhouse: £120 per annum.
ETON RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £100 and £20 for one year. Applications, 3rd instant, to R. H. Barrett, Esq., Slough.
GREAT YARMOUTH HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 15th inst., to R. K. B. Norman, Hon. Sec.
INFANT ORPHAN ASYLUM, Wanstead—Examining Surgeon.
KENT AND CANTERBURY HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 28th inst., to Thomas Southee, Sec.
LEEDS PUBLIC DISPENSARY—Senior Resident Medical Officer: £120 first year, £140 second and subsequent years, rooms, board, etc. Applications, 6th inst., to John Horsfall, Esq., 31, Albion Street, Leeds.
MANSFIELD, SOUTHWELL, and WORKSOP Rural Sanitary District, and Mansfield Urban Sanitary District—Medical Officer of Health: £500 per annum. Applications, 1st instant, to John Whall, Clerk to the Worksop Rural Sanitary Authority.
METROPOLITAN DISPENSARY and CHARITABLE FUND, Fore Street, Cripplegate—Physician. Applications, 15th instant, to W. H. Goodchild, Secretary.
NORTH CAMBRIDGESHIRE COTTAGE HOSPITAL—House-Surgeon: £120 per annum, furnished house, gas, and coals.
NORTHERN INFIRMARY, Inverness—House-Surgeon and Apothecary: £50 per annum, board, etc. Applications, 13th inst., to Alexander Dallas, Sec.
PLOMESGATE UNION, Suffolk—Medical Officer for the Aldeburgh District: £40 per annum.
RADCLIFFE INFIRMARY, Oxford—House-Surgeon.
RAMSGATE and ST. LAWRENCE ROYAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished apartments, etc. Applications, 9th instant, to A. R. Emmerson, Secretary.
ROYAL FREE HOSPITAL—Junior House-Surgeon.
SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon: £80 per annum, and board. Applications, 5th instant, to Alfred Rooker, Sec.
SURREY HOUSE OF CORRECTION, Wandsworth—Surgeon: £300 per annum, unfurnished residence and garden, etc. Applications, 13th instant, to Richard Onslow, Governor.
SWANSEA RURAL SANITARY DISTRICT—Medical Officer of Health: £50 for one year, and private practice. Applications, 1st inst., to G. B. Haynes, Clerk to the Authority.
THETFORD RURAL SANITARY DISTRICT—Medical Officer of Health: £70 for one year. Applications, 3rd instant, to E. N. Cole, Clerk to the Authority.
UNST, Shetland—Parochial Medical Officer. Applications to Mr. White, Inspector of Poor.
WESTMINSTER HOSPITAL—Assistant-Surgeon.
WESTPORT UNION, co. Mayo—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Louisburgh Dispensary District: £100 per annum, fees, residence, etc. Applications, 10th instant, to Hugh Wilbraham, Esq., Boat Haven Lodge, Westport.

MR. THOMAS HARPER WHITAKER, Surgeon, Kirkby Lonsdale, took the oath, and qualified as a Magistrate of the County of Westmoreland, at the Easter Quarter Sessions held at Kendal,

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Oct. 22nd; The Anti-Gam-Law Circular, Oct. 25th; The Northern Echo, Oct. 24th; The Daily Post, Oct. 27th; The Bedfordshire Mercury, Oct. 25th; The Eastern Daily Press, Oct. 24th; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Routh, "A Case of Stone impacted in the Kidney"; Dr. Purcell, "A Specimen of Calculus in the Pelvis of Kidney"; Dr. Symes Thompson, "A Case of Scrofulous Kidney"; Dr. Berkart, "On so-called Bronchial Asthma".

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Wiltshire, "On the Common Skin-Diseases of Children"; Mr. Tapson, "Note on the Removal of Intrauterine Tumours"; Dr. McCallum, "A Case of Extrauterine Fecundation"; and other communications.—Royal Microscopical Society, 8 P.M. Dr. S. J. McIntire, "Notes on Acarellus"; Rev. W. H. Dollinger and Dr. Drysdale, "Further Researches into the Life-History of Monads."

THURSDAY.—Harveian Society, 8 P.M. Mr. H. Cripps Lawrence, "A Case of Congenital Umbilical Hernia"; Dr. J. Hughlings Jackson, "On a Case of Apoplexy."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. DAVIS's question was referred to the most eminent authority on the subject for answer. As the answer is worded, it appears to reflect on the inspector, and not on the medical officer. The appointment of detail duty is a matter of bye-law.

A M.S. report of cases admitted at the Dundee Royal Infirmary has reached us, without the name of the author.

WE beg to call Mr. McSwinnery's attention to the constantly repeated notice that letters respecting business matters, such as the addresses of JOURNALS and advertisements, should be addressed to Mr. Fowke, the Manager, and not to the Editor of the JOURNAL.

KAPPA will find that the subject and conditions of the Hastings Prize Essay for next year were advertised last week.

TITLES IN DENTAL SURGERY.

SIR.—I trust that, for the reasons expressed in this letter, you will publish it in reply to the note of M. O. S., which appears in this week's JOURNAL. In my previous communication, I pointed out that four of the six dentists attached to the Dental Hospital of Liverpool added to their names the letters L.R.C.D.S., which do not represent any qualification known in this country. The Dental Hospital of Liverpool is a public institution; it is put forth as a School of Dental Surgery; and its staff comprises several duly qualified medical men. It is, therefore, open to professional criticism; and I am justified in addressing my letter to you rather than—as M. O. S. suggests—to the Secretary of the Hospital, who, it happens, is also one of the dentists using the letters L.R.C.D.S. Your correspondent M. O. S. is probably a member of the Odontological Society, and if he will refer to the official list, he will find that, although in every other case the titles of the members are appended to their names, the letters L.R.C.D.S. are not attached to that of one of the dentists to the Liverpool Dental Hospital who is a M.O.S. It would be well if we were informed whether this omission is a mistake, or whether L.R.C.D.S., whatever it may mean, represents a title really not recognised by the Society.

I am, etc.,

DENS.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE ETHICS OF MEMBERSHIP.

WE entirely concur in the opinions expressed by an Associate of Thirty Years' Standing, and note with due pleasure his opinion as to "the talent, tact, and temper" displayed in dealing with the question of "Medical Answers to Lay Correspondents", and other ethical questions, which we are occasionally unwillingly compelled to notice, in the way of censuring those who openly infringe professional rules. One class of questions we now invariably refer, in the first instance, to the Councils of Branches—namely, questions of personal difference arising as to professional conduct between medical men. When both are not members of the Association, it is sometimes still our duty to give an opinion, otherwise we prefer that the decision of the Local Branch Council should be taken. This has obviously a salutary effect, and since we have adopted this rule fewer of such questions are brought before us; and this is a great relief. The question of preliminary investigation of the ethical status of members applying for admission to the Association is also an important matter. We are not inclined to think that Branch Councils show any tendency to laxity in admitting objectionable persons. When an Association is designed to include every honourable member of the profession, and already numbers nearly six thousand members, it is not likely that the initials M.B.M.A. (honourable as they are, and we hope always will be, and pleased as we are to see them so often quoted in the *Medical Directory*) should imply any special professional distinction. Whether it is more desirable to elect by ballot or by open voting is of course an open question. We have a decided preference in professional elections for open voting. No undue influence can well be pleaded as an excuse for the ballot; there are, however, the precedents of elections at clubs and at medical societies in favour of the ballot. There has certainly been no relaxation of late in stringency in the mode of election into the Association—rather the contrary. The only recently elected member, however, to whom any noticeable objection has been offered, within our knowledge, was elected upon the strength of a paper, fully and regularly signed, and in the presence of members of his district, who voted for him. "A Member's" letter shall be forwarded to the President of Council, which seems to be a more suitable destination for it than the pages of the JOURNAL.

MEDICAL PORTRAITS.

MESSRS STUART and Co., of the Fine Arts Studio, Highbury, have sent us portraits of Dr. George Burrows and Dr. George Harley. The portraits are executed on a new principle, which they, as the sole patentees, call lytho-type engraving. The portraits are excellent as likenesses, but the process appears to us defective—at least the engravings are coarse and unpleasing in effect. The price seems far too high; they are charged £1 1s. and ten shillings. They are very much inferior to the 7s. 6d. photographs of Fradelle and Marshall, or to many five shilling or shilling prints which one sees in the shops.

MR. W. MAC CORMAC.—We have received previously copies of the pamphlet entitled *A Pure Mind in a Pure Body is Health*, by Dr. Washington Evans. No doubt it is a case in which the London College of Surgeons would and ought to interfere if it could. This case of unprofessional advertising, like that of Mr. Harry Lobbs, has been under the consideration of the Council, and some considerable expenses have been incurred in taking legal opinions as to the powers of the College to enforce discipline; but we believe that the opinions of counsel have not been such as to encourage stringent proceedings.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Callender, London; Dr. Rumsey, Cheltenham; Dr. Tilt, London; Dr. George Johnson, London; Mr. Ross, London; Dr. Hayes, Dublin; Dr. J. Ashburton Thompson, London; Dr. Parsons, Dover; Dr. C. Holman, Reigate; Dr. Lombe Atthill, Dublin; Mr. George D. Pollock, London; Dr. W. Ogle, Derby; The Secretary of the Pathological Society; Dr. Henry, Cork; Dr. Burder, Bristol; A Member; Dr. Lanchester, Croydon; Dr. Phillimore, Snettton, Gloucestershire; Mr. Symson, Lincoln; Dr. Mickle, Bow; Mr. Morris, London; Our Dublin Correspondent; Dr. T. Grainger Stewart, Edinburgh; Mr. Davis, Duffryn; An Associate; Mr. Arthur Jackson, Sheffield; Dr. Armstrong, Newcastle-upon-Tyne; Dr. Edis, London; Mr. Eastes, London; Dr. Cayley, London; The Secretary of the Royal Microscopical Society; M. Lutaud, Havre; Sir G. Duncan Gibb, Bart., London; Mr. Priestley Smith, Birmingham; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. Eassie, London; Mr. Reeves, London; Rev. W. L. Smith, Stratford-on-Avon; Mr. G. H. McSwinnery, Liverpool; Dr. J. Matthews Duncan, Edinburgh; Mr. Adams, London; Mr. W. Mac Cormac, London; The Secretary of the Clinical Society; Sir Thomas Watson, Bart., London; M.D.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Dr. Laidlaw, Birkenhead; Dr. Trollope, St. Leonard's-on-Sea; The Secretary of the Harveian Society; Dr. Falconer, Bath; Mr. Evans, London; A Correspondent; Mr. Wilders, Birmingham; Dr. Aitken, Rome; Mr. C. G. Wheelhouse, Leeds; Dr. Sisson, London; Dr. Hayem, Paris; Our Birmingham Correspondent; The Secretary of the Obstetrical Society; Dr. Burrows, London; Dr. H. Jackson, London; The Secretary of the South Wales Branch; Mr. King, London; Dr. Stephenson, Edinburgh; etc.

CLINICAL LECTURES

ON

THE TREATMENT OF OPERATION WOUNDS.

Delivered at St. Bartholomew's Hospital, London.

By GEORGE W. CALLENDER, F.R.S.,

Surgeon to the Hospital.

LECTURE II.—On Rest and Ease—and Shock.

How, gentlemen, can you expect so delicate a process as that of the healing of a wound by the first intention, or by primary adhesion, to be perfected, unless you take every care to place it under the conditions most favourable to its completion?

Amongst such conditions, maintenance of rest holds the first place; not merely such rest as is obtained by position and by external support, but that entire rest of the parts apposed for union which is only ensured by complete stanching of blood and by drainage from the wound of all fluid which may be exuded from its surfaces.

You saw, last week, how careful we were not to close the wound left after an amputation at the fore-arm until all bleeding had ceased; and to some of you the delay may have seemed needless; but, if you have the slightest oozing of blood after the wound has been closed and dressed, you will be sure to have at least three disturbances of the surfaces which you desire should unite, and which disturbances are well-nigh certain to prevent immediate repair. You will have, first, the outflow of blood, separating as it escapes the parts which should be at rest and in apposition; you will have, secondly, the clotting and subsequent contraction of the fibrine, causing further, though it be but slight, unrest; and you will have, thirdly, the disturbance which results from the disintegration of these blood collections. I am not speaking of bleedings which are considerable; I am referring to slight oozings which, unless guarded against, are apt to infest every wound, and are usually sufficient, by thus disquieting it, to prevent its immediate healing. Therefore, to secure rest, you must stop bleeding absolutely, and you must never close a wound (if it is to be closed) in the hope of its uniting by primary adhesion, until its surface is dry, or is glazing with the first exudation of plastic material.

With this care-taking, you will also be secure against that larger bleeding which has been termed "recurrent," to distinguish it from "secondary" hemorrhage. In most cases, this bleeding, which occurs within the first twelve hours after an operation, is due to the surgeon leaving some vessel unsecured, one which, at the time of closing the wound, may have escaped detection, owing to the very slight oozing from its orifice. This misfortune should seldom occur, for, if it does, the operator has only himself to blame for the accident, and for the disturbance of the wound which will result from the treatment required to stop the bleeding. Practically, you may disregard it, that is, if you take the pains I recommend you to take in thoroughly drying a wound before closing it.

Now there are many ways in which, at an operation, vessels may be secured, and you may elect which you like of these. For my part, with few exceptions, I use torsion; but occasionally, as when a wound is to be left to heal by granulations, or in dealing with the dense tissues divided in excising a knee-joint, it is convenient, chiefly to save time, to secure the vessels with ligatures, with carbolised cat-gut, for example. Torsion is perfectly safe for all vessels, and, in my experience of its use, there has been no instance of its failing, and the two occasions on which only it has been inapplicable for main vessels have been those on which an artery has happened to be divided just at the point of its giving off several large branches. But torsion, like other operations, must be accurately practised, if it is to succeed. The twisting of vessels of some size, such as the radial and anterior tibial, or the brachial and femoral, is an easy process, for the artery is readily seized without inclusion of adjacent structures, and anyone can feel, by the cessation of resistance in the vessel, the rent with which the middle and inner coats give way when torsion is completed. But one often sees an operator fail to secure, at the first or second attempt, a small-sized artery, and almost invariably because sufficient care has not been taken to seize the vessel alone, avoiding the tissues around it, for, if these are held by the torsion forceps in addition to the artery, the twisting, as a rule, will not succeed. There are two good reasons, at least, for pre-

fering torsion to other methods for securing vessels, and, first and chiefly, because it leaves a wound perfectly safe against secondary hemorrhage, for there is no risk of cutting through the outer coat, no ulcerative process, no detaching of a ligature; and, secondly, because it leaves a wound free from foreign bodies, such as acupuncture needles or ligatures; and perhaps you will for a moment reflect, apart from the strictly surgical view of the question, how greatly it must ease the mind of a patient to know that no such foreign bodies have eventually to be taken away from the wound—an ease he would the more appreciate, did he know how painful a process the removal of a ligature sometimes is. And how can you hope that a wound will heal if crowded, as wounds sometimes are, with ligatures? Here is a case just related by Esmarch, in which thirty-five were left after an operation;* primary repair is out of the question under such circumstances, unless, indeed, the ligatures are of cat-gut, the use of which is the next best thing to doing away with them altogether.

The torsion of vessels and the drying of the surfaces will take time, but the time is not to be grudged, and whilst thus engaged observe the greatest care in handling the wound, avoid holding its edges with forceps, guard against bruising of its tissues, and, when all bleeding has been stopped, carefully arrange the wound in the position it is to be left in for healing.

This question of position has to be considered in every case. Some wounds, indeed, arrange themselves, falling into apposition; those about the face often do so. In providing for the subsequent quiet of other wounds, the movements of respiration have to be thought of; after the removal of a breast, for example. Most often the position has to be chosen, so as to prevent muscular movements in the limbs from interfering with the perfect quiet which the process of repair requires; and it has been a matter of some trouble to get over the practical difficulties arising in this way during recovery from amputation wounds, but we have now succeeded, by variously contrived splints and swinging apparatus, in ensuring for these wounds a position which gives quiet and ease, and allows of their being subsequently dressed without disturbance. The appliances we employ vary for the different cases; but one of them you may see in use in Harley Ward for a primary amputation at the fore-arm.

Let us follow the steps in the dressing of this amputation wound. An angular splint, provided with two outriggers (to enable us to swing the arm), had been prepared, having been measured and fitted for the case; it was padded, and over the pad a thick layer of cotton-wool was laid, and over this again some lint, which had been soaked in carbolised oil (1 in 12). On this splint the arm was laid as soon as bleeding had been arrested, and, by its weight, it pressed down the layer of cotton-wool, and thus moulded for itself an even support, and this, let me add, is the only way in which you can get a limb comfortably and uniformly supported on any splint. The arm proper was then protected with cotton-wool, and was bandaged to the upper division of the support. The wound was then washed with carbolic acid lotion (one in thirty), and the edges were brought together with silver wire sutures.

And now two further steps were taken to ensure rest for the wound of the fore-arm during the progress of its repair.

First, one of these silver drainage-tubes was passed into the wound at its outer angle, and was left to hold itself in position by means of this spring, which can be protruded from its end. We had already guarded against the oozing of blood, and our present object was to provide a free outlet for the fluid which is sure to exude from the surfaces of such a wound as this during the twenty-four hours following the operation. If this fluid does not flow off as it is secreted, it soon distends the wound, moving and, of course, displacing its surfaces and destroying all chance of immediate union, and, indeed, is sometimes sufficiently irritating, even when modified by the action upon it of the carbolic lotion, to be the cause, if allowed to remain in the wound, of local and sometimes of constitutional disturbance. It is of the first importance to ensure its escape if, as I have just said, immediate union is to be obtained, and it is for this purpose that a drainage-tube is inserted. But, in the second place, we have to arrange the dressing so that there shall be no disturbance of the operation wound when its coverings are changed. So you may have noticed that a piece of lint, soaked in carbolised oil, was laid over the stump, not under it, and that it was folded and so arranged as to be easily lifted off, when necessary. Over this some cotton-wool was placed, and then a few turns of a bandage secured the fore-arm to the splint. The patient was carefully removed to his ward; and, as soon as he was put to bed, the arm was swung in the usual way, with a four-pound case of shot as a counter-weight.

* So dass nur 35 in der Wunde zurückblieben. *Sammlung Klinischer Vorträge*, page 374.

The swinging of an extremity which has been operated on, and its support by a well-fitted splint, should be so contrived that no change will be needed for at least three or four days, and, if your appliances have been well adjusted, it will not be necessary to interfere with them until the patient is well. It is not possible for me now to explain in detail the contrivances we employ;* you must observe them for yourselves. You will see how they vary for different cases; but you will always notice that they have for their one aim rest and ease, and the avoidance of all disturbance of the wound.

This patient got well in due course, the wound uniting, in great part of its extent, by primary adhesion. Following our usual practice, the dressings were renewed twenty-four hours after the operation, when the drainage-tube, having served its purpose, was removed. In effecting this change, the fore-arm was steadied by hand-pressure after the bandage had been cut through and turned aside, and the cotton-wool lifted off; the oiled lint was then removed from the wound, which was for some time exposed to the air whilst the tube was being withdrawn, and while its edges and the lint beneath it were being oiled, a camel-hair brush being used for this purpose. The wound was then re-covered with some lint soaked in carbolic oil, and the cotton-wool and the bandage were then replaced. Whilst making these changes, the wound was not in the least disturbed, nor did the patient suffer any pain or discomfort.

Whilst thus providing for the maintenance of rest, ease is, in some measure, secured. Such ease as comes to a patient from his being able to move as much as he pleases, without hurt from shaking or displacing of his wound; for it is our rule, within reasonable limits, to allow a patient freedom in this respect—it is not necessary to tell him to lie still. It is very rarely a patient is troubled with pain; but, if he does complain, you must always attend to, and, if possible, relieve him, and you should never put him off by merely suggesting that the pain is of no consequence, or that it will presently pass away. You will often find that some trifling change will give relief; the level at which a limb is swung may be altered, a supporting pillow may be placed here or there, or an over-tight bandage may be cut; indeed, with some such contriving, and by letting the patient shift into almost any position, we have never experienced difficulty in ensuring ease. There is beyond this the repose, which, if nature refuses it, should be secured by treatment; and, as a rule, which may rarely admit of an exception, we always, unless natural sleep is obtained, make free use of sedatives. Occasionally patients are sick, not that there is actual vomiting, after taking chloroform; and, even if they are not, I think it best to avoid running any risk of disturbing the stomach, and it is for this reason only that the sedative preferred is usually an injection of morphia; but, in some way, a good night's rest should be made sure of.

As the patients are inclined, so food is given, or is not; usually for a day or two a light diet is sufficient; but, as soon as possible, they are allowed to fall into their usual food habits, with, however, only a very moderate allowance of stimulants. None of my operation cases are placed on wine or spirits, and they do not even get their ale before they themselves ask for it.

With the exception of one case of pyæmia, for the occurrence of which I hold myself blameable, and of a few outbreaks of erysipelas, only one of which assumed serious proportions before convalescence was established, there has really been no complication requiring treatment after my operations. The patients, lying at ease, simply get well; and this leads me to tell you what we learnt from these patients respecting that which is commonly called shock and reaction. A record is kept for each case of the pulse, temperature, and respiration, and the notes for this record are taken twice daily, morning and evening, on some one day at least before, on the day of the operation, and for as many days after as in each case may seem desirable, and the facts thus collected have led me to modify very considerably the views I had been taught to hold respecting the condition of a patient after a great operation. I will go so far as to say that I have not seen any instance of shock following such a proceeding, at least of such shock as gave us any sign of its presence either through the pulse, the temperature, or the respiration; and I doubt if, in what may be termed a natural progress after an operation, shock has any part. If there should be any great depression, it will, I believe, be found to depend upon something beyond and irrespective of a carefully conducted operation—upon some diseased or merely feeble organ, some undue loss of blood, some poisoning of the system, as from certain extravasations; something which a thorough examination of a patient before venturing to operate should enable us to avoid, or something which exists independently of, although its effects run a parallel course with and thus influence, the after progress of a case. Thus, in the instance in which I removed a calculus from the

kidney, the patient was weak and feeble in the extreme, and it is easy to say that she never rallied from the operation; but, to my mind, it was rather that she went on slowly dying, just as though no operation had intervened. You will see that I do not speak lightly in thus ignoring shock, by referring to the current volume of our Reports, which contains the evidence upon which this conclusion is based, which evidence is positive as to the effect on the system of operations when practised in cases properly selected. It is curious to notice, however, that some trifling worry will sometimes send up the pulse and temperature in a remarkable manner; some passing excitement has thus made a difference of twenty-seven beats in the pulse and of four degrees in the temperature, and yet you will see men admitted after severe injuries—just the cases which one expects to find suffering from shock, and, unless any fatal lesion has been sustained, there will be a normal condition of the three great signs which I have referred to. And, if we find no symptoms which admit of being recorded as indicating shock after an operation, it is scarcely desirable to speak of a subsequent reaction, and you will consequently observe that, in our notes, we prefer to use the term over-action as indicating the constitutional condition during the first few days following an operation—whilst, however, we sometimes record a state of what we term subaction during the patient's convalescence. Now, the import of these terms requires brief consideration.

REMARKS

ON

ENLARGEMENT OF THE BRONCHIAL GLANDS.*

By NOEL GUENEAU DE MUSSY, M.D.,

Physician to the Hôtel-Dieu, Paris.

ENLARGEMENT of the bronchial glands is frequently found in *post obitum* examinations, and has been noticed by several anatomists, amongst them, many years ago, by Dr. Harrison, of Dublin, in his valuable book on the *Anatomy of the Arteries*.

But, respecting the clinical symptoms of the bronchial adenopathy, this affection, both in children and in adults, has been only described in its most advanced stages, in its most severe forms, when the windpipe, by the pressure which it undergoes, is narrowed, and a great obstacle to the passage of air is produced. In many cases, however, this enlargement of the bronchial glands is not attended with the symptoms which belong to the worst degree of the disease, which only had been hitherto described. Nevertheless, this milder and usually unknown form gives rise to peculiar troubles of respiration; it is attended by peculiar symptoms, and it may be detected during life by positive signs.

Almost all the diseases of the respiratory organs may be complicated with enlargement of the bronchial glands; and very often this enlargement unites its phenomenal expression with that of other affections, and can claim a part in the modifications of the respiratory murmur, and of the resonance of the chest observed in these diseases.

Of course, the signs of the bronchial adenopathy are generally to be found in the region corresponding to the bronchial glands, behind the upper part of the manubrium of the sternum, the sterno-clavicular, and the first sterno-costal joints, and the inner part of the two first intercostal spaces. Behind, the laminae of the first four dorsal vertebrae correspond to the same organs.

When these glands are enlarged, you can find in those points a sound duller, higher than natural, generally duller on one side than on the other, with impaired elasticity. With these modifications of the resonance, often very perceptible, you may find weakness, roughness of the respiratory murmur in the whole of a lung, if the main bronchial tube be compressed, or in a part of it, if one only of the secondary bronchial divisions. This weakness of respiration, often very evident in parts where the sound is normal and no alteration of tissue is to be suspected, which is not at all uncommon, cannot be explained satisfactorily without the interference of bronchial pressure. This weakness is usually connected with acuteness of the respiratory sound and protracted expiration. Near the origin of the bronchial tubes a rough, sibilant, or rubbing sound is pretty often to be heard. In the same point there often may be heard an expiratory soufflé resounding over a

* For some notes on these, see the BRITISH MEDICAL JOURNAL for October.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in London, August 1873.

more or less large extent, which is nothing else than the tracheal sound transmitted by the enlarged glands. It may be heard behind, near the spinal column; in front, near the sternum; with this peculiarity, that sometimes the movement of the body may modify this sound, by changing the relation of the trachea with the surrounding parts. I observed this alteration of the tracheal souffle in a remarkable degree, lately, in a female patient in my wards at the Hôtel Dieu. The souffle was very strong when she lifted her head up, and the trachea was closely applied against the convex surface of the cervical spine; it disappeared when she bent her head forward, and the connection between the trachea and the enlarged glands, which conducted the sound, was relaxed. For many weeks I could, according to the position of the neck, produce the souffle, or, on the contrary, make it disappear. The cough, usually the consequence of the bronchial adenopathy, is dry, obstinate, sometimes attended with a long whistling inspiration, as in whooping cough. This whooping cough-like character has been pointed out as belonging to the most advanced degree of this disease by all the physicians who have written on this affection. It may be observed in its mildest forms, and depends very probably on the connection of the enlarged glands with the pneumogastric nerve. I dare not assert that this peculiar character in whooping cough is always the result of the enlargement of these glands; but I found all the signs proper to this condition in some cases of whooping cough, namely, in those which may be called chronic; and this complication seems to me to explain satisfactorily the unusual circumstance of an indefinite duration in a contagious disease like whooping cough, assimilable in many respects to the eruptive fevers. Everybody knows that the cough may retain its character sometimes for several years; and, in a case of this description, lasting for two years, I observed the physical signs of the bronchial adenopathy. I have noticed that the cough may disappear in some chronic cases, although all the signs of the bronchial adenopathy have persisted.

The next symptom to be observed is a slight degree of dyspnoea, sometimes recurrent, and assuming an asthmatic form, or only perceptible when the patient is making an exertion, or when some accidental congestion increases the swelling of the glands. I have seen, under such circumstances, a depression of the skin above the superior extremity of the sternum, at each inspiration, as in cases where some obstacle prevents the free access of air to the lungs. The dilatation of the corresponding side of the chest is also diminished, as can be ascertained by a little instrument which I have called a pneumeter, which serves to measure the relative degree of dilatation of both sides of the chest. This instrument is composed of a spring supporting a dial with a graduated index. On each side of the dial is a string, which serves both to fix the instrument in the required position, and also to measure the breadth of the chest.

This morbid condition of the glands explains certain cases of aphonia. I have, on two occasions in my practice, met with cases of aphonia accompanied by all the physical signs of bronchial adenopathy on one side; and from these circumstances I diagnosed a paralysis of the vocal chord of the corresponding side, due to a compression of the inferior laryngeal nerve; which diagnosis was afterwards verified by a laryngoscopic examination.

In one case, the bronchial adenopathy seemed to me accountable, in a young boy, for an unrestrainable vomiting, attended with dyspnoea, which lasted for two years. Many treatments had been unsuccessfully employed to master this affection. I prescribed Labourboule waters, half a glass four times a day, a plaister with belladonna to be applied on the pit of the stomach, and tincture of iodine on the chest; and under this treatment, directed principally against the enlargement of the bronchial glands, the patient was quite cured.

I do not wish to describe the symptoms of the most advanced degrees of this affection, which are well known, when large tumours press on the veins, the trachea, the œsophagus, and produce cyanosis, cedema of the superior parts, congestion of the brain, dysphagia, and sometimes asphyxia.

These periods of this affection which I have studied here are more amenable to treatment than those of more advanced stages. The mineral waters, containing chloride of sodium and arseniate of soda, such as those of Labourboule, or chloride of sodium and iodine, as Kreutznach, Salies, and Salins, and, in certain cases, sulphurous springs, may be efficaciously prescribed. The use of iodine internally and externally is also indicated.

This condition of the lymphatic glands, to which I have alluded, may be observed at every age; it may complicate a great number of affections, such as measles, whooping cough, typhoid fever, bronchitis, pleurisy, pneumonia, tubercular induration of the lungs, and accounts for many auscultatory phenomena which I had been previously at a loss to explain.

ON THE NATURE OF THE SO-CALLED BRONCHIAL ASTHMA.*

By J. D. BERKART, M.D.,

Assistant-Physician to the Victoria Park Hospital for Diseases of the Chest.

THE history of the so-called bronchial asthma dates from the time of Laennec, and with it also the uncertainty with regard to its nature. Whilst up to this period almost every dyspnoea was designated as asthma, Laennec recognised the true value of the various species of it which were in vogue at his time, and relegated them to their proper places as symptoms of anatomically defined diseases. He was enabled to do so because he appreciated the objective signs, which indicate rather "coarse" changes in the physical constitution of the organs of respiration and circulation, and inferred from them the anatomical conditions which produce the dyspnoea and the other symptoms accompanying this.

This means, however, which served to recognise the pathological state in all cases of dyspnoea, failed even in the hands of Laennec with regard to one, which occurs in paroxysms, and is followed by intervals of a respiration completely healthy, or almost so. Although that dyspnoea most frequently occurs in connection with bronchitis and emphysema, and although these are able to sufficiently account for dyspnoea in general, yet the origin of the paroxysm and the cause of the free interval remained a perfect mystery. Moreover, cases came under Laennec's notice where even *post mortem* examination gave negative results. The cases referred to, which have nothing in common with asthma but the sudden dyspnoea, would, we may confidently say, be interpreted to-day in a different way to what they were at that time; and Laennec could only escape the difficulties which beset him by having recourse to the nervous system, and by attributing the paroxysmal dyspnoea to a disturbance of innervation.

Laennec's views on the subject have been adopted by the majority of his successors. Often have weighty objections been raised to the neurotic nature of asthma, but always has the nervous system triumphantly shielded its devout followers, until at last the asthma assumed the formidable character of a spasmodic disease, a theory which, at the present day, counts the largest number of adherents.

Such success, however, was only possible because, on the one hand, the absence of physical signs was supposed to prove the healthy conditions of the lungs beyond a doubt; and, on the other hand, because experimental physiology appeared to have provided the spasm-theory with the stamp of genuineness.

But neither of these circumstances deserves at our hands the value which has erroneously been attributed to them. For the absence of physical signs is no safe indicator of the absence also of pathological conditions, and all the positive evidence derived from experimental physiology only goes to show that the "bronchial muscles may contract"; but as to "how" and as to "when" nothing is known.

Even this "positive evidence" is a matter of dispute, the cause of which has recently been pointed out by Paul Bert. In many of his experiments he failed to demonstrate the contractility of the lungs, but at last he succeeded in doing so; and he found, as the reason of his failure, that he "insufflated the lungs too much", which circumstance impedes their contraction. (*Leçons sur la Physiologie comparée de la Respiration*. Paris, 1870, p. 375.) But if Paul Bert has thus proven the contractility of the bronchial muscles, he has at the same time conclusively shown the impossibility that asthma can be due to a spasmodic stricture of the bronchial tubes in those cases in which it occurs most frequently, and in which it forms an integral part of the disease, namely, in emphysema. For the same cause which hinders the success of the physiological experiments fully exists under those pathological conditions.

I will not enter into the vast domain of the nervous physiology to rebut step by step the erroneous conclusions which are brought forward as proofs of the nervous origin of asthma. It is too well known that the nervous system easily lends its aid to explain almost the impossible, and why should it fail to do so with regard to asthma? I may the more readily dispense with a similar argumentation, because I am prepared to show that, were even the entire nervous system bent upon producing a spasmodic contraction of the bronchial muscles, it would fail in its attempts, because they are in cases of asthma in such a state of nutrition as to be utterly incapable of contracting at all.

In the vast majority of instances, asthma occurs in connection with

* Abstract of a paper read before the Medical Society of London, Nov. 3rd, 1873.

chronic bronchitis and with emphysema,* and the rare cases in which these are supposed to be absent could only constitute an exception to the rule. This exception, however, does by no means invalidate the rule. Moreover, there is a certain class of bronchial affections in which cough and expectoration are so slightly marked, that Laennec has described it under the name of latent catarrh. Now, in the acute catarrh, the serous exudation characteristic of this disease remains by no means limited to the mucous membrane alone, but also extends to the muscular layer, which is immediately subjacent. So well has this fact been recognised by all clinical observers, that they more or less explicitly mention "an acute relaxation" (Walshe, *Diseases of the Lungs*, 1871, page 209) of the bronchial walls in cases of acute bronchitis. Therefore, what holds good in the acute, still more forcibly applies to the chronic affection. Here, indeed, are the bronchial muscles so completely soaked with serum, that, were this the sole change they undergo, it alone would suffice to render contraction of the muscles a matter of impossibility. But very often the first outbreak of an asthmatic attack is preceded by pathological changes of greater moment than bronchitis—namely, by catarrhal pneumonia, the anatomical basis of whooping-cough, measles, etc.; and that disease inflicts such injuries upon the bronchial walls, that their contractility is irrevocably lost.

Gentlemen, we shall never arrive at the true nature of bronchial asthma if we continue to confine our attention to an attack itself, to its immediate causes, and to its peculiar type of respiration. In asthma, as well as in any other disease, the history of the case and its sequelæ will have to be carefully considered; and then we shall find that, indeed, asthma is no independent disease, no dynamic affection of a nerve, but that it really forms a link in a chain of diseases, which commence with affections of the bronchi and terminate with emphysema, whilst asthma itself represents the stage intermediate between these two.

We know of the existence of substantive emphysema, when the thorax is greatly distended, when the loud and sonorous percussion note strangely contrasts with the feeble respiratory murmur, etc. But then the emphysema is formed, and we have to consider that its formation is by no means the pathological work of a day or a week. In what time an atrophic or hypertrophic emphysema develops is not quite known, but we can calculate it approximately, if we consider the time which elapses between the development of a chronic catarrh and that of emphysema; and also the fact that true, substantive emphysema is seldom or never found in children, (*Vogel, Lehrbuch der Kinderkrankheiten*. Erlangen, 1867, p. 233). From this we must conclude that this destructive work is carried on completely unnoticed by us, and that nothing reveals its existence until the work is finished.

But such profound changes in the lungs, although they gradually only modify their physical constitution, cannot remain indifferent to their functional activity. As long as no more work is required but that of quiet respiration, this can be performed without great effort on the part of the morbidly altered lung. But when an obstacle arises, which for its removal requires a greater force than that of ordinary respiration, then the inability to effect the removal shows the deficient nutrition of the organ. It is this stage of developing emphysema—this stage of deficient elasticity of the lungs—which constitutes the anatomical basis of bronchial asthma.

The existence of the deficient elasticity of the lungs in asthma does not only follow with necessity from the history of every case, but it is also directly proved by physical signs more delicate than those of auscultation and percussion. Manometric measurements, introduced as a method of diagnosis by Waldenburg ("Die Manometrie der Lungen oder Pneumatometrie als diagnostische Methode", *Berlin. Klin. Wochenschr.*, No. 45; 1871), have shown that emphysema is characterised by insufficient expiration. In individuals suffering from asthma, but who in their free intervals are in every respect considered to be in perfect health, and in whom above all the most careful physical diagnosis could not detect a trace of emphysema, the manometer showed a remarkably insufficient respiratory force, though in less degree than in

those suffering from emphysema; and this must be attributed to the same conditions which produce that phenomenon also in emphysema.

The causes and the type of respiration during an asthmatic attack become easily intelligible by the anatomical substratum of asthma which has just been established. In typical bronchial asthma, the lungs are greatly distended, the thorax is in a position of extreme inspiration, and all the respiratory muscles are firmly contracted. Inspiration is short and abrupt, and the effort of the respiratory muscles, although prolonged and greatly increased, remains ineffectual. If an obstacle arise to the entrance and exit of air from the lungs, say the impaction of a tough pellet of mucus in a bronchus, a supplementary force is necessary in order to displace the obstacle and to effectually carry on the respiratory function. Such additional aid to expiration is obtained by deep inspiration; and this is easily effected, because it proceeds from the action of the inspiratory muscles, to which the lungs deficient in elasticity cannot offer any great resistance. Hence the easy and rapid overdistension of the lungs. But this at first diminishes their elasticity, and, only after a deal of the expanding force has been got rid of, the elasticity increases (A. Horvath, "Zür Lehre von der Elasticität," *Centralblatt, f. d. Med. Wissensch.*, No. 48, 1873), whilst, according to the laws of the self-regulation of respiration through the pneumogastric, the expiratory act is continued until the obstacle is overcome. (J. Breuer, *Die Selbststeuerung der Athmung durch den Nervus vagus. Sitzungsbericht. der K. K. Akad. der Wissensch.*, Bd. 58, Abth. ii, 1868, p. 909, et seq.)

The exciting causes of an asthmatic attack either lie in the nature of the disease itself, or external circumstances, which do not affect healthy individuals, but may acquire that importance and produce an attack in the asthmatic. I shall limit myself to a few observations on this subject. The causes are:—

1. A lung deficient in elasticity must, for obvious reasons, more than any other allow of a distension of the blood-vessels, and thus become the fertile soil of hyperæmia and of catarrh. According to the intensity of the irritation, to the nutritive and formative peculiarities of the individual, to the state of the affected blood-vessels, and to that also of the secreting organs, the pathological products of catarrh will be either of a serous, mucous, or more fibrinous (croupous) nature. The removal of these pathological products from the air-passages is essential to the performance of respiration; but the force required to effect it will have to be increased in direct proportion to the tenacity of the sputum and to its more or less firm adhesion to the soil whence it sprung. We have, therefore, to acknowledge the tough and fibrinous sputa as the first cause of an asthmatic attack.

2. The inhalation of foreign bodies, such as ipecacuanha, *Asthma ciliaris*, Salisbury pollen, etc., and their peculiar action (Blackley, *Experimental Researches on the Causes and Nature of Catarrhus Asthmæ*. London, 1873).

3. The radiation of heat from the surface of the lungs, and the changes which this, on account of its morbid alteration, undergoes in contact with the atmospheric air. The skin of the body is protected by clothes interposed between it and the ambient medium, so that they regulate the radiation of heat from the external surface. The surface of the lung, equally in contact with the atmosphere, possesses, under normal conditions, its protective covering in the water-vapour with which the stagnant atmosphere in the lungs is saturated. But if the blood-vessels exhaling the water-vapour be morbidly changed, if thick mucus cover them like a layer of varnish, then the normal radiation of heat from the pulmonary surfaces is necessarily disturbed; the mucus itself enters into a process of diffusion with the atmosphere, with results varying according to the saturation, temperature, and movement of the latter. Under favourable conditions, the mucus dries up on account of the loss of its watery constituents; and in the lungs the same process takes place, as may be often observed on the mucous membrane of the nose in cases of chronic catarrh, in the eyelids in chronic blepharitis, or if a sore be exposed to the air. In all these cases, crusts form, the nasal passages are rendered impervious, and the eyelids are sealed together. Similar changes also occur in the lungs. They then require unspeakable efforts on the part of the expiratory forces to get rid of this obstruction.

4. Displacement of secretion accumulated in the lungs from the seat of its formation into another portion of the lungs, in consequence of which the surface of respiration is suddenly greatly diminished (as after laughter). (Beau).

5. Interstitial cedema. It occurs particularly in connexion with diseases of the kidneys (gouty asthma). (*Asthma urinosum*, Bamberger.)

6. Thrombosis and embolism of the smaller branches of the pulmonary artery. They produce dyspnoea, which cannot during life be referred to its true cause. Its symptoms are those usually ascribed to asthma. The frequency of such occurrence has been pointed out by Virchow,

* Of the 223 cases tabulated by Dr. Hyde Salter, the original causes of asthma are stated as follows.

Chronic catarrh, cold, and exposure to wet	118	Indigestion	1
Whooping-cough, measles, typhoid fever (catarrhal pneumonia) ..	14	Supper of meat, onions, and hard beer (<i>sic</i>)	1
Unknown	40	Hard work, anxiety, and over-exertion	6
Smallpox driven in on the lungs (<i>sic</i>) ..	1	Sudden soberness (!)	1
Apparently spontaneous	10	Hay-making	1
Inherited and constitutional	11	Suffered in teething	1
Outbreak and disappearance of eczema	5	Sudden cessation of menses	1
Liver complaint (!)	1	Climate and miasms	8
Bilious fever (!)	1	Running violently	1
Weak stomach (!)	1		
		Total	223

and he showed that such pathological conditions existed in from 8 to 10 per cent. of the bodies which formed the subject of his anatomical observations. (Lebert, *Virchow's Handbuch*, 5 Bd., ii Abth. 2nd Lief, 1867, pag. 486.)

All these conditions produce an obstacle to the interchange of gases, against which the deficient expiratory forces will for a long time labour in vain.

I may, therefore, in conclusion, state that asthma is a symptom which accompanies diseases of the lungs in which deficient elasticity is the prominent feature, and in consequence of which the existing expiratory forces are only able to overcome an obstacle to respiration after prolonged and increased efforts. This view of the nature of asthma is, I am confident, in accordance with the anatomical condition of the lungs; and its adoption may not be without practical utility. Whilst hitherto the treatment of asthma mainly consists in the blunting of the nervous system, which, in point of fact, is set to watch over the respiratory organ and to warn it against its dangerous foes, we may, by strict attention to the anatomical basis of asthma, delay for a long time the development of the last link of the pathological chain, as traced above.

ON THE USE OF DISINFECTANTS.

By E. J. ADAMS, M.R.C.S., L.S.A., L.M., L.R.C.P.E.,
Medical Officer and Vaccinator.

AN opinion seems to have sprung up that disinfectants, to be of any practical value, should be used in the concentrated form for the prevention of the spread of disease; and that heat used for such a purpose should be the red heat; that, in the form they are now employed, the mischief is likely to be increased, instead of arrested. Such a theory would appear to me to be fraught with considerable danger, as the means used in the manner suggested would become a fresh source of risk, and therefore probably discarded altogether, the poison thus being allowed to run riot and gain fresh strength by meeting with kindred spirits of its own.

It being not always possible to capture the enemy alive, we may sometimes succeed in killing and then disposing of him; therefore, in the case of a room being vacated by a patient after recovery from some communicable illness, the means employed for the purpose, when practicable, should be in a concentrated form; and this gives rise to a suggestion for the universal establishment of Convalescent Homes for the poor, whilst their wretched hovels are undergoing a thorough process of purification and cleansing. To do which effectually, all outlets should be closed and the air thoroughly saturated with chlorine gas or sulphurous acid fumes, the clothes of the patient being allowed to remain in the room during the process; after some hours, the windows may be opened to give place to the outer pure atmosphere. The area of contagion being of limited extent, this proceeding is simply carrying out the precept of "first catching the hare, and then cooking it;" in other words, before it can become distributed by movements in the atmosphere, or by other mechanical means, as by the clothing of people; and, as an instance of the part it plays in the distribution of disease, a case may be mentioned in which the clothes of two children that had died from fever were put away for seven years, and, then being worn by two other healthy children, they caught the fever and died; the clothes were then destroyed.

We have doubtless, most of us, had practical illustrations of the manner in which the odour of a *post mortem* may cling to one's attire for many days; therefore, especial attention should be attached to this particular, and all bedding, clothes, and materials used by the patient should be subjected to a temperature not less than 200 deg. Fahr. for several hours, with the addition, perhaps, of sulphur fumes.

Another important matter with reference to the subject is to ensure a plentiful supply of water, the infected house being thoroughly scoured with soap, soda, and water, and the floors sprinkled with disinfecting powder, as it will also cleanse and whiten them; the ceilings re-whitewashed, and a good fire kept burning, which not only helps to purify the air, but also, by creating a current, serves as an excellent means of ventilation, by drawing the air of the room up the chimney, and thus giving place to fresh air from without. Vessels, containing a weak solution of Condry's fluid, may also be placed about the room. For the sick chamber of a well-to-do patient, I would suggest the employment of reversible hydraulic fountains, to be procured at most glass factories, by which means a jet of water coloured with Condry's fluid could be kept playing with a decidedly pretty and beneficial effect. The cost of the apparatus would be simply £2 or £3.

As the result of upwards of six years' experience of our infirmary,

with a few cases of phlegmonous erysipelas, and a few cases, together with numerous cases of an occasional case or two of puerperal fever from without, I cannot recollect a single case of communication of disease through infection, and should not hesitate to consider a room perfectly fit for habitation after having been occupied by an infectious case, provided proper care had been taken to use the remedies recommended. And, in a case of scarlet fever unconsciously occurring in a family during a wedding, whilst several friends were sleeping at the house, besides a large family of children, some of whom had not had the complaint, not one fresh case occurred, and the room was shortly after occupied by other children.

All the excreta of patients should be freely mixed with moderately strong disinfectants as soon as possible, and the so-called disinfecting powder, consisting of a mixture of carbolate of lime and hyposulphite or hypochlorite of lime, might be advantageously made use of. The hypochlorite, when used too liberally, often produces great tingling and smarting of the eyes and eyelids, and the smell of it induces nausea. The nitrate of benzole is thought to be effectual in removing this annoyance. The patient might even be sponged, where practicable, with tepid water containing a little Condry's fluid, or even the hyposulphite of soda or potash, which will prove very grateful; and the hyposulphites might even be given internally, combined with cinchona and port wine; myrrh, as an antiseptic, might, perhaps, be added. All bad smells should be traced to their origin, and the cause, if possible, removed. It is an important fact that a foul atmosphere predisposes to puerperal fever. It may be taken as a rule that bad air induces fever, forming, as it were, a hotbed for it; and disinfectants, by destroying chemically the products of decomposition, must also exercise a destructive influence upon fever-poison, whether of vegetable or animal origin, and these are its most fertile causes; and, the more complex the matter, the greater the number and variety of changes, and hence the more noxious the result.

Although, perhaps, not directly generating zymotic disease, bad gases produce a set of symptoms analogous in character, and at least prevent the pure air—nature's purifier—from coming into actual contact with the decomposing matter. The poisonous effect of gases is observed in their depressing influence on the system, thus rendering the body more prone to fever, and less able to resist its influence. The different species of germs (monads and others) exist mostly in the lower strata of inhabited towns, and in the Alps are almost absent.

It has been said, that small cells resembling pus-cells exist in the air of a ward containing cases of epidemic ophthalmia, or suppurating surfaces of any kind, and, multiplying, convert the tissues by which they are surrounded into structures like unto themselves, as in variola, etc. Experiments have been made upon mity cheese by subjecting it to the action of chlorine gas, with varying results; and meat, when boiled with chlorine, becomes completely broken up. Carbolic acid, when strong enough to destroy venous, acetous, and lactic fermentation, does not arrest the conversion of starch into sugar by diastase, nor the formation of oil of bitter almonds, having no action upon substances of purely chemical composition, though putting a stop to changes due to organic life. It also destroys the vitality of vaccine lymph. Sesquichloride of iron decomposes sulphuretted hydrogen and the ammonia sulphide, though carbolic acid does not. Sulphurous acid acts in a similar manner to chlorine, and is especially destructive to animal life, as evinced by its being employed as a specific in psora and other diseases of parasitic origin.

It has been argued that, during the Franco-German war, the air of the hospital, notwithstanding the use of carbolic acid, was most impure; but the fact of excessive overcrowding is lost sight of, and we are not told what local means were employed as a preventive. We might have hoped that surgery, as a science, had advanced so far that suppuration had become a matter of rarity after surgical operations, and it would be interesting to know how far the carbolic or chloride of zinc treatment had been carried out. Moreover, at Jarrow, although the air is pervaded by chlorine gas from the various factories, fever and small-pox are said to abound; yet we hear nothing about the drainage of the town, nor to what extent vaccination is practised.

We should endeavour, if possible, to get at the cause, not simply the effect, otherwise one might as well hope to get rid of weeds by cutting the stalks off without destroying the roots. At the Hampstead Hospital, the precautionary measures are so complete that not a case is known where variola has been communicated by the patient or his clothes after leaving, although clad in the same attire as when admitted; and at Terling there are good grounds for believing that the free use of disinfectants in their present form cut short its ravages.

Heat, as an agent for disinfection, should be dry; a moist heat seems to favour noxious exhalations. It would be as well for medical men to pay great attention to their hands and nails at all times, keeping the

latter well brushed, rinsing the hands in a weak solution of carbolic acid or Condy's fluid, ^{essentially} the hands and nails should be attended to before examining a labour case. It is a matter for some consideration whether too much has not been expected from individual remedies; possibly, when the nature of fever poison becomes more clearly demonstrated, as also the several actions of the various disinfectants, by a happy combination of them in the same way that we should prescribe a full purge, corroborative evidence would abundantly spring up, and convert the process of disinfection into a science, instead of theory and speculation, and were it for no other reason than simply to promote cleanliness, strict observance of the patient, also the comfort of those in attendance, especially the amount of confidence and justifiable feeling of security felt by surrounding relations and friends. Even as faith will often save a patient's life, it will produce a less susceptibility to the poison, and thus ensure a greater immunity from danger by removing that fear which is so disastrous to both sick and healthy.

CASE OF AORTIC EMBOLISM.

By JAMES REID, M.A., M.B.

THE following case is interesting, as well from its comparative rarity as from the complete demonstration afforded by a *post mortem* examination of the way in which death was caused.

At one o'clock one morning, I was called in haste to see an old man who had been suddenly taken ill. On reaching the house, I found him dead. Up to an hour and a-half before his death, he was apparently in his usual health; and he was sitting up in bed reading, when he was suddenly seized with excruciating pain in the region of the heart. He repeatedly said to his friends that he felt he was dying, and kept moaning very much. He was covered with perspiration, felt chilly, and complained of the pain getting more violent till he fell down in bed dead, consciousness being retained to the end. Such was the account given by his relatives.

The patient had been under no regular attendance by a medical man, though one day, about a week before, he attended at the Paddington Dispensary as an out-patient. His symptoms at that time were somewhat obscure; and, though the medical officer suspected heart mischief, still nothing definite was made out.

The cause of death could be determined only by a *post mortem* examination, which accordingly was made on the third day after death. On the chest being opened, the lungs were found to be comparatively healthy, though slightly congested. The pericardium was adherent throughout; and the adhesions, though pretty firm, could be broken down by the fingers, except at one point on the surface of the left ventricle, where they had to be cut through. The heart was considerably enlarged; its substance extremely fatty, and very friable and soft. Both sides contained a little blood, but neither was gorged. In the left wall of the left ventricle, at a point corresponding to where the pericardium was so adherent outside, was a small cavity. Its surface was smooth, though unequal; and it was formed at the expense of the muscular tissue of the ventricle, which had here almost entirely disappeared, and become transformed into, or been replaced by a tough fibroid substance so thin that a slight opening had been made through it in cutting the adhesion of the pericardium outside. Loose in the left ventricle, and lying at the aortic orifice, was found a fibrinous concretion of a semicartilaginous consistency, and evidently of some standing. Its shape was irregularly oval, with one side cut off longitudinally; the surface, though studded with irregularities, was smooth, except the flattened side, which was more roughened.

On this body being compared with the cavity in the wall of the left ventricle, the two were found to correspond closely, the one fitting accurately into the other, and leaving the flat side free. The valvular apparatus of the heart was healthy, with the exception of the aortic valves, where there were slight traces of ossification; one of the semilunar flaps being also partially adherent to the lining membrane of the aorta. The liver was large and fatty, and the kidneys were slightly lobulated and granular. The other abdominal organs seemed quite healthy, and there were no traces of any noxious substance in the stomach. The brain was found to be in a normal condition. There was little congestion, and no trace of blood-clots. The quantity of serum in the ventricles was rather in excess.

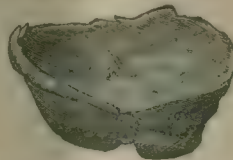
The cause of death was evidently more or less complete occlusion of the aortic orifice by the fibrinous embolus found there.

This body (which has been preserved) weighs fifty-five grains, and measures one inch and one-fifth in its longest diameter, four-fifths of an inch transversely, and half an inch in depth. On being cut transversely,

it shows a laminar arrangement, having been evidently formed by successive deposition.

The accompanying rude drawing (actual size) will give an idea of its appearance.

The most striking feature in the examination was the close cor-



respondence of the embolus with the shape of the cavity in the wall of the ventricle, the fitting being so accurate as to leave no doubt that the one had been formed in the other, and for some time been lodged there.

It seems more than probable that some time ago the fibres of the left ventricular wall had partially given way under some sudden action of the heart, being unable from their extremely softened and fatty condition to resist the strain put upon them. More or less subacute inflammation had thus been set up, leading to the appearances described, the part where the fibres gave way forming a cardiac aneurism. The outer wall of the aneurism had become of a fibroid nature, fused with the pericardium at that point as stated, and interposed a very thin barrier between the blood in the heart and the left pleural cavity. In the aneurismal sac fibrin had been gradually deposited from the blood, forming, as it were, a complete cast of the cavity, and remaining for a time *in situ*, till, at last becoming dislodged, it was carried by the current up to the aortic orifice. Being unable to pass through, it blocked up the opening; and thus cut off, more or less completely, the supply of arterial blood to the whole system.

The date at which the rupture took place was probably recent. Assuming the pericardial adhesions to have been the result of it, the fact that they could, in the main, be easily broken down by the fingers pointed to a recent origin, as also did the fact that the fatty condition of the heart was probably thoroughly established before it took place.

On questioning the man's friends, I was informed that a short time before, while walking along the street, he was suddenly seized with extreme pain in the region of the heart, accompanied by excessive faintness. After a little, he revived, and was conveyed home. I am inclined to think that this must have been the occasion when the lesion in the ventricular wall took place. Ever since then, he had been complaining of uneasiness about the heart; but, beyond this and the breathlessness from which he had for long been suffering, there were no symptoms sufficiently urgent to make him seek medical advice. During this time the fibrin had been getting deposited in the aneurism, but without causing any marked symptoms, till it was detached an hour and a-half before his death, when he was seized in the manner already described. The reason why death was not immediate may have been that the closure was not complete, or that the embolus was carried about in the cavity of the ventricle for some little time before it was finally impacted at the aortic opening.

ON THE MISCHIEFS ACCRUING TO INFANTS FROM CRANIAL PRESSURE DURING LABOUR.

By THOMAS RADFORD, M.D., etc.,

Honorary Consulting Physician to St. Mary's Hospital, Manchester.

THE injuries sustained by the infant, in consequence of long continued or violent pressure which the head very frequently sustains in its passage through the pelvis, during a tedious or difficult labour, or by the use of the forceps, has engaged my attention and consideration for a very long period of time (see *Essays on various subjects connected with Midwifery*; also *Observations on the Cæsarean section*, etc.); but I have never been acquainted with the very serious and grave consequences stated by Dr. M. Duncan, in a paper read before the Obstetric Medicine Section, at the Annual Meeting of the British Medical Association in London, August 1873, and now printed in the *JOURNAL*, page 456. That the delicate brain of the infant may sustain irreparable damage from compression it has to endure, even to the extent mentioned by this eminent obstetrician, such as "paralysis, epilepsy, imbecility, insanity." He says this mischief may happen "from the compression and shearing it undergoes, in what would be called a common moderately severe labour which terminates spontaneously; and there can be no doubt that more definite physical injury by instruments is still more likely to have such baneful consequences." The above statement may, on first

view, appear startling, but that such evils do happen I really believe. Already, I have over and over again commented on the physical injuries inflicted on the brain of infants by the use of the long forceps. I have endeavoured, not only to point out the evils which are produced by this instrument, constructed with long handles which enable the practitioner to use a most unjustifiable amount of compression, but I have recommended the use of an instrument with handles so short that it is utterly impossible to produce more pressure on the infant's head than is quite compatible with its safety. (See Essays.) The long forceps ought mainly to be used as a tractor.

The case related by Dr. M. Duncan, upon which he has made his valuable comments, was one in which he applied digital pressure upon the left parietal bone for the rectification of the position of the head, and which was so great as to indent the said bone. The late Dr. D. Davis contrived two pairs of forceps with blades obliquely placed in relation to each other, for the rectification of mal-positions of the head, by the aid of which pressure must be made on opposite sides of the head, although not on opposite points. I think, however, this is an unnecessary multiplication of instruments, and manual assistance may be so applied as not to allow the entire mechanical force to be expended on one point of the head, viz., by placing the thumb anteriorly on one side, and the fingers more posteriorly on the opposite side of the infant's head, thereby dividing the amount of pressure made.

In considering the degree of tolerance of the head of an infant to pressure, in passing through the pelvis during a tedious or difficult labour, it may not be uninteresting or unimportant to call the attention of obstetricians to the consideration of the question of the comparative safety and danger of delivering the infant by the long forceps, or by turning in cases of labour in which there exists pelvic distortion.

When the late Professor Simpson first published his opinion as to the advantages of turning, in cases of which slight distortion of the pelvis exists, over those of the delivery of the infant by the long forceps, I ventured to differ in opinion from him (see *Provincial Medical and Surgical Journal*, vol. ii, p. 3), and I still maintain the same opinion I then expressed, viz., that turning cannot ever become an alternative operation for the use of the long forceps in cases of labour protracted by slight distortion of the pelvis.

The brain of an infant brought through a distorted pelvis by the long forceps or by turning, is not successively and relatively subject in all its parts to the same degree of pressure. When dragged through the pelvis by the long forceps, the pressure is first made upon the superior parts of the hemispheres of the brain, which must inevitably force this organ towards the base of the skull; whereas, when the infant is pulled through the pelvis after turning, the brain is forced upwards from the base towards the vaulted portion of the cranium. Now a question naturally arises—Will the brain of an unborn infant bear the pressure which it may sustain in being forcibly brought through the aperture of the same dimensions by each of these operations, as safely in one as in the other? Is there not a greater chance of organic mischief being produced by turning in such a case, as the pressure is first made just above the base of the skull, where the most important parts of the brain and nerves are likely to be forcibly lifted up from this portion of the cranium? The question can only be settled by a strict investigation. It is a subject worthy the attention of Dr. M. Duncan, who possesses such high qualifications for strict and truthful inquiry.

CLINICAL MEMORANDA.

LIMIT OF PROPHYLAXIS BY VACCINATION.

To check the poison of small-pox, I with others have hitherto maintained that vaccination, to be effective, must have reached the third or ninth day of its progress; or, in other words, that it must be in, or have passed, the areolar stage. The following case appears, however, to throw some doubt upon this opinion.

A creole was admitted on Monday, August 4th, 1873, as a supposed case of small-pox. The rash was of that *quasi* character which would have scarcely justified its refusal, not only on account of its doubtful appearance, but from the fact that the man had been brought from on board ship; that he had been conveyed by the ordinary small-pox ambulance; and also from the immense responsibility that attaches itself in setting free a case which *might* turn out to be one of true variola. Immediately upon his reception, he was vaccinated in four places with lymph (in tube) obtained from the Privy Council Office. On the third day, slight elevations were noticed; on the sixth day, they had become perfect vesicles; and on the eighth (the day week the operation had been performed), the vesicles were everything to be desired, and having a well marked areola, with considerable swelling of the sur-

rounding tissue. From this time until the 15th, the man enjoyed good health; and some difficulty was experienced to retain him in the hospital, as he was most anxious to rejoin in his ship. At this time, however, he complained of backache and sickness, and took to his bed. Three days later, he was suffering from confluent small-pox, and from which at one time he appeared likely to succumb. Since then, he has had slight ulceration of the left cornea, and is even now still unfit to be discharged.

The lesson to be derived from this case is obvious: viz., that although vaccination is in advance of small-pox by five or six days, the protection of the individual cannot always be considered absolutely certain.

W. GAYTON, L.R.C.P.,
Medical Superintendent of the Metropolitan Asylum District
Homerton Small-Pox Hospital.

THUMB-SUCKING.

I HAVE observed that a peculiar and rather common deformity of the chest is caused by the habit of sucking the thumb in infancy and early childhood. The weight of the arm on the thorax of the child during sleep produces depression of the ribs in the line occupied by the arm when the thumb is placed in the mouth. As this is a very important effect of "thumb-sucking" never hitherto pointed out, I think it desirable to place this note on record for the benefit of other observers.

HORACE DOBELL, M.D., Senior Physician to the
Royal Hospital for Diseases of the Chest.

THERAPEUTIC MEMORANDA.

PHOSPHORUS IN NEURALGIA.

IN the *JOURNAL* of the 18th October I observe a note from Mr. S. M. Bradley, headed "Phosphorus in Neuralgia". He there says: "Since October of last year" . . . I have prescribed it (phosphorus) in various neuroses—in melancholia, in impotence, in mercurial tremor, in locomotor ataxy, etc.—but have come to the conclusion that its value is most conspicuously and constantly seen in cases of nerve-pain . . . while it has appeared to me quite inert in most of the separate diseases I have mentioned above," etc.

By publishing a series of forty-one cases of neuralgia treated with phosphorus,* I have shown that there may be reason to confer the title of "specific" upon it as a remedy for that disease. It is, therefore, desirable that the therapeutic action of this drug should be investigated in England as it has been, and is yet being investigated by many observers on the continent. But the utility of a mere expression of opinion, though by a surgeon of Mr. Bradley's eminence, may very easily be mis-estimated; and when it is perfectly well known to every reader of continental literature that Professor Gubler's† opinion (which Mr. Bradley endorses and adopts) is in some respects opposed to the results of practice, as noted by Beaumetz,‡ De Mussy of Lyons,§ and by Delpech,|| it might perhaps be not uninteresting to have the opportunity of perusing Mr. Bradley's noted cases, and of studying his reasons for the opinion he holds.

I trust Mr. Bradley may be persuaded to afford us these opportunities, of which the London members of the Association at all events will be anxious to take advantage, apart from the special question of the value of phosphorus. Melancholia, mercurial tremor, and locomotor ataxy, though not exactly rare diseases, are yet, I opine, too uncommon here to allow of the occurrence of many of each kind in a single year of individual practice. Mr. Bradley has, no doubt, had a considerable number of cases from which he feels justified in forming an opinion of the value of a certain remedy in them; and so close and accurate an observer must also have much to communicate on the general aspect of these diseases, which will be gratefully received by less favoured practitioners.

I may remark by the way, that the discovery that phosphorus is not a remedy for impotence, was made by the first physician who systematically investigated the therapeutic powers of the drug—Alphonse Leroi. In 1798,¶ he writes that although phosphorus will temporarily remove this functional disorder, without subsequent continence "*la rechute sera funeste*". I have had the misfortune to prove this in one of two cases of impotence I hastily published as cured.

J. ASHBURTON THOMPSON.

* *Practitioner*, July and October, 1873.

† *Bulletin Générale de Thérapeutique*, vol. i, 1873, p. 385, et seq.

‡ *Bulletin Générale de Thérapeutique*, Jan., Feb., and March, 1863.

§ *Gazette Médicale de Lyons*, July 1865; *Gazette des Hôpitaux*, Nos. 42-50, 1863.

|| *BRITISH MEDICAL JOURNAL*, vol. i, 1868, p. 225.

¶ *Mémoires de la Société Médicale d'Emulation de Paris*, première année, page 170.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

CYSTIC TUMOUR OF LEFT MAMMA IN A MALE.

(Under the care of Mr. DE MORGAN.)

ALFRED M., aged 30, single, a solicitor's clerk, of spare frame and delicate appearance, applied to Mr. Morris at the cancer out-patient department on October 2nd. He then stated that three years ago he used to experience an itching immediately beneath and around the nipple of the left breast, to relieve which he was in the habit of striking himself at this spot with his fist. Three weeks after he first felt this sensation, he noticed a lump about the size of a hazel-nut just beneath the nipple of this side, which was hard, and continued regularly to increase up to six months ago, when it was half the present size. At the time of application at the hospital, there was a prominent, rounded, and very elastic tumour in the left mammary region, the circumference of which at the base measured twelve inches; the transverse measurement from the base on one side over the prominence to the base on the opposite side was seven inches; the corresponding measurement in the vertical direction was six inches. The nipple was so flattened out as to be somewhat indistinct, and was positioned a little to the outer side of the most prominent spot. The skin covering the tumour was adherent, or at least so tightly stretched that it could not be pinched up between the finger and thumb, and was of a dusky purple colour, excepting about the nipple, where it was red, and on the sternal side, where it had the appearance of a bruise. The whole was freely movable upon the pectoral muscle, and there were no glands in the axilla enlarged.

Before removing the cyst, Mr. De Morgan made an exploratory puncture with a grooved needle, when a quantity of thick material, resembling coffee-grounds, escaped. The tumour was then removed by the usual incisions for amputation of the female breast. It was found to consist of one large cyst and several smaller ones in the walls of the large one. All contained the same kind of coffee-grounds semi-fluid contents.

In his remarks to the students and visitors, Mr. De Morgan observed that he was of opinion that the present case was one of that class (of which he had now seen a large number) of blood-tumours of a cancerous type. They are very malignant, and very prone to recurrence, especially when attacking the male breast. In fact, in his experience, all forms of cancer, when attacking the male breast, are more surely and more rapidly recurrent than in the female breast. He could offer no explanation of this tendency. For these reasons, he felt bound to give a gloomy prognosis in this particular case. It was true, it would require microscopic examination to make quite certain of the character of this tumour; and the absence of any marked degree of solid deposit in its walls might be thought to negative cancer, but he did not consider that such was any contra-indication of the medullary cancerous nature of the growth.

CARIES OF TARSUS AND METATARSUS: SYME'S AMPUTATION BY
ESMARCH'S BLOODLESS METHOD.

(Under the care of Mr. NUNN.)

AUGUSTUS K., aged 79, a musician by occupation, had been suffering from disease of the right foot for fourteen months. He was a robustly framed man, and had enjoyed fairly good health previously, and had not received any injury he knew of. On admission, the whole foot was much swollen and oedematous. There were one or two sinuses over the metatarsal bones, leading down some depth; but no diseased bone could be felt. There was a fluctuating swelling over the inner malleolus. Percussion of the foot in any direction caused extreme pain.

Before commencing the incisions, the foot and leg nearly up to the knee were tightly bandaged with an elastic roller about an inch and a half wide; a piece of India-rubber band, cylindrical, and about half an inch in diameter, was then tightly wound round the limb close to the uppermost turn of the elastic roller; the roller was then removed, and the operation proceeded with. There was certainly not more than a couple of tablespoonfuls of blood lost altogether, and what was lost escaped after the India-rubber band was removed. During the operation, Petit's tourniquet was applied to the femoral in Scarpa's triangle, and screwed up to about half-tightness. The difference in the limb at the part below the India-rubber band and the part above and between

it and the tourniquet, was very marked—the former quite pale, and free from swelling; the latter deeply congested on the surface, and swollen throughout its thickness.

The foot was examined after removal, and found in a very advanced stage of disease. The scaphoid was a mere plate of carious bone quite loose in its position. The scaphoid articular facet—*i.e.*, the head of the astragalus—was softened; the cartilage partly ulcerated, and in places raised from the bone beneath into little blood-stained blisters. The anterior articulation between the astragalus and calcis, and all the other tarsal joints, were diseased; the cartilages were more or less eroded, and the bone was softened or excavated. The bases of the four outer metatarsal bones were much diseased, especially the third and fourth, the tarsal extremities of which were almost entirely destroyed. The articulation between the inner cuneiform and the first metatarsal bone alone remained intact. Yet, in spite of all this disease, no dead bone could be felt with the probe during life. The reason of this was explained upon examination; for the whole of the joints except the scaphoid were found covered in by a dense layer of close-webbed cellular tissue of almost cartilaginous hardness, which had to be sliced away before the destruction which existed below could be detected. Had, however, any of the sinuses been directly over or even near to the scaphoid, no doubt dead bone would have been felt before amputation, as here the joints were quite open, and the remnant of the scaphoid was lying in a sort of abscess-cavity, which in this case could have been reached with the probe.

CHRONIC DISEASE OF THE WRIST JOINT: AMPUTATION OF FORE-
ARM: ESMARCH'S PLAN OF CONTROLLING HÆMORRHAGE.

(Under the care of Mr. LAWSON.)

William S., aged 32, a labourer of Tunbridge, had always enjoyed good health. About nine months ago, he was likely to fall, when he threw out his right hand to save himself, and struck his wrist against a post. Since then, his wrist has been swollen and painful. The pain in the joint has occasionally been very severe; in fact, the only time since the accident during which he has been free of pain was while he was an in-patient under Mr. Lawson in July, when a plaster of Paris splint was worn. Mr. Lawson remarked that this was a case favourable to excision of the wrist; but, as the patient was a labourer and felt assured he could get on with his work very well with a hook, and was adverse to the more tedious recovery which excision necessitates, he desired amputation in preference. The operation was performed on the bloodless plan of Esmarch, which succeeded admirably without the loss of any blood. On examination after removal, the soft parts of the joint and the three carpal bones of the radiocarpal articulation were considerably diseased, the cartilages entirely absent, and the bones soft and spongy.

EPITHELIOMA BEHIND LEFT EAR: EXCISION: CHLORIDE OF ZINC
PASTE TO WOUND.

(Under the care of Mr. MORRIS.)

Thomas S., aged 56, a gardener, was sent to the cancer out-patient department by Mr. Humphry of Chiselhurst, on October 9th. He gave the following account of his case. Between six and seven years ago, he had a sore like a boil behind the left ear, in the situation of the present disease. This soon healed up after discharging a little pus. On two or three subsequent occasions, he has struck the same part, whilst occupied as a gardener, with branches of trees and shrubs, and these injuries have been followed by ulceration and healing under scabs. The last injury was about twelve months ago: the resulting wound healed under treatment, and remained well till four months ago, when the present sore commenced, which had been growing worse—*i.e.*, deeper and larger.

There was, on admission, an ulcer the size of the bowl of a teaspoon, with its longer axis downwards and forwards, situated behind the left ear and over the mastoid portion of the temporal bone. The margin nearest to the ear was very well-defined, thick, raised, and very hard; below and posteriorly, it was less well limited, and the thickening and hardness faded off gradually into the adjacent skin. The centre was excavated, and had an irregular pinkish yellow base, partially coated by a dry shining film.

The diseased portion was freely removed by the knife; there was a good deal of capillary arterial hæmorrhage, which was checked by liq. ferri persulphatis, and chloride of zinc paste spread on lint cut into little square pieces was afterwards applied.

Mr. Morris remarked that this was a case in which an epitheliomatous formation occurred upon a part of the skin which had been previously frequently exposed to irritation, ulceration, and cicatrization. The fact that

complete cicatrization had occurred was no absolute disproof that the sore had been for some long time of an epitheliomatous character; but it was much more probable that the part had only during the last four months assumed the structure of epithelioma. The absence of enlarged glands in the neighbourhood was no argument either way, as it was a common thing to find epithelial cancer existing a long time without affecting the glands in the neighbourhood.

There were other operations also performed on this occasion.

Mr. Hulke operated upon a boy, ten years of age, for cleft-palate. Chloroform was given, the levatores palati muscles were divided, and sutures of silkworm-gut were used.

Mr. Hulke also operated upon a man, twenty-four years of age, for internal strabismus; the deviation was of four and a half lines degree. Only one internal rectus was divided, and this was done by Gräfe's method.

Mr. Andrew Clark operated upon an infant for a cutaneo-subcutaneous naevus situated at the inner angle of the left eye between this and the cheek and side of the nose. It was of the size of a shilling, and the treatment adopted was the ligature passed subcutaneously around the base of the growth. There was another naevoid tumour of similar size and character on the child's scalp; but this the mother would not allow to be touched.

ST. MARY'S HOSPITAL.

CASE OF OCCIPITAL ANEURISM.

(Under the care of Mr. JAMES LANE.)

MR. JAMES LANE has at present under treatment in St. Mary's Hospital a very rare and interesting case of occipital aneurism. The patient, a healthy young man, fell from an omnibus about five months ago, striking his head against the foot-board. He was slightly stunned by this accident, but had quite recovered the next day, when he observed a very peculiar loud buzzing or whizzing noise behind the left ear. This gradually increased until it became audible to others, and the annoyance was so considerable that he applied for advice about a month ago.

On examination, there was no trace of tumour at or near the affected region, but a strong heaving impulse was readily detected behind the left mastoid process, with a loud bruit on application of the stethoscope. The man complained much of the perpetual noise, which frequently became so intense at night as to prevent sleep; and he was very anxious that something should be done for his relief.

It was resolved to give compression a fair trial, and accordingly an instrument has been devised by which a firm pad could be screwed over the situation of the supposed sac, and tightened from time to time as required. During the application of this apparatus, the patient is free from all uneasy sensations; and on its removal pulsation is less forcible, while the bruit heard during auscultation has now assumed a whistling and ringing character, much resembling some of the more musical cardiac bruits. It is, therefore, probable that some impression is being made in the disease; and even should failure eventually result, ligature of the carotid remains to be done, pressure over this vessel entirely arresting both the sound and impulse in the tumour.

Mr. Lane is inclined to look upon the case as one of aneurism of the occipital artery beneath the sterno-mastoid, splenius, and transversalis colli muscles; and a diligent search among authorities leads him to believe that it is unique.

YORK COUNTY HOSPITAL.

IMPACTION OF BONE IN THE OESOPHAGUS: WOUND OF THE LUNG: PNEUMONIA: DEATH.

(Under the care of Dr. SHANN.)

THOMAS LEE, aged 48, labourer, Clifton, York, was admitted into the York County Hospital on the afternoon of Sunday, January 26th, 1873, under the care of Dr. Shann, Senior Physician to the Hospital, suffering from intensely severe pain in the right inferior chest, great dyspnoea, and constant distressing cough. The account given was that, on the Tuesday previously, while eating his dinner, consisting of a veal pie, he suddenly felt that he had swallowed a bone. Within an hour afterwards, the severe pain in the right inferior chest commenced, accompanied with cough and distress of breathing, which symptoms had continued up to the time of his admission into the hospital. This was in the afternoon; and in the evening the house surgeon sent for me to see the patient. I found him suffering from all the symptoms, both general and stethoscopic, of intense pleuro-pneumonia. The pain and difficulty of breathing were of an aggravated character, and the cough incessant, quick, and of an irritative barking character, such as I had never heard in a case of idiopathic pneumonia.

I inferred from the history that, the patient having swallowed a bone, it had, by some means or other, wounded the lung. On this supposition, however, it was difficult to account for the circumstance that the pleuro-pneumonia which resulted should commence suddenly at the base of the lung and extend upwards.

The pain being very intense, and the breathing and cough most distressing, I had the patient bled to sixteen ounces; the pain almost entirely ceasing, and the breathing becoming greatly relieved, when that amount of blood had been withdrawn. The pulse also became greatly reduced in frequency. The sixth of a grain of morphia was then administered endermically. These remedies placed the patient in a condition of comparative comfort; but the irritating cough, though much less violent, prevented sleep. The pulse rose again in frequency in less than an hour after the bleeding, and was extremely weak; but the pain and difficulty of breathing did not return severely, so as to give rise to any complaint. The patient took beef-tea and brandy and water, and swallowed, apparently without difficulty or any consciousness of obstruction to the passage of food. The cough, though it continued to the end, did not occasion distress, and became gradually less as the end approached; and the breathing, though quick, was not again complained of.

The patient sank gradually, and died about nineteen hours after admission. The blood exhibited a large amount of crassamentum, and was sily, though not cupped, or only slightly so.

POST MORTEM EXAMINATION, January 27th.—Discovered a large mass of unmineralized veal, pierced through the centre by a bayonet-shaped bone above an inch and a half long, sharply pointed at one end, and at the other about two-thirds of an inch broad, but presenting a sharp cutting edge at each extremity, also pointed. This mass was closely embraced by the lower end of the tube of the oesophagus, and apparently completely obstructed it. A sharp cutting point of the bone—one of those at the broader extremity—had perforated the coats of the oesophagus just at the point where it was in contact with the trachea, at its division to form the right bronchial tube. It had not perforated the bronchus, but, being turned aside, had made its way into the areolar tissue at the upper part of the lung, and so produced an opening into the upper part of the right pleural cavity. On extracting this mass of bone and fleshy fibre, which was rather firmly impacted in the oesophagus, a quantity of pus made its escape, formed in the tissues through which the bone had made its perforation. On examining the chest, the right lung was found completely collapsed, compressed, and flattened on the spinal column; and a quantity of purulent fluid, mixed with serum, occupied the bottom of the cavity of the right chest. But the greater part of the cavity contained merely air, not above one-third or one-fourth being filled with fluid. The whole of the serous coating of the ribs, and the pleural covering of the collapsed lung, were converted into a pus-secreting surface of a darkish olive colour; the pulse itself being hepatized or carnified. The left side of the chest exhibited no particular evidence of disease. The *post mortem* appearances thus explained to a great degree the course of the symptoms, which it was difficult to account for simply on the supposition of their being the result of mechanical injury to the lung from swallowing a bone. The mystery was, how to account for the symptoms of pleuro-pneumonia first manifesting themselves as originating at the base of the lung. The perforating portion of the bone was bathed in pus; but this could not have been formed so early as an hour after the accident, from which period the symptoms dated, according to the evidence. It would then seem probable that, in the first instance, some of the fluids swallowed had passed into the pleural cavity, and set up the greatest amount of inflammation at the point to which they would naturally gravitate. Considering the force with which the mass was embraced by the oesophagus, it seemed very remarkable that the patient had never complained of any difficulty in swallowing, or any sense of the presence of a foreign body being lodged in the situation in which it was found.

REMARKS.—I would venture, in connexion with this case, upon a few remarks in reference to the use of bleeding in the treatment of disease. I am frequently inclined to think that the use of bleeding in therapeutics has passed unduly out of memory. In so saying, I would by no means wish to exclude myself from a share in the blame. I have to confess that, during the eighteen years I have held the appointment of Physician to the York Hospital, I have never before had a patient bled from the arm: this not so much from any belief in the modern so-called improved theories in respect to the treatment of inflammation, but from the circumstance of not meeting in practice with the indications for bleeding which induced us to have recourse to it in former years. In the case I have related, the intense suffering from acute pain and excessive dyspnoea presented conditions formerly frequently met with, but, as far as my own experience goes, very rarely indeed during the last

thirty years. Seeing, then, the intense suffering, and considering that it had been suddenly brought on in a person in robust health, in whom the blood was abundant in quantity and healthy in quality up to the time the inflammation was set up, as it might be by a bayonet-wound, I concluded it was a case in which bleeding might be expected to be of service. The result fully justified the opinion. Keeping my finger on the pulse, I had the patient bled; and by the time sixteen ounces had flown out, the pain had almost gone, the breathing become easy, the severity of the cough greatly diminished, and the pulse reduced to about 100 from numbering between 120 and 130. This was just what my more early recollections of the effect of bleeding in certain conditions would have led me to expect. The relief of suffering was continuous, though the result was a fatal one. This could scarcely have been otherwise, when there existed a punctured wound into a serous cavity, through which matter was being discharged into the cavity, and the bony bayonet which inflicted the wound still fixed in it. I am, however, inclined to believe that, under other circumstances, the very great relief to the symptoms afforded by the bleeding might have been followed by a more successful issue. It answered a variety of indications. By reducing the volume of the blood, it took great pressure off the overburdened heart, and brought the mass to be moved more *en rapport* with the diminished circulatory power of the heart and the reduced ventilating capabilities of the lungs; not to mention the undoubted influence which it has in modifying that state of the blood which evidences itself by size on the clot, closely associated with violent inflammatory action.

The earlier writers, Boerhaave, Sydenham, and Cullen, were quite aware of the existence of a form of pneumonia, to which they gave the name of peripneumonia notha, or bastard perineumony, in which the use of blood-letting, if not absolutely contraindicated, had to be employed with great care and moderation.

Cullen observes (Thompson's edition, vol. i, p. 67, § 379): "This disease appears at the same season that other pneumonic and catarrhal affections commonly do—viz., in autumn and spring. It appears also during the prevalence of contagious catarrhs, corresponding, I imagine, with our term influenza; and it is frequently under the form of the peripneumonia notha that these catarrhs prove fatal to elderly people. This disease attacks most commonly persons somewhat advanced in life, those who have before been frequently liable to catarrhal affections, and those who have been much addicted to the large use of fermented and spirituous liquors. In some cases, the feverish and catarrhal symptoms are at first very moderate and even slight; but after a few days these symptoms become very considerable, and put an end to the patient's life, when the indications of danger were before very little evident." With respect to the treatment of such cases, Cullen goes on to say: "In case the fever, catarrhal, and pneumonic symptoms are immediately considerable, a blood-letting will certainly be proper and necessary; but when these symptoms are moderate, a blood-letting will hardly be requisite; and when an effusion is to be feared, the repetition of blood-letting may prove extremely hurtful."

Sydenham (vol. i, p. 251), speaking of this "bastard peripneumony", says: "As winter comes on, and often still as it is going off, and as spring approaches, there comes to light every year a fever marked with numerous peripneumonic symptoms. It attacks, by preference, the stout and fat, those who have reached or passed the heyday of life, and those who are over-addicted to spirituous liquors, more especially brandy." "In treating this fever," he proceeds, "I make it my business to divert from the lungs, by means of venesection, the blood which creates the suffocation, and which lights up the inflammation. The lungs themselves I clear and cool with pectoral remedies; and, by the help of a cooling diet, I moderate the heat of the body at large. Now, when it happens, on the one hand, that this sink of phlegm is lodged in the veins, is day by day supplying fuel to the fire of inflammation, and is, in consequence, appearing to indicate a frequent repetition of venesections, whilst, on the other hand, the most careful observations that I have been able to make have taught me that such repetitions with patients of gross habits, and with patients who have passed the prime of life, are the origin of much mischief, and when this latter fact dissuades me from blood-letting, no less than the former conditions may indicate it—I say that in such cases I purge freely, and make such purging supplementary to the venesection—a substitute which is rightly applied in those cases that will not bear a large and repeated loss of blood." Sydenham also gives this further warning as to treatment. "Now," he says, "this must be carefully noticed; viz., that when the patients who are struggling with the disease have been addicted to brandy and such-like liquors, it will be unsafe to deprive them of the same too suddenly; it must be done by degrees."

These quotations seem to me to prove that the older physicians were discriminating in the use of blood-letting; and, seeing the benefit which

we cannot reasonably doubt that they derived from the discriminating use of this powerful agency, we moderns perhaps ought to consider more carefully than perhaps we have done if we are not the losers by the indiscriminate disuse of it.

SELECTIONS FROM JOURNALS.

ANATOMY.

STRUCTURE OF THE NECK OF THE FEMUR: THE CALCAR FEMORALE.—Dr. Merkel describes in the *Centralblatt für die Medicin. Wissenschaften*, No. 27, 1873, an arrangement of the hard bony tissue in the neck of the femur, of which he says no account has hitherto been given, and which he terms the *calcar femorale* (*Schenkelsporn*). It consists in a process of the cortical substance, which projects into the spongy substance to the depth of about a centimeter; it arises about the level of the trochanter minor, and ends close under the head of the bone at the anterior part of the neck, thus occupying the situation where the greatest pressure is made in the erect position. In newly born children, it is absent; it appears when they begin to walk, attains its greatest development in middle age, and completely disappears in old persons. These conditions explain the variations in the angle of the neck of the bone at different periods of life, and the increased liability to fracture of the part in old age.

ANOMALIES OF THE VESSELS AT THE BASE OF THE BRAIN.—In Todaro's history of researches made in the Anatomical Laboratory in Rome, A. Incoronato describes a peculiar anomaly of the circle of Willis which he met with. The anterior communicating artery was absent, and there was a direct anastomosis between the two anterior cerebral arteries. The posterior communicating artery was also wanting; on the right side, the junction between the carotid and basilar arteries was effected by an enormous carotid branch, which gave off the posterior cerebral artery; on the left, the carotid and basilar were connected by a very fine twig only. On the right side, there was a double anastomosis between the basilar and carotid arteries.—*Centralblatt für die Medicin. Wissensch.*, June 28th.

MIDWIFERY.

SPONTANEOUS REDUCTION OF AN INVERTED UTERUS.—Dr. Spiegelberg relates, in the *Archiv für Gynäkologie*, vol. v, part 1, the case of a woman aged 40, in whom, in her twelfth labour, inversion of the uterus followed the attempts of the midwife to hasten delivery by pulling on the body and umbilical cord of the child. Replacement of the organ was immediately attempted by the midwife; but, after a few fruitless trials, was given up. At the end of six weeks, a rather copious hæmorrhage occurred; the uterus was found to be still inverted, and could not be replaced. Two and a half weeks afterwards, the patient came into hospital. The inverted portion was closely embraced by the os uteri; the part which was not inverted measured scarcely one and a half centimètre (about three-fifths of an inch). As the woman had a severe attack of diarrhoea soon after her admission, a fortnight elapsed before a second examination was made, with a view to reduction. Now, however, the uterus was found to be completely reduced. According to the explanation offered by Schatz, with which Dr. Spiegelberg agrees, the uterus was raised by the continued lying in bed, the round and broad ligaments accommodating themselves to the new position; and, during the diarrhoeal evacuations, the vagina, with the vaginal portion of the uterus, was pressed down, while, the ligaments being unable to follow this movement, the fundus was raised.

INJURIES OF THE FÆTUS BY THE ACCOUCHEUR.—Dr. Ciéslewicz, in an inaugural dissertation, has collected from literature and from the records of the hospital at Halle forty cases of fracture, fissure, contusions of nerves, laceration of muscles, separation of epiphyses, etc., occurring to the fœtus as the result of interference in labour. Among the cases, are two of rupture of the longitudinal sinus. In the first, the delivery was effected easily by the forceps; in the other, the child was born after a labour of twenty-four hours' duration, without instrumental aid. In both cases, the middle and posterior cranial fossæ were covered with a membranous layer of blood, which partly covered also the hemispheres. The hæmorrhage was traced to openings in the superior longitudinal sinus. In one, there was a single small aperture; while in the other there were several of various sizes.—*Centralblatt für die Medicin. Wissensch.*, July 12th, 1873.

REPORTS

ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

VII.—WATER-CLOSET DISINFECTANTS.

WITHIN the last few years considerable attention has been directed to the treatment of the excreta at the moment that they are being delivered to the drain, and it has resolved itself either into the distributing over the soil of a certain portion of smell-arresting powder, or the injecting into the closet basin a quantity of deodorising fluid. Unquestionably, by such means, the air of the closet room is rendered less offensive, but whether the fæces are disinfected and rendered innocuous or not, depends upon the material used. Of the relative value of these disinfectants I have nothing to say, but have merely to point out a contrivance or two which may be relied upon as affording a perfect mechanical delivery of a fluid. I purposely pass by those systems which have been devised for the liberation of a suitable powder, as I cannot think that these will be again preferred to fluid disinfectants. It would also be a waste of time to describe a disinfecter which is not automatic in its action; and I will, consequently, make no mention of those schemes in which a special manual attention is essential to a proper distribution.

Fig. 91 represents what is called a Baker's disinfecter; and in this case there is injected into the closet basin at the moment of closing the valve or fall of handle, a certain quantity of the chosen fluid, and as this mingles with the water whilst it is still in the state of agitation consequent upon its descent from the cistern or the waste preventor, the water, which is meant to lie in the basin and act as an hydraulic seal, becomes well charged with the disinfectant. The trapping water is thus in a better condition to arrest and fix any foul odour which may have arisen from the receiver or soil-pipe; and not only this, but it will, in some sort, preserve the closet room from smell during the moments of voidance.

In order not to appear invidious, I give, at fig. 92, a view of another



Fig. 91.

self-acting disinfecter, viz., Brown's patent; and in this case the disinfecting fluid is delivered to the basin at the same time as the descending flushing water. The vessel containing the deodorant is here fixed over the closet apparatus, and inside, a syphon is formed by a small tube, one end of which is led into the closet supply pipe. When the lever is lifted and the water rushes down, a vacuum is formed in the syphon which holds the measured-out disinfecting fluid, in other words, the quantity of chemical solution there is withdrawn with the cleansing water into the basin of the closet. A small orifice in the bottom of the coil or syphon pipe, which is in the disinfecting jar, permits this measurer to refill ready for the next operation. Both of the above contrivances serve the purpose for which they are intended; and, although

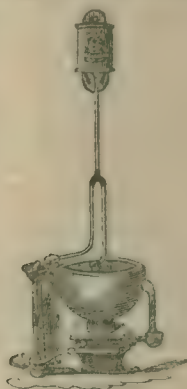


Fig. 92.

the former is vended only for the distribution of chloralum, and the latter for Condry's fluid, each can be trusted to administer either preparation equally well. Both the above descriptions of disinfectors are perfectly easy of erection, and, with the printed instructions sent out with them, an ordinary plumber can readily affix them to any kind of closet. As regards the cost, neither need exceed the sum of thirty shillings. The Baker pattern, holding a gallon, will serve to disinfect about a thousand discharges; and the Brown pattern, containing a pint, will supply about one hundred and forty different actions of the closet. For the rest, all will depend upon the relative values of the disinfectants used.

There can be no doubt whatever that such inventions possess a certain value in places where the soil-pipes of the closets are unventilated, or insufficiently so, and that if they were affixed to the 900,000 and odd water-closets in the metropolis, a great benefit would accrue; but I am inclined to think that in cases where the soil-pipe is properly ventilated by a continuation of the whole sectional area of the soil-pipe up to the roof, that their adoption may be considered quite supererogatory. They will, however, always prove useful to attach to the pipes which supply the water for cleansing out stables, kennels, shambles, and the like places; and they may also with advantage be fixed to the delivery pipes of liquid sewage when this manure is used close to the mansion.

If a disinfecting apparatus be adopted to a water-closet, it ought to be free from the following defects. The disinfecting fluid should not escape prematurely down the drain, and so leave none of the desired liquid in the pan; the apparatus should also be so contrived that a longer or shorter upheaval of the handle should not result in allowing the measure of the medicated fluid to flow through the trap of the closet, and thus leave water only in the basin or pan. It should also be so constructed that a syphon action should not ensue, which would rob the jar or reservoir of its whole contents, as I have often seen to be the case. As for the disinfecting fluid, one should certainly be chosen which cannot corrode the metal attachments; and if it were a coloured solution it would be all the better, inasmuch as if any lapse of the due release of the fluid occurred, it would be then immediately discovered: but any disinfectant can happily be made to fulfil this last condition.

Cesspools.

There is not much difference between the uses to which cesspools are put, but there are a few variations, nevertheless, in their mode of construction. Some are built up with dry brickwork inside, but carefully domed over, and the liquid contents allowed to drain into the surrounding soil. Others are steined with bricks in cement for the very purpose of preventing such infiltration; and cesspools of this class may be found further defended from any chance of leakage by clay puddling outside the walls, and cement rendering inside. Some cesspools are made of a certain depth, and the liquid overflow drains into a still deeper well, whence it is withdrawn by a pump. Cesspools of this class are now mostly made more compact—in shape a parallelogram—with an upright screen or fender halfway, so as to divide the liquids from the solids. If a cesspool must perforce be built for the use of a house, etc., this last kind will prove the best pattern to copy; but besides being made watertight by the use of clay and cement, and being carefully domed over by a brick arch, it should be ventilated by a 6 in. upright pipe, the solid portion made accessible by a manhole, and the liquid half fitted with a pump. Where there can be no overflow provided, an index can be fitted in the ventilating shaft, to give notice when pumping is necessary.

The cesspools to which I wish to refer more particularly, however, are not those situated outside the house, but those which long ago have been foolishly built inside. For the most part, these latter will be found of the watertight order; but it frequently occurs that they were purposely built with open joints, so as to economise the labour of emptying them. I will give a few examples.

In 1870, a house in Wimpole Street, London, was discovered to be in a very offensive condition, and, on opening up the basement, a chain of five cesspools was exposed, each about six feet in diameter and twelve feet in depth, connected together by a brick-drain. The oldest pit lay nearest to the main sinks, etc.; and it would appear that when that was full another was dug, and so on until the atmosphere of the house proved unbearable. There was no connection with any sewer, and the liquid wastes simply disappeared in the gravel. Next door, four similar cesspools were laid bare; and, in addition to these, a hole fourteen feet square and eight feet deep, full of putrid water and its silt, was discovered exactly in the middle of the kitchen. Likely enough this hole had been made for the use of the workmen who built the house originally, or it might possibly have been the ancient idea of a rain-water tank. Unlike the cesspools, it was deep enough to

reach the clay, which between High Street and the foot of Portland Place is close to the surface.

Here at Fig. 93 is another example of the basement-floor of a house in Harley Street, London, which I opened up during the past month. The dark lines represent the old brick drains, and the sewer lies in the middle of the street—the entrance to same beginning at A in the cellar B, which cellar is situated, with its fellows, under the foot-pavement. The fall of the drain was from C to A, or rather ought to have been; but owing to the fact that the drain was for the most part lower than the sewer, and especially so about D, the effete matters for the last thirty years or more had mostly lodged in the cesspool E, close to the closet down-pipes S S, which cesspool was five feet in diameter, twelve feet in depth, and was found full to the overflow. The scullery wastes ran into the cesspool F, which was about four feet square and four feet deep, and the outlet was into the pit E—that is, when the ground was sufficiently soaked as to need it. The cesspool at C was tolerably empty, and free from deposit. The cesspool at H, on the contrary, which measured five feet square and eight feet deep, was, like that at E, as full as possible of black foul smelling deposit. That at J—a circular-shaped one, fourteen feet in depth and six feet in diameter—was, if possible, still worse, as an old servants' closet had stood immediately over it.

Nor was the nuisance altogether confined to the house. The stable buildings began at C; and as the ground-floor, or lowest floor, of these was some seven feet above the basement-floor of the servants' hall at K, and as the drains towards the mews were simply made of three bricks on edge at the sides, covered on the top with oak slabs, with nothing but the bare gravel for a bottom, it was not to be wondered at that the servants' hall was perfectly uninhabitable, owing to dampness, natural and artificial. To make matters worse, a closet-soil downpipe at L delivered—unattached to the drain—against the unprotected wall between C and K. In the house alone, forty cartloads of black sewage deposit and foul refuse had to be carted away, and a suitable shoot was not found nearer than the neighbourhood of Highgate.

When cesspools, either inside or outside a house, are hermetically sealed, there is some danger of an explosion if a lighted candle be brought too near the opened up place of escape. On one occasion which came under my notice, it was found necessary in a house which was drained into an unventilated cesspool, to raise the pavement-flags under the sink, in order to trace some rat-holes. The sink was especially well trapped with a patent syphon. The workman required a candle, and, as he lifted up the flag and laid bare the drain, the pent-up gases exploded and severely injured him. It is therefore necessary to give these places a wide berth, for more reasons than a zymotic one.

I have just alluded to rats, and might here add that these animals are the most reliable harbingers of sewer-gas eruptions. As a rule, wherever there is a bad drain smell, there exists an old brick barrel-drain or rat-run: very often these are also in conjunction with the modern sewer. I have before me a piece of cast-lead pipe, nearly a quarter of an inch in thickness, which had been gnawed by these vermin in order to admit them, by way of the sink-waste, into a house at Tulse Hill. They managed to make a hole through it, and on it are plainly discernible hundreds of their teeth marks. Once in the house, it was found almost impossible to extirpate them; and at the beginning of the crusade, when the boards and flags were pulled up, I am not exaggerating in the least when I say that over fifty nests were laid bare, besides a goodly collection of all kinds of bones, flanked by once shining articles, such as scissors, corkscrews, and one or two silver spoons. A favourite cat, and a good mouser, which I had sent there before I opened up the floors, died after a few days' experience of the place; it was said by some from the effects of nocturnal warfare, although it is just as likely that it was from grief, and because he had, unlike Alexander, too many worlds to conquer.

Speaking of rats, it does not invariably follow, because that a rat is seen about a house that it is a sewer-rat. For instance, on taking up the flags near D on fig. 93, some five nests were discovered and one

rat despatched: it proved to be, however, a house-rat, or, more strictly speaking, one of the barn-yard species. The latter have more or less pointed heads, whereas the head of the sewer-rat is fuller and rounder, and the neck thick and clumsy.

Old Brick-drains.

Occasionally a considerable amount of danger may arise from the presence of ancient brick-drains under the basement floors. These have been appropriately termed "elongated cesspools," and require removal quite as much as the cesspools proper, which they generally serve to connect.

On opening up an old brick-drain, the crown of the arch—if the drain be of the barrel pattern—will be found in tolerable preservation; but the bottom or invert will be generally discovered in a perished condition, the mortar gone, and the bricks rotten. In very bad cases, the floor of the drain will be here and there broken up, with a consequent soakage into the soil at such places. Pieces of the crown may also have fallen in, and the passage of the excreta partly obstructed. If the drain were formed with brick sides and flagstones at top and bottom, the stones forming the bed will be found very uneven and with open joints, and the subsoil around will be black and foul-smelling.

Nearly all the old houses in town and country possess such brick-drains, and not the least part of the evil lies in the fact, that one-third of the diameter would have sufficed to lead away all effete matters. Where brick-drains are found—and a search should be made for them—they should be taken up and glazed earthenware pipes laid in their place. No hesitation should be observed in this matter; for, where a brick-drain exists, there are many other things equally objectionable, which only the opening out of the drain will expose. When the old drain is laid bare, the whole of the brickwork should be taken up and carted away, and the earth around it also, if it should show any signs of filthiness. Some people are satisfied with removing the crown of the arch, laying the pipes over the old invert, and filling up around with the broken rubbish got out of the trench. Others have actually laid the new pipes alongside the brick barrel, and contented themselves with disconnecting the latter, thus converting the old drain into a gas retort, and really making matters worse. The only safe system, however, is to cart away all the old formation and provide new. No amount of lime or disinfecting powder will purify the old bricks and silt-sodden earth around. A concrete bed should also be prepared for the new pipes, and, when the latter are laid in, they should be covered with a few inches of concrete. If this be done, leaks will be impossible.

There is one precaution to take in bedding the joints of drain-pipes in mortar or cement, and that is, to see that, in pushing the pipe ends into the sockets, a ridge of the cement or mortar be not formed inside the drain. On taking up a long drain on an estate in Shropshire during the present year, I found that the stoppage had been entirely owing to the men's stupidity in this way.

It is necessary to take proper care to envelope the drain-pipes inside the house with concrete, and it is as necessary to concrete over the whole floor of basement, in order that no foul air should be sucked into the house by means of the fireplaces and heated flues. If the ground upon which a building stands be porous, it is also filled with air, and, if a leaky gas-pipe or faulty drain-pipe be laid in it, this poisoned ground-air, as it is now called, will assuredly be passed into the rooms for respiration. Dr. Pettenkofer instances a case where lighting gas traversed twenty feet of street, and penetrated the whole foundations and basement of a house, with fatal results. He has also discovered that the ground under all houses is charged with carbonic acid, and that in some cases there exists as much of this pulse-lowering gas a few feet below the surface as in the worst of unventilated houses. It is imperative, therefore, that the basement floors should be concreted over their whole area, and all drain-pipes laid in a water-tight trench of the same material. Strictly speaking, a pipe with concrete surrounding will not be air-tight, but it comes sufficiently near to that desirability. If there be no cellar, a well-ventilated air-space should be kept between the double flooring and the ground for the same general reason.

ANÆSTHETICS.

XXI.—DEATH FROM CHLOROFORM.

WE read in the *Ohio Clinic* of September 27th—"Still another death from chloroform! The Cincinnati Hospital is peculiarly unfortunate in this regard. On Wednesday last, a German, aged 43, entered the hospital with a dislocated shoulder-joint. Anæsthesia was established, the luxation was reduced, but the patient was dead. Dr. N. P. Dundridge, who had charge of the case, made all the usual efforts, of course, at resuscitation.

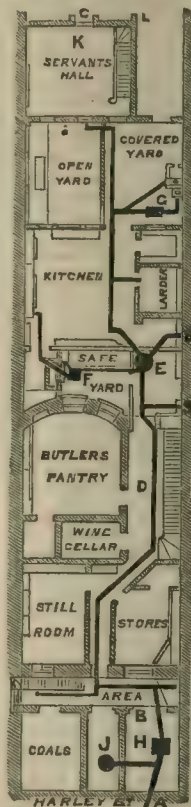


Fig. 93.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 8TH, 1873.

SURGICAL STATISTICS.

WE publish with much pleasure, in another column, a communication from Dr. Lauchlan Aitken, now of Rome, who assisted Sir James Simpson in the prosecution of his inquiries on "Hospitalism". Dr. Aitken has a perfect right to challenge the accuracy of our statements, and his attempt to urge all that can be said in defence of his departed friend's publication deserves our respect. At the same time, we fail to see the errors which he wishes to point out. There are four allegations in the sentence of which he complains; and we will just bring them plainly before the reader, who, if he be interested in the matter, will see the same points more fully discussed in Sir James Simpson's original articles in the *Edinburgh Journal*, and in the various comments to which they gave rise in the medical papers.

1. Our first allegation was, that much of Simpson's information rested on the memory of his informants. That this was so, is perfectly plain from Dr. Aitken's own account of the matter, since he says that in some cases schedules were rejected for this very reason; while he does not say, nor did Sir J. Simpson ever say when challenged on the point, that any definite inquiry into the sources of their information was ever made, except in cases such as were on the face of them suspicious to Sir J. Simpson's own mind. No one can tell, as to any given schedule in the table, whether the gentleman furnishing it did so from mere memory, or as the result of a search through his books. How could Sir J. Simpson or his assistants know that what some of their correspondents confessed was not the case in many other instances into which no inquiry was made?

2. But, allowing that in other cases the returns were really made from case-books, or from the day-books of the surgeon's practice, what guarantee have we for their completeness? Let it not be forgotten that some at least of these returns extended over twenty years; though, in the general haze in which all these statistics are involved, we are not told whether any limit of time was fixed, nor to whom the questions were sent, nor whether to all the practitioners of any given district, nor what was the proportion of answers. Every one who has had anything to do even with hospital registration, where there is a special officer appointed for this duty only, and where he is or ought to be supervised by his seniors, knows how difficult it is to get complete lists of operations preserved. It is not, as Dr. Aitken seems to suppose, the slightest imputation on the "veracity" of any of the parties concerned, to think that, under these circumstances, their accuracy is highly doubtful. The utter uncertainty as to the completeness of the lists published is as plain from Dr. Aitken's statement as it could possibly be

made; and, in this uncertainty, no arithmetical computation of the ratio of deaths and recoveries is worth anything. When this objection was urged on Sir J. Simpson, he met it, not by any assertion or proof of any attempt at completeness in his statistics of private amputations, but by the singular argument that the hospital statistics were probably also incomplete—as if arithmetical certainties were ensured by the uncertainty of both the terms composing the ratio.

3. The next allegation of which Dr. Aitken complains is, that a great part of Simpson's table was composed of single favourable cases. This he attempts to refute by saying that, out of the 2,098 cases of which the table consists, only 62 were from surgeons who returned single favourable cases. This is so. But the comparison should have been, not with the number of cases, but with the number of returns—*i. e.*, of surgeons. Sir J. Simpson obtained answers from 374 surgeons, scattered, as the context of his paper shows, over England, Wales, and Scotland, and comprising experience extending backwards for twenty years. Out of this number, 71, or about one-fifth, had never amputated more than once in their lives. This is surely a large proportion of single cases, and would of itself have justified our remark. But, if the individual amputations be considered separately, the proportion of single successful cases becomes still greater. Thus, in the class of amputations of the thigh, 142 surgeons returned cases of primary amputation—313 cases in all—or little more than two to each surgeon; 75 of these had only performed one amputation apiece, and 47 of these were successful, 28 fatal. One hundred and sixty-two returned cases of what Simpson calls "secondary" amputation (classing all amputations as secondary except those performed for injury); these gave 356 cases—again a little over two apiece; 83 of these surgeons had only performed one such operation in their lives, 66 successfully, and 17 with a fatal result. We have not added up the other classes of amputations in the table; but they seem, on inspection, to be similarly composed. The proportion of single favourable cases appears to us a very high one, and the resulting total to be a mere accident. It cannot be doubted that the number of surgeons who have had some experience in amputation in private practice, over the whole of Great Britain, during the last twenty years, is very much greater than the number of those who made returns in this table. Had more of those who have had single fatal cases (such as do certainly occur frequently within the knowledge of everybody), happened to answer Sir J. Simpson's circular, the result might have been entirely different. However, if Dr. Aitken prefer it, we are ready to change the word "single" into "either one or two favourable cases"; for, out of the 374 returns, 121 were of this kind—62 of single amputations, and 59 of two amputations each—all successful.

4. With respect to the proportion of single unfavourable cases, we certainly regard it as suspiciously low. It is delusive to say, as Dr. Aitken does, that the proportion of deaths in the single cases is higher than the general ratio, unless we knew that the general ratio was fairly obtained, which is just the matter in dispute. Every one knows that country surgeons have rarely opportunities of amputating, except those attached to a hospital, or those in some exceptional kind of practice, like the surgeon alluded to by Dr. Aitken, who had such remarkable success in primary amputations among the miners. Unless, therefore, we could have some idea of the proportion be-

tween those who answered the circular and those who did not, there is an illimitable field for conjecture as to the margin left for error. And it surely is suspicious that, in the whole of Great Britain, only nine surgeons were found who had performed one unsuccessful amputation apiece during the last twenty years.

In fact, these tables appear to us to furnish an example of everything that statistics should not be. First, there is no guarantee for any approach to completeness: their incompleteness is manifest in every particular. For instance, of so common an operation as amputation of the forearm, "secondary or for disease," only 60 cases are reported, and those all favourable. Of the 374 surgeons who made returns, the majority—217—as Mr. Callender pointed out, returned only favourable cases, 779 in all, or 3.5 to each surgeon; while the minority, 157, returning on an average 8.4 cases apiece, had 17.1 per cent. of deaths, or 1 in 5.8 cases of all kinds of amputation. Is it not obvious that, if every surgeon who had had any experience had recorded it, the result might have differed in any conceivable way? Next, there was, as Dr. Aitken's account shows, no guarantee which can be seriously relied on for the exclusion of any errors which haste, negligence, or defects in memory, might introduce into this long record of past experience. To talk of arithmetical deductions from such data is rather a parody on the statistical method of reasoning, than a serious contribution to science. Lastly, if we allowed the exact numerical accuracy of all Simpson's tables, the practical deduction from them, as has been shown over and over again, would remain very uncertain. A surgeon like his "No. 288" may perform fifty-two primary amputations consecutively on miners without a death, and, if he were to move to some large hospital, be no more successful than Mr. Erichsen suggests; yet the fault might be neither in the surgeon nor the hospital, but in the nature of the injuries or of the patients, or in a different principle of selecting or rejecting cases for operation. Sir J. Simpson chose to assume that one possible explanation of a fact assumed to be true was the only possible explanation of it; but both the verification of the fact and the establishment of the inference require more exact methods than he adopted. No question can be more worthy of inquiry, or more promising of real improvement in surgery.

THE DIETARY RATIONS IN THE BRITISH NAVY.

AN important paper on the Dietary of the Seamen of the Royal Navy has been published by Staff-Surgeon J. M. Hunter, R.N. (*Statistical Report of the Health of the Navy for the year 1871*, p. 207.) He commences his essay by the startling observation that the dietary of the Royal Navy will not maintain the men in health and strength, apart from the supplies which they purchase for themselves. He cites personal observation in proof of this, and refers to corroborative evidence published by other naval officers. This fact has led him to analyse with great care the past and present dietary of the navy. An old diet scale of 1720 was found to give weekly 32.52 ounces of nitrogenous and 185.06 ounces of carbonaceous food (= 4.64 ounces and 26.43 ounces daily); but the ingredients of the diet (biscuit, salt pork, salt beef, peas, dried fish, butter, and cheese) wanted many essentials of a good diet, and, as Dr. Hunter intimates, the theoretical is far above the practical nutritive value. In subsequent years various changes were made; and in 1824 and 1850 fresh diet scales were ordered, until in 1871 the present varied diet table (which we copy) was issued. It is used at sea, but when in port the men receive one pound of fresh meat and one pound of vegetables.

Weekly Rations of the British Navy for 1871 (in Ounces).

	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.	Nitrogenous.	Carbonaceous.
Biscuit	20	20	20	20	20	20	20	140	21.84	108.57
Preserved Beef	12	..	..	..	12	..	..	24	3.55	17.88
Salt Beef .....	..	..	16	..	..	..	16	32	2.48	2.32
Salt Pork .....	..	16	..	16	..	16	..	48	3.76	46.94
Peas .....	..	5.2	..	5.2	..	5.2	..	15.6	3.58	9.77
Flour .....	..	..	9	..	..	..	9	18	2.62	12.88
Suet .....	..	..	.75	..	..	..	.75	1.5	0.00	3.11
Raisins .....	..	..	1.5	..	..	..	1.5	3	0.00	2.85
Preserved Potatoes ..	4	..	..	..	..	..	..	4	0.25	2.70
Rice .....	..	..	..	..	4	..	..	4	0.25	3.25
Sugar	2	2	2	2	2	2	2	14	0.00	13.30
Cocoa	1	1	1	1	1	1	1	7	0.25	6.65
Tea .....	.25	.25	.25	.25	.25	.25	.25	1.75	(?)	(?)
Rum	2.5	2.5	2.5	2.5	2.5	2.5	2.5	17.5	..	..
Vinegar .....	..	5	..	..	..	..	..	5	..	..
Pepper, etc.	..	..	..	..	..	..	..	..	..	..
Total (excluding liquids).	39.25	44.45	50.50	44.45	39.25	44.45	50.50	312.85	38.58	230.22

One ounce of sugar, and .5 of lime-juice daily, after fourteen days at sea.

To this diet Dr. Hunter proposes to add eight ounces more of preserved potatoes, two ounces of compressed vegetables, two ounces of pearl barley, and five ounces of pickles (pickled cabbage and onions) weekly. He would omit the rice. The former suggestions are intended to make the diet more agreeable and appetising, and to add antiscorbutic substances, and appear to us most judicious. We are not equally clear that his reasons for omitting rice are so sound, and indeed his arguments seem directed merely against the excessive use of rice.

Dr. Hunter concludes his interesting paper by giving the diet of the American, French, and Dutch navies. We extract the American table to compare with our own.

Weekly Rations of the United States Navy, in Ounces, 1871.

	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.	Nitrogenous.	Carbonaceous.
Biscuit	14	14	14	14	14	14	14	98	15.28	83.58
Coffee	1	1	1	1	1	1	1	7	(?)	(?)
Tea .....	.25	.25	.25	.25	.25	.25	.25	1.75	(?)	(?)
Sugar	4	4	4	4	4	4	4	28	0.00	13.60
Molasses .....	..	10	..	..	..	..	..	10	0.00	7.70
Preserved Beef	12	..	..	..	12	..	..	24	3.55	17.88
Salt Beef .....	..	..	16	..	..	16	..	32	2.47	2.30
Salt Pork .....	..	16	..	16	..	..	16	48	3.76	46.94
Rice	8	..	..	..	8	..	..	16	1.00	13.00
Beans .....	..	8	..	8	..	..	8	24	5.52	15.30
Dried Fruit .....	..	..	2	..	..	2	..	4	0.00	3.80
Pickles .....	..	..	..	4	..	..	4	8	0.40	0.64
Preserved Tomatoes ..	4	..	..	..	4	..	..	8	0.40	0.64
Butter .....	..	..	..	..	2	..	..	4	0.00	8.30
Flour .....	..	..	18	..	..	8	..	16	1.72	12.80
Total	45.25	52.25	45.25	47.25	45.25	45.25	47.25	328.75	34.10	226.48

The total theoretical value of the American naval diet is below our own, and in some items it appears to be inferior. The issue of butter, tomatoes, and pickles, and the absence of rum, are improvements, but we do not see that we have much to learn from this dietary.

Returning to Dr. Hunter's proposition that the sea diet of the sailor does not keep him in health, it appears to us that we should hardly gain anything by adding to the amount of the articles already given. What is wanted is evidently more easily digestible substances. Dr. Hunter justly remarks that, "to get the full value from the biscuit and salt pork, requires excellent teeth and great capability of digesting fat." He goes on to say that the result of a great number of observations has shown him that "seamen are generally deficient in the number of their

teeth, many having lost four molar teeth before arriving at thirty years of age."

The want of nourishing power in what is not a bad dietary as regards quantity is then, we believe, owing chiefly to the form in which the food is taken. Dr. Hunter's proposals would partly remedy this by adding variety and giving savour, but we question whether men will ever be kept perfectly well for long periods at sea until bread is substituted for biscuit, and the manufacture of preserved meat is improved. The introduction of bread instead of biscuit is really a simple matter, now that good baking-powders can be used instead of the tedious yeast process. The baking-powders can be made of salts supposed to possess antiscorbutic powers, such as citric acid and potash, and thus two points would be gained. With flour presented in this more digestible form the men would eat more, and the consequences of the present diet noted by Dr. Hunter would greatly lessen. We can only recommend this officer, who has evidently very carefully considered this subject, to follow it up, and see if he cannot in some way offer to the authorities a plan which may give the sailor the present elements of his diet in a form better adapted for easy digestion and absorption.

APOPLEXY AND DRUNKENNESS.

We have no intention of taking part in the recent discussion as to the conduct of the police, but we wish to enter a caveat against the dictum of that police inspector who is reported by Mr. Belt (*Times*, November 4th) to have said that he (the inspector) "was a better judge than any doctor could be on the subject [of drunkenness], having greater experience." But to be a good diagnostician requires not only a large experience but a varied one. An inspector is too much of a specialist. Inspectors of police should know that drunkenness is simulated by fatal cases of apoplexy. A little more knowledge would make them quite vacillating in diagnosis, and perhaps an extensive one would make them shrink from making a diagnosis at all. What we wish to urge is, that the diagnosis of drunkenness is no easy matter for any one. Apoplexy is, as the phrase goes, "only a symptom." It not only results from sudden and local damage to the brain, "idiopathic" or traumatic, but from opium in large doses, and even from drink. The condition of a man who has quickly taken a large quantity of spirits may be indistinguishable from that of a man who has a large hæmorrhage in his pons Varolii.

One thing is to be insisted on—viz., that the non-existence of local palsy is not to be taken as evidence that there is no local cerebral lesion. For in cases of hæmorrhage in the pons Varolii, or even of very large hæmorrhage into but one side of the brain, there is usually no discoverable paralysis; the patient is deeply comatose, and universally powerless. In other words (which bring us back to our particular topic), a local lesion of the brain imitates, so to put it, the effects of alcohol taken in poisonous doses. Hence it is plain, *à priori*, that it will not always be an easy matter to tell apoplexy, owing to a fatal lesion from apoplexy caused by the comparatively insignificant process of drinking to great excess. And it is well known that really able medical men have taken cases of cerebral hæmorrhage for poisoning by opium, and even for drunkenness, and have treated the patients accordingly. Before we pass on, let us quote the *Times* (Leader, Nov. 4th).

"Some of the rules to which Mr. Belt refers appear absurd, and the habit of not sending for a doctor, except in cases where a man is utterly incapable, has sometimes led to errors even more grave than are exemplified in these instances. More than once of late have prisoners died in the police-cells who were locked up under a charge of drunkenness, but who were really suffering under a fit."

There is one reason why some medical men do not feel that there are difficulties in diagnosis. It is, that in most cases in private practice the diagnosis of the cause of apoplexy is made for us—so far, that is, as to exclude errors as to drunkenness, poisoning, and violence. It is made by the history of the case, and by the circumstances of the patient as he became ill. What we insist on is, the difficulty of making a diagnosis from the condition of the patient himself. Now, when a man is

found comatose in the street, this is all we have to go by. If the patient be universally powerless and deeply comatose, and if there be no convulsive seizures, we really cannot make a diagnosis. The obvious corollary is, Take care of him. We do not say merely that the police cannot make a diagnosis; we say also that medical men cannot. The police should be told that they are not to conclude on the matter at all, that it is not their affair. And if the doctor be wise, he will take great care of scores of drunken fellows rather than risk neglecting one person who is dangerously ill.

We may now mention another misconception. We do not assert that there is any difficulty in being right in most cases, even by what is almost mere guessing. We do not doubt that if a routinist treated every person who was found lying insensible in the streets, and who smelled of spirits, as if he were drunk, he would be right in the vast majority of cases. But could not some ingenious instrument-maker construct a machine that would make a diagnosis that would be "right in most cases"? It would only have to be made so as to utter the words "He is drunk," when brought in contact with a person found insensible in the streets, smelling of liquor. The routinist and the machine would only make a small percentage of blunders. But what blunders they would be! Perhaps the routinist may reply with grinning complacency to our criticisms, "You avoid errors in diagnosis by not making one at all." We prefer to say that we do not conclude when there is no evidence to warrant a conclusion.

We do not deny that there are some differences betwixt apoplexy, the result of a grave cerebral lesion, and deep intoxication, but we deny that any one has pointed out differences sufficient to warrant a diagnosis. Nor are we ignorant of the stock symptoms, "smell of drink," etc. But there is one untrustworthy symptom we feel bound to denounce. The assertion that, if we can partly rouse a patient from insensibility, he is not suffering from cerebral hæmorrhage, is a most unwarrantable one.

There is an error which, although we mention it last, is most easily fallen into. Not only is the stage of insensibility from drink simulated by fatal cerebral lesions, but so also is the stage of excitement. It is not sufficiently known that, after severe injuries to the head, and after meningeal hæmorrhage—we speak from cases which proved fatal—the patient may be not comatose, but "uproarious." He may struggle and swear when disturbed. If a man be found in such a condition in the streets, the first suggestion is drunkenness. We should, it is true enough, be right in most cases of uproariousness if we said the patients were drunk. Now and then we should make a painful blunder. Since a man who has received a fatal cerebral lesion may struggle and swear for a while, his condition would of a certainty be misunderstood by the police. He would be roughly handled.

MR. JOHN PRANKERD, F.R.C.S., an old member of the British Medical Association, has just been elected Mayor of the ancient borough of Langport, Somerset, for the fourth time.

In the last *Gazette*, Surgeon Fiddes was appointed Surgeon-Major; and the military papers announce that Surgeons Harrison, Martin, Everet, and Loughleat, will shortly be gazetted to a similar rank.

PROFESSOR FLOWER, F.R.S., has recently suffered from the effects of a chill. He left England on Thursday for a six months' sojourn in Egypt. In common with his many friends, we trust he will return thoroughly restored to health.

THE CHOLERA.

IN Berlin, from the 16th to the 23rd October inclusive, 43 fresh cases occurred, making in all 1,009 cases since the commencement, 268 only of whom recovered, 677 died, and 64 remain under treatment. In Vienna it is not yet extinguished. During the week ending October 15th, 72 cases occurred, with 47 deaths. From the 16th to the 22nd inclusive, 67 cases, with 39 deaths.

HOSPITAL SUNDAY IN DURHAM.

The church-collections annually made in aid of the funds of the Durham County Hospital were taken at the several places of worship in town and county on October 26th, the Dean preaching at the Cathedral. The total sum collected amounted to £111 : 12 : 6, of which the town itself contributed £51.

ASHANTEE EXPEDITION.

THE real experiment which this war will try (we hope with a satisfactory result), will not begin until our European troops land on the coast, and it will then be possible for the first time to test, on anything like a sufficient scale, the effect on the white man's health of the much dreaded West African climate. Hitherto our countrymen, only represented there by a small number of non-commissioned officers attached to West Indian regiments, become acclimatised after a few years, and no very accurate statistics can be made of their condition. We know that the black troops themselves suffer much from pulmonary disease, that the Ashantees are very subject to dysentery, and that a very deadly form of bilious remittent fever with severe intestinal complication is endemic in the country. The unfortunate Marines, whose sojourn in Ashantee was cut short after four months, suffered from this formidable affection; and it is only now, after a long period of convalescence, that the survivors have been reported fit for duty. It has been suggested that their speedy break-down was caused in part by the injudicious way in which they were landed, during Midsummer, and partly by the vicinity of a village where supplies of ardent spirits could be obtained. We are told that the detachment of the same corps, sent out in the *Simoon*, on August 12th, continues in good health, but we suspect that on the whole the tendency rather is towards an undue depreciation of the climatic dangers to be expected. We hope that the regiments now under orders to sail, contain a certain proportion of old and well-seasoned soldiers. The evils of sending young men to tropical stations is twofold. Not only are their constitutions soft and unformed, but they lack the self-restraint necessary to guard them from the perils of debauchery and reckless exposure. On the other hand, those who have served before in such climates, know in some measure what to avoid, and, although soldiers are proverbially thoughtless and improvident, in health as well as money, they are not altogether disinclined to learn by experience when serving abroad. Excellent as the rules recently suggested by Surgeon-General Gordon are, they are perhaps too lengthy and elaborate for universal use, and might be judiciously compressed into a few specific propositions. The necessity of moderation in food as well as drink, the importance of keeping the head always covered, and the abdomen warmly clad under all circumstances, are points which naturally occur to all, and these might be drawn up in combination with others and read out from time to time by the officer commanding each regiment. An official sanction would thus be given to sanitary matters, and the men would see that the suggestions recommended were no mere crochet of the doctor, but were thoroughly endorsed and enforced by their regimental superiors. There is a well known story in the service, of a regiment stationed in Dublin some years ago, whose sick-list from venereal disease was so remarkably low as to attract the notice of the authorities. The regimental medical officer requested the surgeon to inform him by what means he had secured such a remarkable exemption, and was, in reply, furnished with a copy of preventive rules which he had persuaded the colonel to read from time to time at the head of his regiment. It was not thought advisable, in the interests of a straight-laced morality, to recommend the general adoption of his suggestions; but the principle is a thoroughly good one, and might be carried out with benefit whenever an exceptional amount of sickness prevails. We believe that nothing has occurred to cause any alteration in the preparations now being carried on at home. The hospital-ship, we are glad to hear, has not been damaged in any essential respect by the recent explosion, and the business of fitting up goes on towards completion. It has been suggested by some that the roll on the coast may be so great as to interfere with the comfortable treatment of sick

on board; and it is possibly in connexion with this, that rumour now mentions Sierra Leone as a likely convalescent station for lingering cases. Medical officers continue to volunteer largely for war-service, attracted by the probabilities of distinction, no less than the double pay allowed; and we must hope that, in addition to military laurels, we may reap a rich harvest of valuable observations concerning the nature and progress of some of the least known tropical diseases. The most recent medical advices give favourable reports of Commodore Commerell's health. Although not yet out of danger, he is making fair progress.

CURIOUS PATIENTS.

THERE is no shifting panorama of life which presents more rapid and singular changes, more strange and startling pictures of pathetic and various vicissitude than that which may be watched in the hospital-ward. The student of morals and of psychology might derive almost as much food for thought from the study of these aspects of the population which passes through it, as do the students of medicine and surgery. In opening the session at St. Vincent's Hospital, Dublin, last week, Dr. Quinlan observed to his students (in inculcating upon them the necessity for intelligent kindness to the patients):—"You will sometimes meet curious patients. Last session we had a Mahomedan Arab, who, on being admitted into the ward, managed to convey to those in charge of it that he would comply with any treatment ordered, save that he could not drink wine or eat pork; and, at the same time, we had an ex-Zouave suffering from the remote effects of an injury received from the bursting of a shell at Sedan. This present moment we have in the hospital an ex-United States soldier who, in a negro riot some years ago, received a depressed fracture of the skull from a blow of a brick. A fragment of the skull presses on the brain and causes severe epileptic fits at intervals of about a month. This distressing infirmity we trust to remove by trephining out the depressed portion of the skull which contains the seat of injury." The poet, novelist, or historian of the hospital-ward has not yet arisen. Although more than one pen has illustrated some of its most weird scenes, such efforts have mostly been tinged with a ghastly exaggeration, and have aimed at producing a shudder rather than teaching a truth.

GUY'S HOSPITAL.

At a Court, held October 29th, the Lord Bishop of Ripon, Lord Cairns, Lord Lawrence, Mr. Henry Hucks Gibbs, and Mr. Money Wigram were elected Governors of the Hospital, to supply vacancies occasioned by the deaths of the Bishop of Winchester, Sir David Salomons, Mr. Hope Scott, and the late Mr. Money Wigram, and by the resignation of Mr. John Masterman.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE last quarterly return of the Registrar-General for the United Kingdom states that the resident population was computed at 32,131,488; that the registered number of persons married in the quarter ending June 30th, 1873, was 130,678; that the births of 266,246 children, and the deaths of 150,736 persons, were registered in the quarter ending September 30th, 1873; and that the natural increase of population during the latter three months was thus 115,510. In England, the summer was healthy; the mortality (19.4 per 1,000) low in town and country; small-pox fatal to very few children; measles, scarlet fever, diphtheria, and whooping-cough quiescent; fever less prevalent than in previous years. Diarrhoea, while cholera was looming round our shores, wherever there was dirt, asserted its destructive prerogative, but less than in previous hot seasons of the year. Indeed, the continuance of the decline in deaths referred to the seven principal zymotic diseases, which has been noticed in recent quarters, is one of the most satisfactory points in the return. The number of these deaths was 23,196, against 33,963, 31,388, and 27,428, in the corresponding quarters of the three years 1870-71-72. Diarrhoea produced a high percentage of deaths in Birmingham, Leicester, Dudley, Preston, and Gateshead. Only 277 deaths were referred to small-pox, which is probably the smallest number that has occurred in any quarter since the beginning of the present century,

and a very great decline from the number (7,720) of fatal cases registered during the climax of the recent epidemic of variola in the first quarter of 1872. The birth-rate (34.6 per 1,000) was above the average; the natural increase of population rapid. The marriage-rate in the quarter ending June implied that the country was prosperous, and that the mass of the population took such a cheerful view of their prospects as led them to marry in unusual numbers. If prices were high, so were wages. The prosperity of the people was not, however, evenly distributed; it was principally experienced in the coal and iron-mining districts.

DEPÔT CENTRES.

It has now been officially settled that medical appointments to the depôt centres are to be retained under all circumstances for three years. At present, however, few of them are in working order; their respective staffs have nothing to do, and recruits are coming in either very slowly or not at all. It is very difficult now-a-days for military service to rival the attractions of abundant and well-paid labour; and more especially is this difficulty felt in Highland districts. The almost total impossibility now experienced by Scotch regiments in obtaining the class of men they have always been accustomed to select, has attracted the serious notice of the authorities; and it is even hinted that Mr. Cardwell may find it expedient to reconsider the principles involved in the short-enlistment Act.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE Microscopical Section has put forth an excellent programme for the session of 1873-4. The list of officers includes—President, Dr. Wade, F.R.C.P.; Treasurer, Dr. Sawyer; Honorary Secretaries, W. Hinds, M.D., Lawson Tait, F.R.C.S.; Demonstrators, George H. Evans, F.R.C.S., E. Rickards, M.D. The meetings for the winter session 1873-4 are as follows:—1873: November 11th, December 9th; 1874: January 13th, February 10th, and March 10th; summer session: May 12th, June 9th, and July 14th. The following papers and specimens have been promised for the ensuing session:—Dr. Hinds: Section of Tumour of Brain, with Osseous Spiculæ. Mr. Walter Lattey: Starch. Mr. Lloyd Owen: Anatomy of the Retina. Dr. Jolly: Osteoid Cancer. Mr. G. H. Evans: Some Histological Points bearing on the Pathology of Skin Diseases. Mr. Lawson Tait: Anatomy of the Ovary; Dermoid Cysts; Fibro-myoma of the Uterus and Ovary. Mr. T. H. Bartleet: Microscopic Appearances in certain Affections of Bone. Dr. Sawyer: Illustrations of Human Parasites. Mr. Priestley Smith: The Crystalline Lens; Embolism of the Retinal Artery. Mr. F. E. Manby: Blood Corpuscles. Mr. Furneaux Jordan: Specimens of Cancer of Bone.

ROKITANSKY CELEBRATION.

THE Medical Society of Vienna, at its meeting on October 24th, resolved to appoint a committee to carry out their wishes in doing honour to the Professor in the celebration of his seventieth birthday.

A RECENT MAGISTERIAL DECISION.

No small stir has been created amongst pharmaceutical chemists by the imposition on a South London chemist of a penalty of £10 for selling, as granulated effervescent citrate of magnesia, what appears to have been the ordinary trade article which passes under that name, but which is, as is well known, rather an effervescent citro-tartrate of soda with magnesia. The penalty seems to us to have been excessive, and was unquestionably imposed under a misapprehension. The public analyst piques himself on the fact that his certificate stated bare facts, without comments. But the bare fact without comments is precisely what would mislead a magistrate under the circumstances. It should have been undoubtedly stated to the magistrate, that the substance in question is in truth a well known, perfectly harmless, and even beneficial combination, which has superseded the citrate of magnesia in ordinary use, with the knowledge and assent of chemists and medical men generally, just as sulphate of magnesia is always sold when Epsom

salts are called for. It was not at all a case for prosecution; and, in adopting such proceedings, the Act is abused. It was a case of possibly unintentional persecution, and we are of opinion that the fine ought to be remitted. The magistrate was clearly not in possession of the whole truth, or he would never have imposed it. The general principle, however, that a name should accurately represent the substance sold, is not less sound in pharmacy (perhaps even more so) than in any other trade; and the discussion on the subject which has arisen will no doubt lead to a modification of title. Thus the well known, popular, and agreeable aperient and febrifuge drink, hitherto commonly sold as effervescent granulated citrate of magnesia, may properly be labelled henceforth "Granular Effervescent Citro-tartrate of Soda with Magnesia"; or it may be more shortly known as the Citrated Aperient. It would be well that it should be introduced in the new appendix to the *Pharmacopœia* as a pharmacopœial rather than a trade article, and thus arbitrary varieties of composition would be avoided.

THE GERMAN SCHOOLS OF MEDICINE.

THE number of students in the Vienna Medical Faculty diminishes sadly from year to year. Since Oppolzer's and Skoda's death, the diminution is very marked. Where one could with difficulty get within ear-shot in days gone by, on account of the number attending, the wards now, it is stated, are almost empty. In Prague and Gratz, however, the attendance is unusually good.

VERY SMALL PAYMENTS.

WE learn that at the East London Hospital for Children and Dispensary for Women, which has at present a very large out-patient department, it is proposed to introduce a system of small payments from the out-patients. It is intended to require a payment of a penny each time. Some objection is raised on the ground that this may be considered to trench on the province of neighbouring practitioners. We are assured that one practitioner dispenses advice and medicine to the poor at threepence a-head per visit.

MEDICAL PRACTICE IN RUSSIA.

THE want of medical men in Russia is a well-known fact. Whilst in Prussia there is one medical man in every 3,230 of the population; in Austria, one in 4,355; in Hungary, one in 5,492; in Russia there is only one to every 14,166. In the last winter session, there were 3,978 medical students in Germany, whilst in Russia there were only 1,922. With this want of doctors, the Government seems favourable to the gentler sex taking up the study of medicine; special extra courses, well endowed with scholarships, have been opened under official authority in St. Petersburg and Moscow, which are even better attended than were those in Zurich, against which the recent ukase was fulminated on political grounds.

THE EPIDEMIOLOGICAL SOCIETY.

THE first meeting of the Epidemiological Society of London for the present session will be held at the new rooms of the Medical Society, No. 11, Chandos Street, Cavendish Square, on Wednesday, November 12th, at 8.30, when an address will be delivered by the President, Dr. Wm. R. E. Smart, C.B., of Haslar Hospital, Inspector-General R.N. Visitors are invited for the evening. Dr. Smart was elected President, and Dr. Squire, 6, Orchard Street, Portman Square, General Secretary, at the close of the last session. Dr. Buchanan continues to act as Treasurer. The staff of Foreign Secretaries continues with no other changes than the appointments of Dr. F. J. Mouatt in the place of Dr. Macpherson, resigned, and of Inspector-General Dr. John Murray as one of the Secretaries for India.

UNIVERSITY PRIZES.

THE advantages of University education at Oxford and Cambridge are being more and more developed, on a plan which makes it easy for students of good acquirements to attain them almost without any pecuniary sacrifice, and with, of course, great immediate and prospective

advantage. In our University intelligence to-day (a column to which students and their friends should not fail always to refer) will be found a notice of a valuable open scholarship in Natural Science at Exeter College, Oxford. It is one which should prove tempting to a well-trained second year's student of scientific tastes. There is no restriction of age; and excellence in anatomy, physiology, and botany, or zoology, especially if coupled with chemistry and physics, will carry the election. The tendency at the Universities to encourage, by substantial rewards and by splendid facilities for instruction and study, the cultivation of biological and physical science, is of the highest importance to medical students, and of happy augury for the future of medicine in this country. We cannot too strongly urge our students to carefully hold in view this prospect, and to strenuously exert themselves to obtain the advantages of scientific training in the great universities.

ADULTERATION OF TEA.

A TEA-MERCHANT writes to complain that the Adulteration Act, though doubtless in many respects of advantage as regards milk, etc., is inflicting, by the very injudicious way in which it is brought into operation, a most damaging effect on the tea trade. No doubt, he says, there is a fair foundation for some of the action which has been taken in respect of the admixture of iron filings and foreign substances, but this affects a small extent of the import, while the injudicious proceedings in respect of colouring matter have perfectly paralysed the sale of all green tea. Green tea is, and ever has been, coloured more or less. Writing with a long experience, he asserts that there never has been an allegation, certainly no proof, of injury to health by its use. No doubt the tea would be purer when free from colouring matter; but, considering it ever has been so imported, that the annual import is about 12,000,000 lb., its cost about £1,250,000, is it just to merchants engaged in such a trade practically to prohibit these operations and inflict on them such a fine? Some understanding should be come to with the authorities to limit the operation of the Adulteration Act to cases of positive adulteration in which the article would be injurious to health. In all parts of the country, he says, the officials under the Act are bringing innocent grocers into court and fining and discrediting them for selling tea in the same form that they and their fathers have done for half a century before. The consequence is, they will not purchase, the wholesale dealers cannot sell, and there are no buyers for the new import; the one loses his character, the other his fair profits, and the importers are punished with a fine amounting to £300,000. Looking at the matter from a consumer's rather than from a broker's point of view, we fail to discern the grievance. The putting a mineral face upon tea is a process for the purpose of imitating the best with inferior kinds of tea. It is a trick of the producer, to which consumers have always been averse. They show their aversion by refusing to pay the old-fashioned prices for the article when its nature is exposed; and the sooner and the more effectually it is so exposed, the more quickly the broker will find means to make the producers understand that they must abandon a vicious and indefensible practice so long carried on with impunity, that a tea-broker now claims for it the protection accorded in this country to vested interests. It is one of the strangest cases ever brought forward for compensation.

MEDICAL BENEVOLENCE AND MEDICAL PROVIDENCE.

AT the late meeting of the Society for the Relief of Widows and Orphans of Medical Men, a discussion took place as to the best means which might be adopted for making this beneficent Association better known amongst the members of the profession in the metropolis, as it was believed that a knowledge of the benefits conferred by the Society was alone required to induce young practitioners to join. It was stated, amongst other matters, that the funded property of the Society, which cannot under any circumstances be sold out, yields an annual interest of about £2,500. The annual subscriptions amount to about £550. There are about four hundred members; whilst the number of widows receiving grants is now fifty-seven, and of children twenty-seven. In other words, one widow to about every eight members re-

ceives aid from the Society, and eighteen of these now receive £50 each per annum; others, having some private property, receive less sums, in accordance with their requirements. Such are the advantages which any gentleman may secure to his widow and children, if he should unfortunately leave them in want, after he has paid in for two years only the annual subscription of two guineas. With these strong claims for support, from a purely provident point of view, it does seem strange that more of the married members of the profession in London (metropolitan practitioners only being eligible for the membership) are not induced to join the Society. Mr. J. B. Blackett, the Secretary, is always ready to furnish information, and may be communicated with at 53, Berners Street, W. The half-yearly general meeting of the Society was held on Wednesday, October 22nd, in the library of the Royal Medical and Chirurgical Society, Berners Street. The chair was taken at half-past eight o'clock by the President, Dr. Burrows. It is much to be regretted that members do not evince more interest in the affairs of the Society. At the hour appointed for the general meeting, there were only eight members present—not sufficient to form a quorum. Business was in consequence postponed for some time. The minutes of the Courts of Directors held since last general meeting were read. Mr. Edward Tegart was elected a Vice-President; Dr. Quain, one of the Treasurers; and Dr. Fuller and Sir John Fisher, Directors. From the half-yearly statement of accounts, it appeared that fifty-six widows had received £1,053, divided in accordance with the urgency of the wants of the applicants. Thirty-four children had received £176, including grants to three from the Copeland Fund. The total grants for the half-year had been £1,229. The expenses for the same period amounted to £107. A legacy of £500 had been received from the executors of Mrs. Jane Lyon. A special grant of £30 was made to a widow of a deceased member whose case did not come within the description specified by the laws for ordinary grants. A vote of thanks to the Chair closed the meeting.

NOXIOUS GASES.

DR. ANGUS SMITH, the inspector under the Alkali Act, observes in his latest report that there have been many opinions as to the distances which gases will travel. He thinks we may be sure that sulphuric acid does not remain any perceptible time as a gas when it comes into the open air. Muriatic acid will go several miles; and sulphurous acid, he believes, goes further, but is diluted more rapidly, and, therefore, is less perceived. Chlorine will go four miles and be quite distinct to the smell, if the ground be smooth; but if it be roughened by trees or vegetation, the trees obstruct the motion of the air and gases, and the absorbable portion is removed, but not without damage to vegetation. Dr. Smith reports that chemical works generally are greatly on the increase, and the power to repress escapes of gas does not increase with them. He thinks that when new manufactories are proposed the air might be examined, and if the atmosphere be injured to a certain extent, no more of the same manufactories should be allowed at the same place. He says that all the usual gases are escaping in increasing quantities, and the actual increase of muriatic acid from alkali works is considerable, although not the percentage. It is painful to see vegetation in many places giving way, with no sufficient power at hand to check the mischief, and no manageable mode of compensating those who suffer, or at best one very hazardous. Dr. Smith has been making some inquiries into the quality of the air in Chorley and other places. He observes that the examination of the physical phenomena of meteorology has hitherto had too little to tell us regarding the influence of the atmosphere on the health. The influence of the different directions of wind has to be considered, whether from an eastern or other sea; and the air has to be examined at different heights. The true quality of different winds must be sought partly in chemical examinations; and we learn thereby the true origin of many commotions of the atmosphere. The examination of the rain has been made to give us much information. He maintains that we require the introduction of more chemical investigation into the sanitary and meteorological departments.

SCOTLAND.

SMALL-POX AND FEVER IN GREENOCK.

SOME feeling of alarm is at present being felt on account of the increase, especially of small-pox, but also of typhus, in Greenock. Some years ago there was a very fatal epidemic of typhus in the town; and its narrow streets and crowded population seem peculiarly suited to spread infectious diseases which have once obtained a lodgement. There were stated to be in the infirmary last week 58 cases of small-pox and 19 of fever. These figures, which only give the numbers under treatment at the infirmary, are certainly large considering the size of the town. The authorities at Greenock seem very thoroughly alive to the necessities of the case, and it is to be hoped that they will be able to meet the epidemic and curtail its progress.

OPENING OF THE GENERAL SESSION IN GLASGOW UNIVERSITY:
ADDRESS BY PRINCIPAL CAIRD.

THE public opening of the session took place on Monday, the 3rd instant, the medical session having been entered on a week before by an address from Professor Macleod. In his address, Principal Caird dwelt largely on the advantages to professional men of a liberal training as distinguished from a more strictly professional one. Although his remarks referred chiefly to the clerical profession, he also gave some hints which are applicable to the medical and other professions as well. He urged the students that they should try to aim at being something other and better than simply professional men, that they ought to study to be men of culture and wide sympathies. He concluded an extremely vigorous address by an earnest appeal to all art-students, whatever might be their future calling, to attend to this branch of study which lies at the basis of all excellence in the more general walks of intellectual life, reminding them that the opportunities of general culture which they now possess will never again be offered to them.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

THE Council of this institution have at last decided to enforce the new revised code of examination lately referred in the JOURNAL, and the first examination under the new system will take place in December next. A strong opposition was shown to the question of allowing two new subjects—viz., chemistry and botany—to enter into the curriculum, but ultimately it was decided that they should be included.

THE PROFESSORSHIP OF SURGERY IN THE UNIVERSITY OF DUBLIN. THIS appointment, vacant by the death of Dr. Robert Smith, will be filled up on Saturday, the 8th inst., by the Provost and Senior Fellows of the University. It is rumoured that the candidates will include Dr. Edward H. Bennett, Mr. Stokes, and Mr. Wharton, ex-President of the Royal College of Surgeons. It is thought that Mr. Wharton will be elected, and if so, he must vacate the surgeoncy to the Meath Hospital, as by a recent bye-law of Trinity College no professor attached to the University is allowed to hold office in any other clinical hospital than Sir Patrick Dun's. The professorship has a tenure of seven years, but the holder may be re-elected at the end of his term of office.

SANITARY LECTURES.

THE eighth of a series of lectures on health, at present being delivered by Dr. Cameron in the Dublin Exhibition, took place on Thursday, the 30th ult., on the subject of Clothing and Exercise. The various merits of different kinds of clothing material were explained. It was shown that wool maintained the heat of the body to a much greater extent than either cotton or linen, and absorbed four times as much moisture from the skin. The best under-garments should be composed of equal parts of wool and cotton. Children and old people should be

warmly clad, and flannel, he considered, had saved a large number of lives. The evils of tight-lacing were exemplified, and in an æsthetic point of view a very contracted waist was not a thing of beauty. Large numbers of persons suffered from wearing badly-shaped boots. Boots should have wide toes and low heels. Some models of feet distorted by wearing badly-fitting boots were shown, also fashionable boots with narrow toes and heels two inches and a half high, and created considerable amusement.

VIOLENT ASSAULT ON DR. JOHNSTON OF DUBLIN.

MR. MULVANY, well known in Dublin as "Dr." Mulvany, a quack practitioner, who advertises extensively by bills posted up in every part of the city, was last week found guilty of an unprovoked assault on Dr. Johnston, the Master of the Rotundo Lying-in Hospital, and sentenced to six months imprisonment. If it had not been for the mistaken clemency of the jury, who recommended him to mercy, we believe Mr. Mulvany would have received two years penal servitude. We may add that the attack was a very aggravated one, Dr. Johnston having been beaten severely on the head with a poker, and having a finger dislocated from the violence he received.

SUPPLEMENTARY WARRANT FOR THE
ARMY MEDICAL DEPARTMENT.

THE following communication has been addressed to the Chairman of the Parliamentary Bills Committee of the British Medical Association by the Secretary of State for War, enclosing a supplementary Royal Warrant restoring to the medical officers of the army privileges of which they had been deprived by the Warrant of 1st March. The letter announces also certain other concessions which do not appear in the Warrant. The two documents, read together, afford evidence of the desire of Mr. Cardwell to do justice to the claims which were laid before him, on behalf of the Army Medical Service, by the deputation of the Committee, on the 13th June last, and in a subsequent written statement submitted to Mr. Cardwell, at his request, by Mr. Hart. There can be no doubt that these documents will be received with considerable satisfaction; and we shall be glad to receive communications on the subject from army medical officers, for the information of the Parliamentary Bills Committee.

To ERNEST HART, ESQ., *Chairman of the Parliamentary Bills Committee, British Medical Association, 37, Great Queen Street.*

3rd November, 1873.

SIR,—I am directed by Mr. Secretary Cardwell to acknowledge the receipt of your letter of the 24th June last, in which you renew the representations regarding the operation of the recent Warrant for the Medical Department of the Army which were fully laid before him by you on behalf of a deputation from the British Medical Association on the 13th of the same month, and which had previously been brought to his notice by the Director-General, Army Medical Department.

Mr. Cardwell regrets that, while the advantages which have been conferred upon the Army Medical Service by the general scope of the arrangements in connection with the Warrant appear to be fully recognised, yet there are some points not altogether acceptable to the officers of the service. He is anxious that no reasonable ground of dissatisfaction should exist, nor any which he can remove consistently with the general scope of the new arrangements; and he has, therefore, recommended, and Her Majesty has been graciously pleased to restore to the Warrant, the provision which gives to surgeons 17s. 6d. a day after fifteen years' service; but this, he directs me to say, must necessarily be accompanied by a modification of the arrangement by which he proposed to make special pro-

motions from time to time, to secure in practice the same end.

Her Majesty has also been graciously pleased to allow those officers who drew forage in virtue of their rank before the 1st of March, 1873, to continue to draw it for the number of horses they were formerly allowed, in accordance with the regulations then in force.

The Warrants for pay and allowances of medical officers have hitherto granted forage allowance according to the relative rank of the officers with combatant officers in the army; but a change has recently been made by which, in some cases, combatant officers will only receive the allowance when necessarily mounted for the performance of their duties. Mr. Cardwell regards the Warrant of 1st March as sound in principle in these respects; but he has felt himself justified in recommending to Her Majesty the concession of which you have now been informed to those already in the enjoyment of the advantage conferred by the old regulation.

With reference to the representation as to the relative rank of officers attached to regiments, it should be borne in mind that the tenure of office by regimental field-officers appointed since the 30th October, 1871, will be for five years, though with the power of reappointment; and that, therefore, when they are not reappointed, the medical officer, if a surgeon-major, will probably rank above at least one field-officer during the time he serves with the regiment.

I am to add that Mr. Cardwell has under his consideration measures by which he trusts that the compulsory removal of officers from the regiments at home, in which they are now serving, will not be necessary until they are actually required for foreign service, which, it is believed, will in many cases not occur for three years from the date of the Warrant; and that, where exceptional removal is necessary in the interests of the public service, he is willing to consider whether some compensation may be given for expenses incurred with due authority on exchange. The exceptional number of removals which are now taking place are to a great extent caused by the increase to the staff-surgeons on the Indian Establishment, which has necessitated the withdrawal from their regiments of officers who have obtained some of the numerous promotions lately made; and it has also been necessary to bring home and replace from this country a large number of ex-assistant-surgeons of regiments who have completed their tour of five years' service in that country. Officers appointed to brigade depôts will, as a rule, hold their appointments for three years.

I enclose a copy of the Royal Warrant by which the Warrant of 1st March has now been amended.

I have the honour to be, sir, your obedient servant,
LANSDOWNE.

ROYAL WARRANT: ARMY MEDICAL DEPARTMENT.

VICTORIA R.

Whereas We have been pleased to make certain alterations in the Regulations for the Medical Service of Our Army, contained in our Warrant of 1st March, 1873;

Our Will and Pleasure is that, from the date of Our said Warrant, the following rule shall govern the pay of Surgeons after fifteen years' service; and that the provisions of Article 6 of Our said Warrant shall not be applicable to Officers who, before the 1st March, 1873, were entitled to forage in virtue of their several ranks:—

I. The pay of a Surgeon after fifteen years' service in that rank shall be seventeen shillings and sixpence a day.

II. Officers of the Army Medical Department who, prior to 1st March, 1873, were in receipt of forage or forage allowance in virtue of their several ranks, shall continue to receive forage or forage allowance for the number of horses to which they were entitled before that date, in accordance with the regulations then in force.

Given at our Court at Balmoral, this 23rd day of October, 1873, in the 37th year of Our Reign.

By Her Majesty's Command,
EDWARD CARDWELL.

MEMORIAL TO THE LATE DR. JOHN MURRAY.

It is proposed to place a bust and tablet in Middlesex Hospital as a memorial of the late Dr. John Murray. A small Committee has been formed for this purpose, consisting of—Dr. J. Ford Anderson, Dr. Joseph Bell (Edinburgh), G. W. Callender, Esq., F.R.S., Dr. W. Cayley, Campbell de Morgan, Esq., F.R.S., Dr. Dyce Duckworth, Dr. Arthur W. Edis, Sir William Fergusson, Bart., F.R.S., Professor W. T. Gairdner (Glasgow), Sir William W. Gull, Bart., F.R.S., Ernest A. Hart, Esq., D. Hepburn, Esq., Dr. George Johnson, F.R.S., Dr. Robert King, Dr. Robert Liveing, R. H. Lucas, Esq., Dr. Morell Mackenzie, Henry Morris, Esq., M.A., Dr. Charles Murchison, F.R.S., Dr. Richard Quain, F.R.S., Professor W. R. Sanders (Edinburgh), Dr. Alexander Silver, George Southam, Esq. (Manchester), Dr. A. P. Stewart, Dr. W. Stokes, jun. (Dublin), Lawson Tait, Esq. (Birmingham). Subscriptions will be received by Campbell de Morgan, Esq., F.R.S., Treasurer, or by Arthur W. Edis, M.D., 23, Sackville Street, W., Henry Morris, F.R.C.S., 19, Bedford Square, W. C., Hon. Secretaries.

The following subscriptions have been received and promised:—

	£	s.	d.		£	s.	d.
Dr. J. Ford Anderson...	2	2	0	Sherhard B. Burnaby, Esq.	1	1	0
G. W. Callender, Esq., F.R.S.	2	2	0	W. Younger, Esq.	1	1	0
Dr. W. Cayley.....	2	2	0	William Draper, Esq....	1	1	0
Campbell de Morgan, Esq., F.R.S.	2	2	0	Mrs. Catherine Wood....	1	1	0
Dr. Arthur W. Edis ...	2	2	0	Dr. W. G. Curgiven ...	1	1	0
Ernest Hart, Esq.	2	2	0	Captain Darley	1	1	0
Dr. Robert King.....	2	2	0	Andrew Clark, Esq. ...	1	1	0
Dr. Robert Liveing.....	2	2	0	J. Ashburton Thompson, Esq.	1	1	0
Dr. Morell Mackenzie...	2	2	0	Esq.	1	1	0
Henry Morris, Esq. ...	2	2	0	J. Cooke, Esq.	1	1	0
Dr. Charles Murchison, F.R.S.	2	2	0	Dr. J. C. Thorowgood ...	1	1	0
Dr. Richard Quain, F.R.S.	2	2	0	W. R. Anderson, Esq. ...	1	1	0
Dr. A. P. Stewart	2	2	0	Dr. J. Whitmore	1	1	0
Dr. S. W. Sibley	2	2	0	Robert Edis, Esq.	1	1	0
Dr. Alfred Pulla	2	2	0	Alex. Anderson, Esq.	1	1	0
Mr. Francis Fowke.....	2	2	0	Archibald Hewan, Esq. ...	1	1	0
Mrs. Robert King	2	2	0	Dr. J. Clay Shaw	1	1	0
A. Gavin Anderson, Esq.	2	2	0	Miss Thorold	1	1	0
J. G. Skelton Anderson, Esq.	2	2	0	H. M. Evans, Esq.	1	1	0
John Anderson, Esq. ...	2	2	0	Dr. R. Thorne Thorne ...	1	1	0
G. G. Anderson, Esq. ...	2	2	0	Horace Chaldecott, Esq. ...	1	1	0
Alexander Anderson, Esq.	2	2	0	Dr. F. J. Roberts	1	1	0
Dr. Andrew Clark	2	2	0	Marcus Beck, Esq.	1	1	0
J. A. B. M'Combie, Esq.	2	2	0	Dr. Vivian Poore	1	1	0
Rev. Walter Walsh.....	2	0	0	Jn. Gregory Forbes, Esq. ...	1	1	0
Dr. Joseph Bell	1	1	0	Joseph J. Clover, Esq. ...	1	1	0
Dr. Dyce Duckworth....	1	1	0	Alexander Walker, Esq. ...	1	1	0
Dr. George Johnson, F.R.S.	1	1	0	W. F. Bull, Esq.	1	1	0
R. H. Lucas, Esq.	1	1	0	R. Case, Esq.	1	1	0
Dr. A. Silver	1	1	0	Mr. Fenn	1	1	0
George Southam, Esq. ...	1	1	0	Mr. Humphreys	1	1	0
Dr. Wm. Stokes, jun. ...	1	1	0	A. Hensman, Esq.	1	1	0
Lawson Tait, Esq.	1	1	0	Dr. H. Cooper Rose ...	1	1	0
Maitland Burnett, Esq. ...	1	1	0	C. S. Tones, Esq.	1	1	0
R. W. Edis, Esq.	1	1	0	F. H. Alderson, Esq.	1	1	0
				Dr. Hall Davis	1	1	0
				R. Farquharson, Esq. ...	1	1	0
				Principal Campbell, D.D. ...	1	1	0
				Charles W. Gibbon, Esq. ...	0	10	6
				Mr. Smith	0	10	6
				R. H. Woodhouse, Esq. ...	0	5	0

The further object will be held in view of perpetuating the memory of Dr. Murray in the place of his birth and education by the foundation of a scholarship, bursary, or annual prize in the University of Aberdeen. This is especially desired by friends resident in that city and by old Aberdonians, and a special committee is likely to be formed there to promote this object. Meantime the London committee will receive subscriptions for this useful purpose in addition to those for the London memorial.

For the Murray Prize, Bursary, or Scholarship, the following subscriptions have been promised in London:—

	£	s.	d.		£	s.	d.
Ernest Hart, Esq.	10	10	0	Dr. Arthur W. Edis ...	10	10	0
Mrs. Ernest Hart	10	10	0	C. Creighton, Esq., M.B. ...	5	5	0
Dr. Morell Mackenzie ...	10	10	0	Dr. Dyce Duckworth...	1	1	0

AFRICAN FEVER.

THE ASHANTEE EXPEDITION.

WE are favoured with the following by a correspondent accustomed to the Gold Coast.

I see by an appendix to the JOURNAL of October 25th, under the above heading, that you are, for the sake of giving better advice to those who are about to join the expedition against the Ashantees, anxious for information on the treatment of the endemic diseases of the Gold Coast. Having served there for some time, I on my return wrote my experience of this almost *uninhabitable* country; and this remark is specially applicable to the interior, where, as far as I could judge (and in the *quasi* expedition against the Ashantees in 1864, under Colonel Conran, I travelled over almost the entire of the Gold Coast Protectorate) there was not anywhere to be seen an open space which would cover three acres of ground; neither was there on the way from Cape Coast to the river Pra, which constitutes the boundary of the territories between the Protectorate tribes and the Ashantees, a hill nor any sort of elevated ground which could be regarded as a healthy site for an encampment.

In an expedition of this kind, we must not place much hope in friendly alliance. When Colonel Conran intended to proceed to Coomassie, the capital of Ashantee, in conjunction with the allied tribes, one may well fancy the extent of his disappointment when, on a fixed day, *one* man only joined his camp at Prabsne, out of many thousands who promised to do so. There is no cohesion amongst the tribes, and I can well believe that they have a wholesome dread of the Ashantees, who are as fierce as they are brave in battle.

If European troops are to engage at all in this feudal warfare, they should reach the coast by the 15th December. I would suggest to send them to Accra, rather than to Cape Coast, where they would for thirty miles have an open country almost free from bush. The way to Akropong is healthy, and intersected by elevated ground. Europeans used to go from Accra to this place for a change of air.

It is no part of my object in this communication to review our situation on the West Coast of Africa; yet I must agree with the remarks lately made by Mr. Bright, "That as there was no slavery in these parts now (although domestic slavery prevails to a large extent), our best policy would be to abandon such inhospitable stations, and allow these savage tribes to settle their strifes amongst themselves, particularly as long as they appease the 'angry gods', and pay respect to the dead by human sacrifices."

From various causes the climate of the Gold Coast is very destructive to Europeans, but principally so in consequence of the badness of the water, which produces dysentery, diarrhoea, abdominal congestions, as well as to the endemic fever, on the nature and character of which some good remarks may be found in an article "On the Diseases of the Gold Coast," *Medical Times and Gazette*, December 22d, 1866:—

"Remittent fever is an endemic disease, and may be said to be the result of marsh malaria. It attacks Europeans and natives alike; but the former, in proportion to their numbers, much more frequently. This is the inevitable climate fever, from which there is no escape: years of residence, or supposed acclimatisation, afford no immunity—good and careful living no security against its attacks; the suckling child is as liable to be attacked as the mother herself. This fever is supposed to be a modified form of yellow fever. This idea is maintained by my friend Dr. Cedont of the French Navy, who served at Martinique during the epidemics of 1853 and 1858. Having had ample opportunities of investigating the etiology and semeiology of both forms of fever, his remarks must be considered not only valuable, but also useful.

Remittent fever is usually ushered in with a dry skin, constipated bowels, pains in the back and loins, or knees, with a desire to vomit, loss of appetite, great thirst, and a feeling of lassitude. Should these symptoms progress, want of sleep ensues, and the tendency to vomit becomes really distressing. There is a profuse perspiration, particularly from the head and face, while the kidneys become thoroughly demonstrative of the changes which are taking place. If there be no improvement, death takes place from debility, and inability to retain anything on the stomach. The line of treatment to be pursued must in every instance be governed by the severity of the attack. As a general rule, it will be advisable to have the bowels well cleared out; doing so will prevent the tendency to either existing or acquired congestion of the abdominal organs—particularly of the liver and kidneys, as well as to a concomitant delirium, "of a busy restless kind". The best purgative is either a combination of podophyllin and colocynth, or colocynth and calomel: the former combination is preferable, as it exercises a/l

the beneficial effects of a purgative, without, as far as we are aware of, diminishing the serum of the blood. Again, we know from Dr. Anstie's experiments, that this drug exercises a special effect on the liver, an organ which seems to be in some way primarily and principally engaged in this disease. If the secretions from the skin are checked, calomel and Dover's powder in small doses will be found useful, with lime-juice or tea *ad libitum* as a drink; the treatment to be completed by the administration of quinine in five-grain doses. There are times when stimulants and tonics may be usefully administered. The most useful are champagne, Moselle, and good sherry, which can rarely be procured. The best tonic is ammonia and bark, or ammonia and capsicum, made into a pill with common soap. Remittent fever cannot be cut short. As a rule, large doses of quinine may be usefully given; but more will depend on the constitution of the patient, and on his having suffered from repeated attacks, which appear to have the effect of producing ephemeral fevers, than in the administration of medicines. All cases with a tendency to a comatose condition should be briskly treated and purged as soon as possible. Blisterings will not be inopportune to the shaven scalp. The quickest blister may be obtained by applying with a brush the liquor vesicatorius. Cheerfulness and resolution are nowhere more beneficially employed than on the Gold Coast, where gentle exercise, avoidance of the sun and night-air, play no unimportant part in maintaining health.

Quinine may be given in large doses during the period of remission, or as soon as the hot stage subsides. If it should be considered necessary to empty the contents of the stomach, the use of the sulphate of zinc will be found the least distressing of emetics. When vomiting has already taken place, there should be no recourse to emetics; they should be only given when there is a tendency to nausea, and never when the disease is advanced, as one in a few days becomes sufficiently weak and will require all his strength to enable him to battle with a dangerous endemic disease—dangerous by itself, and rendered more dangerous from a tendency to abdominal, pulmonic, and cerebral complications. Next in rank to purgatives and antiperiodics, we must place the use of cold affusion as a most useful adjuvant in the treatment of fever. The natives use limes freely as an application to the head and body, as well as for a drink during all their fevers. I borrowed from them the habit of cutting the limes in two, and then rubbing them to the head. The cooling and soothing effects, though temporary, are found to be a great luxury in the absence of ice, or even cold water. Dr. Currie recommended towards the close of the last century cold affusion in the treatment of fevers, and I have no hesitation in recommending its application to the shaven scalp. I had not the hardihood to adopt the more heroic method of treatment, which I know to have been employed on some European residents, at the suggestion of the natives—viz., to take the patient and put him into a cold-water bath and rub him all over with limes, and afterwards envelope him in blankets. In the *Medical and Physical Journal* for January 1803, I find that Dr. Patterson speaks as follows regarding the cause of this fever: I use his words, as they are expressive of my own opinions. He says remittent fever is the result of marsh malaria, and, as a proof of this statement, he instances the retreat of the water at certain seasons of the year in the northern parts of America, which, on subsiding, leaves the surfaces of the low land exposed to the influence of the sea. Violent bilious fevers ensue, which attack numbers within a certain distance. In Egypt, the people are healthy when the Nile inundates the land, and diseases are not generated until the waters subside, leaving a vast extent of country covered with noxious matter, which, when exposed to the solar rays, becomes exalted, and thus spreads disease amongst the people. In Africa, as well as at home, epidemics have been known to subside or disappear, hæmorrhages to cease, and endemic disease to become less rife during the cold months. Results such as these can be only due to some alteration in the state of the atmosphere, whether electrical or chemical we know not. The harmattan seems to exercise the same beneficial agency in purifying the atmosphere in Africa as the cold winds do in this country; and in no instance is this beneficial agency more marked than in stemming the course of those cases known as blood epidemics, such as small-pox, cholera, and typhus fever.

En passant, I may remark that the educated natives of both sexes use perfumes and scents of the volatile alkali when they feel sickish. I have no doubt but such a proceeding may have the effect of cutting short or mitigating their fevers. Physicians long ago used to treat fevers, especially febris intermittens, which was supposed to be the result of asthenia, by opium and camphor, together with hot aromatic baths; and frictions of spirit of wine, with broth as a drink, impregnated with spices, and the administration of Peruvian bark, *per se*, or with a volatile alkali, constituted the general plan of treatment.

In the West Indies, the administration of salines is generally resorted

to in the treatment of this kind of fever. Of their efficacy I have no doubt, particularly if applied at the outset. I have no statistics to prove, and my experience has not led me to imagine, that the endemic fever of Africa is at all contagious, or even in any way infectious, though I have seen solitary cases quickly multiplied. But one cannot be surprised at such an occurrence, when we consider the circumstances under which the people live—lying huddled together like swine within and abroad, exposed to the sun and night air, surrounded by an impure atmosphere; and, as there are no hospitals for the sick, there is no alternative but to allow those suffering from fever to remain in their dirty overcrowded hovels. The healthy inmates now become exposed to the danger of catching the same form of disease as that which prostrates the man sick in bed. Under such circumstances, whether at home or abroad, it can scarcely be considered a matter of surprise that, when fever of any kind enters such localities, it would prove "infectious;" and, in consequence of the number of those attacked, as well as owing to the number of causes which serve to make a nidus for concentrating the poison or "infection," we may be led to conclude that, in the course of time, the fever changes its character and assumes something like a contagious property. So many causes sometimes conspire to produce remarkable changes in disease, that we should be slow to attach the title of either "infection" or "contagion" to such forms of fever. Passing from this subject, we revert to a no less important subject, viz., dysentery, the scourge of armies. This disease is characterised by frequent bloody or feculent stools mixed with mucus and blood; hence it may be classified as pure and mixed dysentery. The latter form may be better understood as dysenteric diarrhoea, and is attended by tormina and tenesmus. In pure dysentery, the stools are occasionally so offensive from the outset, as to merit the title of foetid dysentery, which, if preceded either by disease of the liver or diarrhoea, is, in my belief, incurable. No constitution, however formed, appears exempt from an attack of this disease in some form, particularly if a resident with the Bushman, where illnesses of every kind become more intensified and require a greater exercise of judgment in directing, than diseases of a similar form on the coast. In all cases, it will be safe to begin by administering a mild purgative, such as castor oil; then small doses of mercury with chalk, so as to produce an alterative effect; and follow up the treatment with opiates, astringents, and counterirritation.

The following form of powder will be found generally useful:—
R Acidi gallici \mathfrak{z} i; plumbi diacet., pulv. kino, \mathfrak{ss} gr. xiv; morphiae mur. gr. iij. *M.* Divide in pulv. viij, unumumat \mathfrak{z} ia quaquâ horâ. The best of all stimulant astringents will, I think, be found in the use of the oil of turpentine, when given in twenty-minim doses with mucilage, to which may be added ten minims of chloric ether four times a day. A blister may be occasionally applied with benefit over the liver; but my belief is, that counterirritation to the seat of the disease is injurious, as it tends to hasten an ulcerated condition of the intestine. I have derived great benefit from the use of ipecacuanha when given in half-drachm doses, and its effects were more readily procured when given in combination with small doses of opium. The origin or cause of this disease can only be approached approximately by observation. It is selective in its situation, and attacks one or more of the intestinal glands, which I have seen ulcerated and nearly in a state of decomposition after a few days' illness. These ulcers are generally confined to the solitary glands and glands of Peyer. The membrane surrounding them appears flaccid, and is easily separated, owing to the infiltration of serous fluid. Not unfrequently the appearance of an intestinal catarrh may be observed in the ileum and great intestine, which exhibits itself under the forms of either a blanched or reddened condition of the mucous membrane. That all these changes are produced by a combination of causes, viz., bad water, innutritious diet, residence in a pernicious and uninhabitable climate, as well as by the alternations of heat and cold, can scarcely admit of a doubt.

We may, perhaps, here fitly consider what rules, if any, can be beneficially observed while living on the Gold Coast. These may be summed up as follows:—Good diet and careful living. The stomach is not to be overloaded, as one can take but little open air exercise, owing to the persistent heat throughout the year. There should be a partial exemption from all kinds of stimulants, except tea, which is always considered a luxury; avoidance of the night air, moisture, and strong rays of the sun; daily ablutions and the wearing of flannels are indispensable for those who wish to enjoy good health. If dysentery set in, there should be an immediate change of climate. Quinine is, perhaps, unduly extolled; its continued use does not afford immunity against repeated attacks of fever, and its habitual use often serves to lessen its beneficial power. It may almost be said that a man gets on as well without his daily draught, and does not by this means counteract its beneficial use when he becomes ill. In large doses, it produces noise in the ears and a busy restlessness of the hands and eyes, with headache, which may re-

main until a crisis occurs. Madeira will always be found a safe and pleasant retreat; but, if a man feel strong enough to return home and be gladdened by the voices of his friends, he had better do so, as there exists in Funchal a listless gloom, occasioned by the resort thither of those with bad lungs and weak frames. He sees too much of the intolerable hammocking, and is therefore led to conclude that he is still in an African land. Such associations are in themselves so sickening to a man in fair health, that he has no time to think of anything else than death.

PROVINCIAL MEDICAL SCHOOLS.

THE following returns are in addition to those published last week.

Liverpool School of Medicine.—Number of students attending, 101; first year's entries, 40.

Anatomical School, Cambridge.—Number of students attending, 50; this year's entries, 25.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

THE omission, no doubt accidental, of the Royal Infirmary School of Medicine from the list of provincial schools, published in the *JOURNAL* last Saturday, was much regretted here, not the less so from the fact that this school stands at the head of the list in the number of new entries, which amount to forty, making the total number of students in attendance just one over a hundred.

This satisfactory position of the Liverpool School is due to the enterprise and perseverance of the body of lecturers, who, for some years past, have worked earnestly and successfully to develop the ample resources of the institution, and to improve and complete its machinery in every department.

The old building was erected about forty years ago by public subscription, and, although in its original condition by no means deficient either in accommodation or adaptation for the purpose during the earlier period of its history, had of late years become inadequate for the yearly increasing number of students attracted to its classes by the superior advantages afforded, it was also found that certain new departments of teaching and much improvement in some of the existing branches of study were necessary to keep pace with the progress of medical education and to meet the extended requirements of the licensing bodies.

As they possessed neither endowment nor reserve fund, the lecturers had an obstacle to overcome; but, nothing daunted, determined about two years ago to appeal once more to the public of the town for funds, and have succeeded in raising already upwards of £5,000, all of which has been expended, and £1,000 more is still required; towards the liquidation of the balance, Mr. T. Pemberton Heywood, who headed the original subscription-list with the handsome donation of £1,000, has just contributed a further sum of £500; other subscriptions are flowing in, and in a short time the entire sum will doubtless be raised. The improvements effected in the school have rendered it one of the most complete and well-arranged institutions of the kind in this country. The dissecting-room, originally large, has been increased to nearly double its former dimensions. A new museum on a large scale, well lighted and appropriately fitted up, has been added. Several new class-rooms have been constructed, with all the new appliances now found in the most recently constructed schools. Comfortable accommodation for students in the shape of lavatories, library, dressing and reading-rooms, are provided. An entirely new series of laboratories and lecture theatre for chemical and physiological teaching are included, both on a large comprehensive and complete scale, especially the physiological department under the direction of Dr. Caton, which is acknowledged to be almost, if not altogether, unrivalled by that of any other medical school, either in the metropolis or the provinces. This portion of the school would amply repay a visit to those who may be contemplating the construction of a similar building.

The new buildings were opened formally on the 1st of October by Mr. Torr, M.P., in the presence of an unusually large meeting of old and new students, the lecturers and their professional friends, and a numerous gathering of those interested in scientific education, who afterwards adjourned to the large theatre in the medical institution, where the prizes were distributed and the introductory address delivered by Dr. Caton.

Mr. Torr has presented to the lecturers a donation of £100, to be invested, and the interest devoted to founding a medal as a prize for competition amongst the students, and as a memento of the occasion of his opening the new buildings.

The day's proceedings were brought to an agreeable conclusion by a banquet at the Adelphi Hotel, under the presidency of Dr. Gee, the Chairman of the School, at which eighty guests assembled, their enjoyment being greatly enhanced by the very creditable performances of an amateur musical party got up amongst the lecturers and students.

The session at the medical institution was inaugurated on the ninth of October by a *conversazione* given by the President, Dr. Cameron, on a scale of unprecedented hospitality and brilliancy. Instead of the hackneyed display of microscopes and purely scientific objects of mere medical interest, the guests were entertained with a really magnificent exhibition of high art. The walls of the extensive suite of rooms and the theatres were covered with paintings of great value and great merit, lent for the purpose from the private galleries of gentlemen of Liverpool. The extensive and *recherché* collection of Wedgwood and other ware, contributed by Mr. T. Shadford Walker, with choice specimens of china by Dr. Grimsdale and other friends, formed a striking feature. Mr. John Newton, the Honorary Secretary of the Institution, furnished a most interesting and curious collection of antique books, mediæval illuminations, and old manuscripts, of priceless value. The whole constituted a somewhat original and novel, but a most thoroughly enjoyable, method of opening a medical session, which will long be remembered by the two hundred members and guests present as a memorable incident in the history of the institution.

REPORTS OF SOCIETIES.

MANCHESTER MEDICAL SOCIETY.

D. LLOYD ROBERTS, M.D., President, in the Chair.

Diseased Larynx in an Infant.—Mr. CULLINGWORTH exhibited the larynx of an infant, ten weeks old, in which there was enlargement of the aryteno-epiglottidean folds, partly from oedema and partly from what appeared under the microscope to be an increase in the normal glandular elements. Death occurred suddenly from apnoea. Both lungs were retracted against the chest-wall, and they contained very little air. The vocal chords were healthy. In answer to a question from Dr. Leech, Mr. Cullingworth said there had been no crowing respiration, or other symptom of laryngismus stridulus.

Administration of Carbolic Acid Vapour.—Mr. LUND described three methods of using the vapour of carbolic acid, by atmospheric diffusion. By moistening a piece of sponge with a mixture of one part by measure of strong liquid ammonia, two parts of carbolic acid crystals melted, and three parts of pure alcohol, placed in a wide-mouth bottle, as a common scent bottle, it has been found to be of great service to inhale the vapour from this in cases of severe coryza and chronic ozoena. Mr. Lund also exhibited an apparatus invented by Professor Calvert for diffusing the vapour of carbolic acid in sick rooms, etc. To prevent the possibility of the vapour of the acid being ignited by contact with flame, the heat is conveyed to it by a red-hot block of iron placed beneath a metal tray which holds the acid. The third illustration was a means of preserving recent anatomical and pathological specimens, by placing them in porcelain trays in a zinc box of one foot cubic capacity, lined on all sides with soft wood steeped in olive-oil and one-fourth part of the pure acid. The lid of the box is made to fit air-tight, or nearly so, and at common temperature the interior is filled by an antiseptic atmosphere in which such specimens can be kept for a long time without putrefactive change. They are apt to undergo some alteration in form and appearance if they contain much fat, for this tissue slowly undergoes a kind of cell degeneration by *post mortem* liquefaction and exudation of oily fluid. With this exception, the physical conditions remain unchanged. The oiled wood lining of the box can be easily recharged with acid by rubbing over it some of the melted acid crystals, free from water.

Abscess of Kidney.—Mr. STOCKS showed a specimen of abscess of the kidney opening into the descending colon.

Rare Dislocation of Humerus.—Mr. STOCKS mentioned a case of rare dislocation of the humerus, which has already been reported in *extenso*.

Fibroid Disease of Lung.—Dr. RANSOME reported a case of fibroid disease of the right lung in a man aged 68, the subject of chronic bronchitis, who died of congestive diarrhoea, the affection of the lung being in a very early stage.

Typhlitis.—Dr. DRESCHFELD read a paper entitled "Remarks on Typhlitis and Perityphlitis."

Fatal Case of the Vomiting of Pregnancy.—Mr. BRADLEY related a case of the vomiting of pregnancy which terminated fatally. The patient was a widow, aged 37; the vomiting came on in the second month of pregnancy, and, after continuing without intermission for seven weeks, she died exhausted. Mr. Bradley proposed to divide the vomiting of pregnancy into three varieties, occurring at three distinct periods and requiring distinct treatment. First, vomiting occurring at the commencement of gestation, due to irritation of the uterine ganglia, whence the irritation would be carried along one of two channels to the medulla oblongata, either from the uterine nerves to the hypogastric plexus, thence by filaments of spinal nerves to the cord itself, and so upwards to the medulla, or, from the hypogastric plexus along the gangliated cord of the sympathetic to the solar plexus whence it would be carried along the pneumogastric nerve to the brain. The treatment for this form should be soothing injection of belladonna, or conium into the rectum, and drop doses of ipecacuanha wine. Second, vomiting occurring during the earlier months of pregnancy prior to quickening, when, of course, the uterus is still in a great measure within the pelvis; this form, he believed, was very generally due to the pressure of the gravid uterus upon a loaded rectum, which, in its turn, irritated the hypogastric plexus directly in front of which it is situated. For this variety, he advocated the use twice-a-day of soap and water enemata to unload the bowels, and, when very obstinate, he suggested the prone position for the patient. Third, vomiting coming on subsequent to quickening, any time, indeed, between quickening and delivery. He considered that this variety was occasioned by the direct pressure of the uterus upon the gangliated cord of the sympathetic, or upon the solar plexus. He remarked that this form sometimes, like the others, resisted all treatment, in which case, of course, it would be necessary to induce premature labour. Mr. Bradley also referred to the analogy which exists between the vomiting of pregnancy and puerperal convulsions, and suggested that inasmuch as the latter malady is accompanied by anæmia of the blood-vessels of the medulla (the result of sympathetic irritation), that nitrite of amyl should be tried on account of its power of paralysing the entire sympathetic system.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

GENERAL ANNUAL MEETING, WEDNESDAY, OCTOBER 15TH, 1873.

JAMES DUNCAN, M.D., in the Chair.

Report of Council for Session 1872-73.—Dr. GEORGE F. DUFFY, honorary secretary, read the Annual Report, as follows:

"The Council of the Medical Society of the College of Physicians, in presenting their ninth annual report, have much pleasure in congratulating the members on the continued success and prosperity of the Society.

"During the session the Society, which at present numbers ninety-three members, has had five additions to its ranks; but, on the other hand, it has to deplore the loss of one of its most active and energetic officers—the late Henry Eames, who throughout four sessions held the post of honorary secretary to the Society, and discharged the duties of that office most zealously and efficiently.

"During the session there were seven ordinary meetings, and one special meeting of the Society, at which the following papers were read:—The President's Inaugural Address; Dr. Darby, on Small-pox Returns; Dr. Walter G. Smith, on the Use of the Direct and Induced Electric Currents in Medicine; Dr. Lyons, on Some Cases of Abdominal Dropsy; Dr. James Little, on the Use of Digitalis in the Failing Heart and Delirium of Acute Diseases; Dr. Henry Kennedy, on the Etiology of Enteric Fever; Dr. McClintock, on the Semeiology of Intemperance; Dr. Hawtrey Benson, on Two Cases of Poisoning by the Fumes of Charcoal; Dr. Finny, on Pulmonary Hæmorrhage as a Cause of Phthisis; Dr. Nixon, on Mitral Regurgitant Murmur without Valvular Disease; and Dr. Grimshaw, on the Influence of Digitalis on the Weak Heart of Typhus.

The report concluded with a return of the attendance of members of Council.

Election of Officers for Session 1873-4.—The election of officers for the coming session took place after the reading of the report. The result of the ballot was as follows:—*Council*: Lombe Athill, M.D., J. Hawtry Benson, M.B., Thomas Fitzpatrick, M.D., Arthur Wynne Foot, M.D., Samuel Gordon, M.B., T. W. Grimshaw, M.D., Thomas Hayden, F.K.Q.C.P.I., George Johnston, M.D., Henry Kennedy, M.B., James Little, M.D., Alfred H. McClintock, M.D., J. W. Moore, M.D. *Honorary Secretary*: George F. Duffy, M.D. [N.B. The names are arranged in alphabetical order.]

ASSOCIATION INTELLIGENCE.

MIDLAND BRANCH.

THE autumnal meeting of the above Branch will be held on Tuesday, November 11th, at 7 P.M., at Messrs. Crossley and Clarke's, Medical Library, Leicester.

Several gentlemen have promised to read papers and bring cases forward for discussion. Any member who is desirous to assist at this meeting is requested to communicate with me without delay.

THOS. BLUNT, M.D., *Hon. Sec.*

Leicester, October 29th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : MICROSCOPICAL SECTION.

THE next meeting will be held on Tuesday, November 11th, at 7.30 P.M., in the Council Room, Queen's College.

WILLIAM HINDS, } *Honorary Secretaries.*
LAWSON TAIT, }

SOUTH-EASTERN BRANCH : EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above District will be held at the White Hart Hotel, Lewes, on Friday, November 14th, at 3 o'clock. RICHARD GRAVELY, Esq., in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

By permission of the Committee of the Sussex Archaeological Society, the Museum at the Castle will be thrown open to members and their friends for inspection.

Papers have been promised by Dr. Moon of Brighton, "On the Therapeutics of Pythogenic Fever", and on "Stricture" successfully treated by "Holt's" method at the Newick Cottage Hospital, by the Chairman.

Dinner will be provided at 5.30 P.M., at the White Hart Hotel; charge, 5s., exclusive of wine.

Notice of intended communications is requested by the Secretary on or before Thursday, the 6th instant.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonards-on-Sea, October 28th, 1873.

BATH AND BRISTOL BRANCH : ORDINARY MEETING.

THE first ordinary meeting of the session was held at the York House, Bath, on Thursday evening, October 30th; E. L. FOX, M.D., President, in the Chair. There were also present thirty members and two visitors.

Dr. Caddy, R.N., was elected a member of the Association and of the Branch. Several new members were proposed.

Papers.—T. Cole, M.D., read a case of Obstruction of the Left Inferior Vena; and a discussion took place, in which Mr. Stockwell and Mrs. Thompson, Parsons, Goodridge, Spender, Taylor, and Inman joined.

2. S. Martyn, M.D., read a case of Intestinal Obstruction with Colic: Evacuation of Flatus by Puncture, and Recovery. A long discussion ensued, in which Drs. Davey, Spender, and Goodridge, and Messrs. Mason, Hinton, Board, Lansdown, Stockwell, and F. Parsons took part.

SOUTH WALES AND MONMOUTHSHIRE BRANCH : ORDINARY MEETING.

AN ordinary meeting of this Branch was held (by kind permission of Dr. Yellowlees) at the County Asylum, Bridgend, on September 21st. There were thirty members present.

New Members of Association.—William Price, M.B., Bonvilstone, near Cardiff; J. R. James, Treorkey, Pontypridd.

New Members of Branch.—W. Davies, Llanpumpains, Carmarthen; Cornelius Biddle, Merthyr; E. P. King, Chepstow; T. E. Williams, Talgarth, Breconshire.

Resolutions.—1. It having been recommended at the meeting of

officers of health held in London in August last that each Branch be invited to appoint a Committee to consider questions relating to Public Health matters, it is resolved—"That the President, President-elect, the Secretaries, and all members of this Branch who are officers of health, be appointed the Committee on Public Health of this Branch, and that Mr. Morgan of Neath be Secretary thereof."

2. "That a Committee be appointed to consider the question of medical practitioners meeting unqualified practitioners in consultation and sanctioning their proceedings. The Committee to report to the next meeting. The Committee to consist of Dr. Hearder, Mr. Dyke, Dr. Edwards, Dr. Taylor, Mr. Cresswell, Mr. Ewan Jones, and Dr. Sheen."

3. "That the next meeting be held at Newport, Monmouthshire, in March 1874, the day to be fixed by the President and Secretaries."

The remainder of the day up to dinner time was spent in a most interesting and instructive manner, Dr. Yellowlees, the Superintendent of the Asylum, giving an admirable running commentary on the various phases of Insanity, illustrating his remarks by typical cases selected from among the patients in the Asylum. A rapid visit was afterwards paid to the various wards. The meeting was a most successful one, and it was felt on all sides that the members dispersed carrying with them very valuable information, and that there is a wide field open in the future adoption of the plan then followed for increasing their knowledge of insanity.

SOUTH-EASTERN BRANCH : WEST KENT DISTRICT.

THE first meeting of the seventeenth session 1873-74 was held at Rochester on October 29th—Dr. JAMES V. BELL in the Chair.

Next Place of Meeting.—Maidstone, on December 2nd, with GEORGE HENRY FURBER, Esq., as Chairman.

New Members.—1. Robert Bowen, Esq., F.R.C.S., Deputy Inspector and Principal Medical Officer, Fort Pitt House, Chatham; 2. Harry Knight Hitchcock, Esq., St. Clare, College Park, Lewisham; 3. Geo. M. Slaughter, Esq., Surgeon-Major, 2nd Battalion 10th Regiment, Fort Pitt, Chatham; 4. Henry Weekes, Esq., Brompton, Chatham; 5. John H. G. Meares, Esq., Surgeon-Major, 82nd Regiment, 4, Newton Terrace, Rochester; 6. George Ireland Russell, Esq., Gravesend; 7. C. J. W. Pinching, Esq., Gravesend.

Communications.—1. Doubtful diagnosis respecting the position of the foetus in a case of Ectopic Pregnancy—judged to be intramural. By Dr. Stephen Monckton.

2. A child aged four years, lately a patient in the hospital, was exhibited by Dr. Frederick J. Brown, showing a Malformation. The three canals—urethra, vagina, and rectum—opened separately within the vulva. There was no sphincter to the rectum, and faeces plastered the vulva constantly.

3. A Case of Obstructive Mitral Disease was read (coarctation extreme): morbid specimen exhibited. By D. James V. Bell.

4. A Case of Tumour of the Velum Interpositum, associated with chorea and laryngeal phthisis: larynx exhibited. By Dr. Burns.

5. A Photograph of a child born at full time that died in a few hours, presenting a tumour projecting beyond the occiput, containing the entire brain. By William Bell, Esq., F.R.C.S.

6. A Case of obscure Mammary Tumour, that disappeared under the use of bromide of potassium—one of a series of six cases. By John Croft, Esq., F.R.C.S., of St. Thomas's Hospital.

The members and visitors (thirty) dined together at the King's Head Inn.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

OPEN SCHOLARSHIP IN NATURAL SCIENCE.—About the end of January 1874, there will be an election to a Scholarship at Exeter College, Oxford, the candidates for which will be examined in Biology, Chemistry, and Physics. Candidates are not expected to exhibit special knowledge of more than one of the above subjects, and preference will be given to a candidate who excels in Biology or one of its branches. The candidate selected will have to satisfy the College that he has sufficient classical and mathematical knowledge to pass Responsions: N.B.—There is no limit of age disqualifying candidates for this Scholarship. The Scholarship is of the annual value of £80, tenable for five years from matriculation. The scholar elected will have the use during term of a place in the histological laboratory of the College. For further information, application should be made to Mr. E. Ray Lankester, Natural Science Lecturer, Exeter College.

CORRESPONDENCE.

SURGERY AT THE BAR.

SIR,—It is not my intention in this letter to enter into the vexed question of hospitalism; but you will, I trust, permit me to point out a grave error into which you have unwittingly fallen in your leading article of Saturday, October 18th, on Surgery at the Bar. The error is in the last sentence, or perhaps it is more strictly accurate to say that the whole sentence is erroneous. It runs thus: "When we remember that much of Simpson's information seemed to rest on the memory of his informants, or on books for the completeness of which there was no guarantee, and that a great part of his table was composed of single favourable cases, while there is a very suspicious absence of single fatal cases, the former supposition will not seem improbable."

Now, sir, no one can know better than I do how much at variance with the facts are the assertions you make in thus concluding your article. Every schedule from which Sir James Simpson got his figures, both for country and hospital amputations, was summed up and revised by me, with the assistance of a gentleman employed in the Register Office at Edinburgh, and of Dr. Aeneas Munro, now of Glasgow; and it is very far indeed from being the case, that much of Simpson's information seemed to rest on the memory of his informants or on books. On the contrary, whenever a schedule seemed in the least suspicious, either from the surgeon confessing that he was relying on his memory, and might have had more amputations than he entered, or when, from the remarks appended, it was evident that he had mixed up with the major amputations of the limbs, for which alone he was requested, other cases of operation, the schedule was immediately thrown aside and made no further use of. To many others, whose returns seemed to deviate from the average, either in the way of great success or the reverse, I wrote, on behalf of Sir James Simpson, asking for further details and information, before the schedule was collated; and we thus obtained, I maintain, as thorough a guarantee of the undoubted trustworthiness of the statistics as they admitted of. To give an instance, the figures contained in schedule No. 288 were so astounding that Sir James Simpson would not insert them until he had had an interview with the practitioner, who was discovered to be one of the most estimable surgeons in the great mining districts of the West of Scotland, and in regard to whose veracity not even the shadow of a doubt was possible.

So much as to Simpson's information. But the assertion in the latter part of the sentence quoted from your leader—that "a great part of his table was composed of single favourable cases, while there was a very suspicious absence of single fatal cases"—is still more astonishing, and must have been penned by you without a previous examination of the schedules, which are accessible to all in the second volume of Simpson's works published in 1871.

The facts are as follows. Out of the 2,098 cases of country amputations collated, there are exactly 71 returns containing one operation only. Of these 71 cases, 62 were successful; while nine surgeons returned their schedules with a single unfavourable amputation. So far, then, from the table being mainly composed of single favourable cases, as you assert, you will perceive that the mortality among the 71 amputations performed by as many surgeons is greatly higher than the general average of the whole 2,098 cases. The total mortality of all the amputations returned by country surgeons is 1 in 9.2, or 10.8 per cent.; while the mortality of the 71 single operations is 1 in 7.8, or 12.6 per cent.; so that, had all the single cases, favourable and unfavourable, been left out of the list, the mortality of the remaining 2,027 country amputations would actually have been lower than Simpson's table proves it to be! Nay, more, of the 62 favourable single cases returned, 23 were amputations of the forearm; while none of the 9 unfavourable single cases were so. If we deduct the 23 forearm-cases, we find that in the other 48 single amputations of the thigh, leg, and arm, the mortality rose to 1 in 5.4, or 18.7 per cent.; whereas in the remaining 1,672 similar amputations in the schedules of country surgeons returning more than a single case, the mortality is only 1 in 7.7, or 12.8 per cent. I need not point out that this result is in strict conformity with Simpson's deduction from the whole of the statistics, that, in country practice, increased experience in amputation gives a higher measure of success.

I have tried, sir, in thus criticising your article, to be as succinct as possible; nor should you have heard from me on the subject, had not my regard for the memory of a great man made it imperative that I should take notice of the serious error you had promulgated to the profession.

I am, etc., LAUCHLAN AITKEN, M.D.

Rome, October 25th, 1873.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

DR. ELTON BURROUGHS has been awarded the Government grant for Vaccination for the Prees District of the Wem Union.

AMENDMENTS OF SANITARY LAW.

MR. GEORGE TURNER, Medical Officer of Health to the Portsmouth Sanitary Authority, has made a very important communication to the Parliamentary Bills Committee of our Association. As the circumstances which he so ably details must find their parallel in many other districts, we invite attention to the case. Mr. Turner's first ground of complaint against the existing state of sanitary law is, "the long period which now intervenes between the report of the health-officer to the local authority, and the time when active measures can be taken in those cases in which, from structural defects, houses are reported as unfit for human habitation."

It appears that in Portsmouth, with a population of 113,000 (1871), the sanitary authority (Town Council) meets only once a month; but there is a so-called Sanitary Committee of that Council which meets every fortnight, yet "entirely without legal powers" to act upon information received. The facts, which Mr. Turner adduces, show clearly that the same powers which have been conferred on committees of rural sanitary authorities by the Public Health Act, 1872, section 13, should be extended to committees of Urban authorities. Here is seen one of the anomalous absurdities which result from the division of local sanitary authorities into urban and rural. Whatever may be the administrative body for health purposes, it should be uniform throughout the country, and, in all populous places, should meet at least once a week, with full legal powers to meet all emergencies. No proper care can possibly be taken of the public health under such an administrative system as that in force in Portsmouth and other urban districts.

Two instances of grievous abuse are cited by the health-officers.

1. There is a block of buildings between two very narrow alleys, abutting on the quay, and containing fifteen houses, eleven of which are occupied by seventy-three persons, allowing to each an average of less than three hundred and forty-five cubic feet of house room for all purposes of living. One house is in ruins, and another is used as a coal store. There is but one privy for the entire block, and this can be used by only two of the houses. It is liable to overflow into the adjacent alley. There is absolutely no provision made for the removal of the excreta of sixty-one persons, and there are no ash-pits. The more careful of these unfortunate people throw their refuse into the Camber, a ship-dock adjoining, and surrounded by houses. The more careless and more numerous residents either cast these matters on a grated gully-hole in the alley, connected with an old drain leading into the dock—which drain is frequently choked up—or they flung their filth into the ruined house, which was also used for a similar purpose by the labourers on the quay, until the health-officer directed this ruin to be boarded up, reporting to his authority that the houses in question were unfit for human habitation.

The subsequent action taken on this case by the Town Council, through its engineer and clerk, is said to be under the statute 31 and 32 Vic., c. 130. Now, this we find to be the Artizans and Labourers' Dwellings Act, 1866—a very defective enactment, section 4 of which, relating to officers of health, was repealed by section 11 of the Public Health Act, 1872. It will be in the recollection of our readers how vigorously our Joint Committee on State Medicine protested against that silly clause before it became law for six years only). The proceedings under the Act in question admit of such needless delay, owing to the requirement of numerous notices, reports and references, that, as Mr. Turner states, the medium time required to put the Act in force is six or seven calendar months. A well-disposed and competent owner may effect the necessary reforms at once, but an obstinate one may prolong the time two or three more months. Cases in which the delay is longest, owing to the unwillingness or poverty of the owner, are commonly characterised by the most dangerous insanitary conditions. It is, therefore, clear that this obstructive Act should be repealed, and that amended provisions to effect promptly its professed objects should be inserted in the next Public Health Bill. To show how little our legal reformers know of the laws they try to amend, we need only state that this Act, as well as several others intimately connected with the health of the people, is not even mentioned by the Sanitary Commission in their "Arrangement of Statutes." Nor is any reference made to its

provisions in the official "Digest of Statutes for the Use of Urban Sanitary Authorities." Here, then, as elsewhere in the Statute Book, do we find enactments obstructive of sanitary administration, which have utterly escaped attention both by the Sanitary Commission and by the Local Government Board and its legal advisers, but which are adroitly made use of by local boards and recalcitrant owners of cottage property, in order to postpone or prevent the removal of most horrible and injurious nuisances.

2. Mr. Turner's other instance of abuse relates to a somewhat better class of houses, situated between Lake Road and Duke Street. In this case, also, the nuisance arises from drainage, the privies from both rows of houses opening into an old and badly-constructed postern drain, by direct and untrapped apertures. The liquid portion of the dejections of course escapes down the draining until the solid matter forms an obstruction, when a flood of sewage is thrown upon the premises above the stoppage. The process of opening, emptying, and cleansing the drain, by manual labour, is repeated every month or two. "To make the matter worse," says Mr. Turner, "the urban authority in 1866, licensed No. 215, Lake Street as a slaughterhouse, in direct opposition to four of its own bye-laws. The drain is at present blocked up there, and the occupier continues slaughtering. He cannot be prevented from so doing except by a summons before a magistrate, and this cannot be done until the sanitary authority meets. He will probably escape punishment as he was not "prosecuted under the bye-laws within six months of the first offence, which occurred in 1866." (We hope to hear the issue of this case.)

Here, again, is a frightful default, against which any good sanitary law would provide a summary and effective remedy. "Rights of owners" to poison their neighbours should not be allowed a week's grace.

It thus appears that the Portsmouth Town Council, like other urban authorities, is the wilful contravener, not only of the principles of sanitary legislation, but also of its own bye-laws; and such are the authorities which have been deliberately selected by a timid and absurdly confiding legislature as the local bodies for the administration of the Public Health Act.

The difficulties raised by the possession of badly-conditioned property by needy and ignorant owners are very great. These persons are, however, justified in leaving the work to be done by the local authority, and the cost to be charged on them as "private improvement expenses." In fact, a much greater proportion of the sanitary improvements in towns ought to be dealt with summarily on this principle, not contesting the matter with individuals, but proceeding promptly with the works after the expiration of the shortest reasonable time allowed to the owner. But, on this point, we agree with Mr. Michael, that the period of repayment by such owners is by far too limited under the present law. It ought to be greatly extended, and, in a much larger proportion of instances, the cost should be borne by the public, as is done to a great extent in Liverpool.

Mr. Turner recommends very properly that, whenever the health-officer, the engineer, and the clerk of the authority agree, the necessary notices might be served and the summonses issued, without waiting for the meeting of the sanitary authority—we should add, if this does not meet weekly. Mr. Turner proposes the universal abolition of privies and the substitution of water-closets. We recommend him, before getting into sewerage troubles, to examine some of the better privy-systems in force in the northern towns, especially that at Rochdale, where the pollution of the soil by soakage is quite as effectually prevented as it can be by any system of sewerage, and where it is simply impossible to pollute the water-supply.

We will not go further into this question now; but it well deserves more impartial and unprejudiced consideration than it has hitherto received from most sanitarians. In flat and low-lying districts, especially, it is more advantageous, speaking financially, than the water-carriage of fecal matter. The more frequent meeting of the sanitary authority, whether Town Council or Committee, would partially remedy another obstacle mentioned by Mr. Turner, namely, the difficulty of promptly removing to hospitals patients suffering from infectious diseases. This necessary measure would be greatly facilitated by combining representatives from the board of guardians and the rural sanitary authority with representatives from the urban authority, so as to make a Joint Sanitary Committee, fully empowered and fully officered, in each place. These suggestions will, we hope, be taken into consideration by the two committees of our Association before the next session of Parliament.

We cannot conclude without expressing our admiration of the excellent coloured maps of the portions of Portsmouth complained of, which have been forwarded to us by Mr. Turner. Such plans ought generally to accompany statements inculpatory of local authorities. We hold these for reference until they are required.

PUBLIC HEALTH ORGANISATION.

SIR,—The Public Health Act of 1872, and the organisation best calculated to fulfil the objects of that Act, will, doubtless, for some time to come form topics for discussion at meetings of the various Branches and by others interested in the subject.

Referring to the scheme propounded by Mr. Hart in his Address at the recent conference of Medical Officers of Health, which, in a modified sense, repeats the suggestions of the Joint Committee on State Medicine, I venture to think it would facilitate discussion and help to promote unanimity of opinion, if the members of the Association more clearly understood some points in this scheme. The points which seem to me to require elucidation, for the sake of brevity, I put in the form of questions.

I. Is it proposed that all Poor-law medical officers should be officers of health?

II. What is to be the relation between the Poor-law medical officer, as officer of health, and the proposed consultative health-officer?

III. What are to be the prime duties of each?

IV. When, as is the case in numerous places, a town, under the management of a corporation, is divided into two or more Poor-law medical districts, is the corporation to be advised by the several officers, or by only one?

V. On which of the officers will the responsibility rest of advising the local authority—on the Poor-law district officer or the consultative health-officer?

VI. In the event of the local authority, being advised by the district Poor-law medical officer, not approving his suggestions, is it understood that they will appeal to the consultative health-officer, and thus supersede the local officer (and, of course, by so doing, disgust him and weaken his influence)?

VII. In the event of the several Poor-law medical officers advising the local authority, what security will there be for uniformity of advice?

VIII. If the power of appeal to the consultative health-officer be allowed, is it likely to expedite sanitary reforms, or the reverse?

IX. As regards united districts, is it proposed that the Council of Delegates, or whatever the proposed county or district authority may be, should have absolute power? or will each delegate or representative have to refer the question back to the local authority?

X. I venture to ask these questions because it seems to me that, under the proposed scheme, the Poor-law medical officer, as health-officer, must in reality become the assistant of the consultative health-officer, and the local boards sink into insignificance before the county or district authority. Is it likely that officers of health will accept this position, or local boards consent to be so extinguished?

I think that these questions should be answered clearly and without reservation.

I am, etc.,

A MEDICAL OFFICER OF HEALTH.

September 9th, 1873.

*** In the address referred to, the scheme adhered to was that of the State Medicine Committee, without, so far as we are aware, any perceptible modification. The points raised by our correspondent are of practical importance. We have requested the comments of Dr. Rumsey on this letter before replying to it; we find ourselves entirely in accord with them. The following are the answers which we would, therefore, submit to our correspondent's queries:—

1. Yes.

II. That of local deputy or assistant.

III. (a.) The duties of the deputy or local health officer would be mainly those of a scientific reporter of cases of sickness and injury; also of the causes, origin, and distribution of disease, especially of epidemic outbreaks. He would thus be the primary element in a national registration of disease, and the basis of a sanitary organisation. In epidemics, he would inspect the localities and dwellings invaded, inquire into causes and circumstances, direct the isolation (in hospital or otherwise) of infectious cases, order all sanitary precautions in the families of the sufferers and for the safety of survivors. He would report instances of overcrowding, inspect dwellings, buildings, articles of commerce and food, and trades, injurious to health. He would act promptly for the local authority, as health officer of the first instance, on all urgent occasions, reporting his action to the chief officer.

(b.) The chief or consultative health officer, for a group of districts or a county, would receive weekly, or oftener in dangerous emergencies, the reports of the local health officers, the registries of births, deaths, and causes of death, the returns of cases from hospitals and dispensaries (to be paid for), and the reports of the nuisance officers. He would call for correction of defective returns. He would abstract and classify the facts reported, distribute the pith of the information, thus obtained and ar-

anged, among the various local authorities in his district, reporting it also to the superior authority for which he acts, and to the Central Board. He would advise all the authorities in his district, and inquire into all cases referred to him.

[The scheme for the duties of health officers put forth by the Local Government Board in November, 1872, does not suppose the existence of two orders of medical officers of health. Yet it directs the performance of two or more distinct kinds of duty, which will be found incompatible, and nearly impracticable by the same single officer. The present official scheme will have to be recast, and the duties rationally adjusted between two orders of officers in a proper sanitary organisation.]

IV. The Poor-law medical officers, being everywhere at work, would make the same inspections and reports in corporate towns and cities, as in country districts. If the corporate town be large and rich enough to maintain a chief officer for itself, he would perform the same duties for the corporation, as the chief officer of a county or amalgamated authority. [The metropolis might require ten chief health officers debarred from practice.] If the corporate town be not populous or wealthy enough to employ and pay a chief officer, debarred from private practice, other adjacent districts should be combined with it for this purpose.

V. On the poor-law district officer or deputy health officer—in sudden local emergencies.

On the chief health officer—in cases reported to him from the local authorities and officers, and in matters of sanitary improvement affecting a larger area than that of the local authority, and in the general sanitary administration of his district.

VI. The action of the chief officer would generally be in support of the local officer. It need neither "disgust" the latter, nor weaken his proper position. It would tend rather to strengthen his action. Especially, it would relieve him from the damaging duty of initiating proceedings against his local employers and patients, an onerous responsibility which is avowedly disliked by the great majority of union medical officers.

VII. It is not intended that "several Poor-law medical officers" should "advise" the same authority. If it were, there would, indeed, be no "security for uniformity of advice."

VIII. The advice of the chief health officer of an united district or of a county would, it is believed, materially "expedite sanitary reforms."

IX. The superior or county administrative authority would supplement and correct local action. It would, subject to the central authority, have "absolute power" in contested cases, and in sanitary improvements affecting a larger area than that of a local board. Strictly local matters might probably be settled at once by a willing local authority, or might be referred to it.

X. The plan proposed by the Joint Committee and Mr. Hart would by no means "extinguish" local authorities, while it would keep them up to their duty. As at present constituted, these small local boards are utterly unfit for many duties relating to the public health, which will have to be performed, some day, by some proper authority.

There is no more reason why the local medical officer should not "accept the position" thus offered him, than why a regimental surgeon should object to act under a surgeon-major or an inspector of hospitals. If men go into the public medical service, they cannot reasonably expect to be all on perfect equality and of the same rank.

NOTES ON REPORTS OF MEDICAL OFFICERS OF HEALTH, 1873.

Birmingham.—Dr. Alfred Hill has presented to the Town Council his first two quarterly reports on the sanitary condition of Birmingham. The reports, in addition to very complete statistical records as to the mortality of the borough, contain analyses of the water-supply and details as to the prevailing meteorological conditions. In the first quarter of the present year the death-rate was nearly twenty-five per thousand persons living, but during the second quarter it fell to a little short of twenty-two per thousand. Small-pox was largely prevalent during both quarters, and Dr. Hill takes the opportunity of pressing upon the town the necessity of efficient vaccination as a certain means of stamping out this loathsome disease. Its prevalence always implies the want of vaccination, and its fatality depends upon the extent to which it is carried out. As elsewhere, this latter point is forcibly shown in Birmingham, where the mortality during one quarter was at the rate of 11.76 per cent. amongst the vaccinated, and 61.11 per cent. in those who had not been vaccinated. Had revaccination been efficiently carried out, we are justified in asserting that there would have been no death-rate at all amongst those subjecting themselves to the operation; and, although

we have no means of judging from Dr. Hill's report as to the extent to which the provisions of the Vaccination Acts are carried out or not in Birmingham, we would impress upon the Board of Guardians, as the vaccination authority, the great importance of seeing that every child within their jurisdiction is vaccinated, and that proper steps are taken by them to give facilities for, and to encourage, revaccination.

Chesterfield.—In his report to the Chesterfield Rural Sanitary Authority, Dr. Angus Mackintosh, after supplying certain meteorological data, points out that the death-rate had been about twenty per thousand. Fever, which we presume to have been of the enteric type, had latterly been greatly on the increase, and the number of deaths amongst infants had been extremely high. This latter mortality is stated to be mainly due to convulsions, a term which affords one of the most unsatisfactory of all records of infant death. It may be laid down as a sound rule, that where a large infantile mortality prevails, there also insanitary conditions prevail, and it is owing to the low vitality existing during the early period of life, that infants primarily suffer. Whether diarrhoea ensue or the feeble life of the child is otherwise extinguished by the poisoned air it breathes and the harmful conditions by which it is surrounded, convulsions often supervene during the last moments or hours of life, and whereas they are but a final symptom brought about by conditions which have rendered life insupportable, they are in death-records too often raised to the rank of a disease. Neglect of children, whether by nursing them out, by the provision of improper diet or otherwise, of course largely tends to swell an infant mortality, but these causes can hardly prevail more in Chesterfield than in our factory towns, where their fatal influence is so notorious. Dr. Mackintosh's report, however, leaves no doubt upon that point, for it tells the usual tale of air and water poisoned by sewage and excremental nuisances, and we ourselves recall the fact that during recent years several of the rural portions of this district have suffered severely from outbreaks of infectious disease engendered or rendered epidemic by the bad sanitary conditions prevalent. There seems a possibility that the local sanitary authority may undertake the draining of middens, a proposal which we cannot endorse. It is the element of wetness which, by favouring decomposition, renders a midden so fertile a source of nuisance and disease, and to drain such a structure after rainfall and slops have soaked through its contents is but to provide a most imperfect remedy for an evil which should not exist. The draining of a midden should not be necessary; and, were it constructed on the principles laid down in the Appendix to the Twelfth Report of the Medical Officer of the Privy Council, the necessity never would exist. We trust that Dr. Mackintosh will receive support in carrying out the numerous improvements which he indicates in his report.

Cockermouth.—The rural sanitary authority of Cockermouth has, under an order of the Local Government Board, had all the powers of an urban authority conferred upon it, and it has united with the Local Board of Cockermouth for the purpose of procuring a common water-supply. Prior to the consideration of the future bye-laws, a report was read to the members of the authority by Dr. Fox, congratulating them upon the earnest desire they had evinced to stay the spread of preventable diseases, and urging upon them the importance of framing such local regulations as would bring all necessary sanitary improvements within the range of the humblest cottage dwelling.

Gainsborough.—Dr. Mackinder calls the attention of the Local Board of Health in this town to the fact that the water used by the inhabitants is pumped from the river at certain fixed hours quite irrespective of the tide, and notwithstanding that the sewage of ten thousand persons is emptied into the stream not far from the point at which the water is procured; he also informs the Board of the necessity for improving the ventilation of the public sewers. The consideration of the latter subject was at once entered upon, and orders were given to act on the advice of the medical officer of health, but as regards the danger attending the present water-supply no resolution was come to, on the ground that if the town were supplied with such water only as would not be liable to be contaminated with sewage, the supply would be insufficient. Surely it is impossible, now that a matter of such importance has once been brought to light, that it can be allowed to stand over for a length of time. Bad as it is to curtail a public water-supply, it is better to do this temporarily, than knowingly to run the risk of providing people with diluted sewage for drinking purposes.

Whitehaven.—Brief monthly reports have been drawn out by Mr. R. Lumb for presentation to the Whitehaven Town and Harbour Trustees. During the past four months there has been a steady improvement in the sanitary condition of the town, but it is not at all clear that this is due to the action of the sanitary authority; for, to judge by the reports of the medical officer of health, but little notice is, as a rule, taken of the sound advice given by him, and even when, during the early part of the summer, fever was on the increase, the main burden of his report

was that the sanitary evils before pointed out still remained in operation. This town has twice been visited by Dr. Buchanan on behalf of the Government. His reports disclosed a serious prevalence of preventable disease and an unusual amount of sanitary neglect; and, as the result of his second inspection, he found that the sanitary progress which had been made was totally incommensurate with the wants of the town, and that there was an absence of any indication that the Board of Trustees had duly measured its responsibilities.

EVASION OF THE PUBLIC HEALTH ACT BY A RURAL AUTHORITY.

THE health-officer of a large rural union—acreage, 60,000; population, 14,000—in the Midland Counties, has been recently appointed at a salary of £5 per annum, with £3 3s. for each inspection; “the Board wishing to avoid altogether the control, interference, and assistance of the Local Government Board.” Fever is very prevalent in one of the villages, the probable cause being, as usual, defective drainage. The health-officer is aware of all this, but, not having received official notice, and being not at liberty to inquire without the order of the local authority, he is powerless, and must let matters take their own course. He may, indeed, write to the clerk, calling attention to the fact, and he may seek to communicate unofficially with the inspector of nuisances; but what more can he do without offending his authority? Why did he sanction an obvious evasion of the Act by accepting office on such terms?

RETURNS OF SICKNESS TO HEALTH-OFFICERS.

MR. E. R. MORGAN, medical officer of health to the Neath Union, has made the same kind of attempt to obtain from his medical neighbours information as to outbreaks of disease as we noticed last week from Dr. Laidlaw, of Tranmere, and with a still less successful result. Mr. Morgan says wisely, “I cannot blame them; in fact, I do not see how they can be expected to do so without remuneration.”

COTTAGE REGISTERS.

THE medical officer of health of the Shorwell District (Godshill), in the Isle of Wight, has favoured us with his Form of Cottage Register. His columns are headed:—(1) No.; (2) Kind and Situation of Building; (3) Name, Occupation, and Wages of Tenant; (4) Family and Lodgers; (5) Sitting and Sleeping Rooms (cubic space where deficient); (6) Water-supply (qualitative examination where suspected); (7) Kind and Situation of Out-buildings; (8) Drainage, Refuse Deposit (where objectionable); (9) Total Number of Inmates; (10) Remarks.

From a specimen of his entries, he seems to record much useful information, which, with a good index, will form an appendix, containing much valuable information, for his annual report. We advise him to procure and examine the forms published by Dr. Acland, at Messrs. Parker and Co.'s, Oxford. These may save him some trouble in writing.

PROPOSED SALARY OF MEDICAL OFFICER OF HEALTH IN DERBY.

WE are very glad to see that the medical profession in Derby have taken action in full endorsement of the observations which we made last week (page 519) on the insolent offer by the Derby Sanitary Authority of the salary of £20 a year for a medical officer over a population exceeding 50,000. We observed that, “if all medical men were true to their profession, so insolent an offer would pass as undeserving of notice.” We are glad to find, in the *Derbyshire Advertiser* of October 31st, an emphatic protest, signed by a large number of the medical men practising in Derby, stigmatising the terms offered as ridiculous and degrading, and pointing out that, “to offer £20 per annum as the remuneration for the performance of scientific duties so important, various, and intricate as those involved in the working of the Public Health Act, is not merely an insult to the profession, but (what is far worse) it is the surest method of depriving the community in general of the benefits to life and health, and social well-being, which are the objects, and should be the results, of all sanitary legislation.”

The attitude of the medical practitioners of Derby is excellent, and we are glad to hear from Dr. Dolman that, if necessary, there is reason to believe that the Derby Branch of the Association will be there ready to afford the assistance of its associated organisation in the satisfactory solution of this important public question.

OBITUARY.

JOHN HENRY CAMPBELL, L.F.P.&S.G., L.R.C.P.Ed.,
F.G.S.Ed.

THE career of this amiable and much beloved medical man has been cut short at the early age of twenty-six. While a student he had an attack of rheumatic fever, which left the aortic and mitral valves seriously impaired. After taking his diplomas, he went abroad for some time in the service of the Liverpool, Brazilian, and River Plate Marine Service. His health was thereby so far restored that upon his return home he settled down to practice in the district of Strathkiness, in the county of Fife. Before a year had elapsed, however, he was again rendered unfit for work by a general neuralgic affection accompanied by great prostration. He dated his loss of strength from one evening when returning home in a thunder-storm he was struck by lightning which threw him from his horse. His whisker and eyebrow and the side of the horse were slightly singed. Although much stunned, he was able to continue his journey, and for some time afterwards did work, but with increasing loss of strength. The effect of this blow may possibly be traced in the affection, which continued from this time until his death, about eighteen months afterwards. It was characterised by attacks of severe neuralgia, changing from time to time its seat, and leaving hardly any part of the body free; accompanied by severe vomiting, and almost complete loss of tone in the vascular system. Frequently during the attacks, the smallest arteries in the skin could be seen visibly pulsating. The affection, as may readily be seen, was much less the effect of the crippled heart, than some obscure disease of the vaso-motor system, of the nature of which we as yet know nothing.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were duly admitted Fellows of the College on the 30th day of October, 1873.

Eatwell, William Coverdale Beaty, M.D.St. Andrew's, Oriental Club, W.
Christie, Thomas Beath, M.D.St. Andrew's, Royal India Asylum, Ealing, W.
Moon, Henry, M.D.St. Andrew's, 9, Old Steyne, Brighton

The following gentlemen were admitted licentiates of the College on October 30th, 1873.

Dawes, Richard St. Mark, 10, Lanark Villas, W.
Head, Robert Turner, East Grinstead
Hills, Thomas Hyde, Knightbridge House, Maidstone
Lattey, Walter, Southam, Warwickshire
Mackinlay, James Egan Harrison, 7, Earl's Terrace, W.
Nunn, Philip William Gowlett, 14, Vale Place, W.
Ransford, Thomas Davis, Guy's Hospital, S.E.
Sherwood, Arthur Paul, 25, Edwards Square, W.
Warden, Charles James Hisslop, 21, Westmoreland Place, W.

The following candidates, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College.

Nunez, Daniel, San José de Costa Rica
Parakh, Dhanjioha Navroji, 201, Euston Road, N.W.

The following gentleman, having passed the required examinations, will be proposed for admission as a member.

Morris, Beverley Robinson, M.D.Dublin, Nottingham

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 30th, 1873.

Bailey, James Johnson, Stockport
Lyddon, John Henry, Chatham
Robbins, Henry John, Aldeburgh, Suffolk

APOTHECARIES' HALL, DUBLIN.—At the professional examinations held in October 1873, the following gentlemen received the licence to practise medicine and pharmacy.

Robert Spence, John Joseph O'Sullivan, George Mahood Foy, John Baptist Fisher, and Richard N. Lyon.

The following candidates passed the preliminary examination in arts.

Hugh Joseph Greany, Ebenezer Donaldson, William Francis Fryer, Zachary George Myles, Joseph James Hallowell, David John Daniel Helihoys, Thomas Kidd, and James Maguire.

MEDICAL VACANCIES.

THE following vacancies are announced:—
BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon: £30 per annum, apartments, board, and attendance. Applications, 15th inst., to James C. Gell, Secretary.

BIRMINGHAM—Surgeon to the Borough Prison: £200 per annum. Applications to Messrs. Gem and Hebbert.

BRISTOL ROYAL INFIRMARY—House Surgeon: £130 per annum, apartments, board, and washing.

BUCKS COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, with board and furnished apartments. Applications, 15th instant, to Acton Tindal, Esq., Aylesbury.

CHARING CROSS HOSPITAL—Assistant Dispenser: £30 per annum. Applications, 12th instant, to Henry Woolcott, Sec.

CLIFTON UNION—Medical Officer to the Workhouse: £130 per annum.

CORK UNION—Medical Officer to the Workhouse: £150 per annum, apartments, etc. Applications, 20th instant, to P. McGrath, Clerk to the Union.

DORSET COUNTY HOSPITAL—House Surgeon: £70 per annum, and £10 additional as Secretary, with apartments and board.

DRAYTON UNION, Salop—Medical Officer for the Ashley District: £21 p. ann.

DURSLEY ODD FELLOWS SOCIETY—Medical Officer.

DURSLEY UNION, Gloucestershire—Medical Officer and Public Vaccinator for District No. 2: £90 per annum, and fees. Applications, 19th instant, to George Wenden, Clerk.

GRAY'S HOSPITAL, Elgin—House Surgeon: £50 per annum, board and lodging. Applications, 20th instant, to David Forsyth, Esq.

GREAT YARMOUTH HOSPITAL—House Surgeon: £100 per annum, furnished apartments, etc. Applications, 10th inst., to R. K. B. Norman, Hon. Sec.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street—Assistant Physician. Applications, 12th instant, to Samuel Whitford, Sec.

KENDAL UNION, Westmoreland—Medical Officer for the Kirkby Lonsdale District: £45 per annum.

KENT and CANTERBURY HOSPITAL—House Surgeon: £80 per annum, board, lodging, etc. Applications, 28th inst., to Thomas Southey, Sec.

METROPOLITAN DISPENSARY and CHARITABLE FUND, Fore Street, Cripplegate—Physician. Applications, 15th instant, to W. H. Goodchild, Secretary.

MID-CHESHIRE—Medical Officer of Health: £800 per annum.

NORTH CAMBRIDGE COTTAGE HOSPITAL—House Surgeon: £130 per annum, furnished house, gas, and coals. Applications, 10th instant, to Rev. Alfred J. Perry.

NORTHERN INFIRMARY, Inverness—House Surgeon and Apothecary: £50 per annum, board, etc. Applications, 13th inst., to Alexander Dallas, Sec.

PLOMESGATE UNION, Suffolk—Medical Officer for the Aldeburgh District: £40 per annum.

POPLAR—Public Analyst: £100 per annum. Applications, 11th instant, to S. J. Barth, Esq., 117, High Street, Poplar.

RAINFORD INFIRMARY, Oxford—House Surgeon.

RAMS GATE and ST. LAWRENCE ROYAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished apartments, etc. Applications, 9th instant, to A. R. Emmerson, Secretary.

ROTHBURY UNION, Northumberland—Medical Officer for the Whittingham District: £50 per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields—Assistant House Surgeon.

SIR PATRICK DUN'S HOSPITAL, Dublin—Surgeon.

STROMNESS, Orkney—Medical Officer.

SURREY HOUSE OF CORRECTION, Wandsworth—Surgeon: £300 per annum, unfurnished residence and garden, etc. Applications, 13th instant, to Richard Onslow, Governor.

UNIVERSITY OF DUBLIN—Professor of Surgery: £150 per annum, and fees.

UNST, Shetland—Parochial Medical Officer. Applications to Mr. White, Inspector of Poor.

WEST DERBY UNION, Lancashire—Medical Officer for the South Municipal District: £125 per annum. Applications, 11th instant, to W. Cleaver, Clerk, Clayton Square, Liverpool.

WESTMINSTER HOSPITAL—Assistant Surgeon. Applications, 11th instant, to F. J. Wilson, Sec.

WESTPORT UNION, co. Mayo—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Louisburgh Dispensary District: £500 per annum, fees, residence, etc. Applications, 10th instant, to Hugh Wilbraham, Esq., Boat Haven Lodge, Westport.

WEST RIDING LUNATIC ASYLUM, Wakefield—Assistant Medical Officer.

WOOLWICH—Public Analyst.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BURMAN, J. Wilkie, M.D., Deputy Medical Director of the West Riding Asylum, Wakefield, appointed Medical Superintendent of the Wilts County Asylum, Devizes, *vice* the late Dr. Thurman.

KITCHEN, C. F. H., M.R.C.S., L.R.C.P. Lond., appointed Junior House-Surgeon to the Royal Infirmary, Manchester, *vice* R. Lyell, M.D., promoted to Senior.

ORWIN, Arthur Wigelsworth, M.R.C.S. Eng., L.R.C.P. and L.M. Edin., appointed Resident Medical Officer to the Guest Hospital, Dudley, *vice* Llewelyn Thomas, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

JONES.—On November 2nd, at No. 2 Residence, St. Thomas's Hospital, the wife of Robert W. Jones, F.C.S., M.R.C.S., L.R.C.P.L., of a daughter.

DEATH.

YOUNG, John Eldon, Esq., M.D., Surgeon-Major Her Majesty's 18th Regiment, "The Royal Irish", on October 26th, at Gosport, aged 44.

ASSISTANT-SURGEON HARRY LEACH, 1st Brigade Kent Artillery Volunteers, passed his examination at the Medical Department of the War Office on the 22nd ult., and received a certificate of proficiency in accordance with the Army Regulations for the Reserve Forces.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Thomas Bryant, "A Case of Intestinal Obstruction and Gastrostomy"; Mr. A. E. Durham, "A Case of Foreign Body in the Pleura"; Dr. Puccell, "A Specimen of Calculus in Pelvis of Kidney"; Dr. Symes Thompson, "A Case of Scrofulous Kidney."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Jonathan Hutchinson, "On Abdominal Section and other Treatment for Intussusception"; Dr. Gee, "Case of Renal Calculi."

WEDNESDAY.—Epidemiological Society, 8 P.M. The President (Dr. William R. E. Smart, C.B., Inspector-General, R.N.), Introductory Address.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. George Johnson, "On Cases of Poisoning by Homoeopathic Concentrated Solution of Camphor"; also, "On Cases of temporary Albuminuria the result of Cold Bathing"; Dr. Anstie, "A Remarkable Case of Death from Meningeal Congestion, without any Inflammation"; Mr. Henry Arnott, "On a Case illustrating Esmarch's Method of controlling Hemorrhage in Operations by Elastic Bandaging."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. SEPTIMUS FARR's letter has been forwarded, and he will receive a private letter from Mr. Benson Baker.

A CONVERSAZIONE.

WE are obliged by Mr. Lawson Tait's polite offer to admit a reporter to a *conversazione* at his house; but we are of opinion that a *conversazione* at the house of a medical man is a matter of private and not of public interest, and we must decline to send a reporter. We are of opinion that not only ought reporters not to be invited on such occasions, but that their presence should not be tolerated. There are plenty of public medical institutions and societies at which interesting demonstrations may be given, when public report is desired; but if reporters are invited to private *conversazioni*, such occasions may easily degenerate, as on one or two notable occasions they have done, into offensive and invidious public advertisements. This is especially the case when reporters of the public press happen to find their way in, and when paragraphs creep into the public press for which the giver of the fact is not always responsible. Mr. Lawson Tait must forgive us for saying that we consider the form and purport of his invitation professionally objectionable, and that it is one which we are assured that the profession in Birmingham will concur with us in thinking ought not to be encouraged. We feel sure that, if these objections had occurred to Mr. Tait in time, he would have avoided following or setting what must, we think, be considered a bad example.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

M. B. M. A.—Sir Henry Holland was an associate. He became a subscriber to the JOURNAL two years since, and subsequently filled up the form necessary for his admission as a member. He never took, however, any part in the affairs of the Association, and was for many years much withdrawn from professional society.

WE are unwilling to publish the document forwarded to us from Wednesday. We would, on the contrary, gladly aid S. T. O. to retrieve his character and regain honest occupation in this or another country.

DISLOCATION OF THE RADIUS BACKWARDS.

SIR,—In last week's JOURNAL, I see an account by Mr. W. G. Davis of a dislocation of the radius backwards; and, as a case somewhat similar has recently come under my notice, I have thought it would be interesting, on account of its rarity, to make a note of it.

J. H., aged 13, was brought to me on September 1st, having just fallen off a hedge and pitched on his right hand. He complained of pain and inability to move the elbow, which, on examination, was found to be slightly flexed; and the head of the bone could be distinctly felt subcutaneously behind the external condyle. It was easily reduced by extension of the arm and flexion of the joint. Liskeard, November 5th. I am, etc., W. NETTLE.

VARIETIES OF SORE-THROAT.

J. H. B. writes—I should feel much obliged if you would kindly answer the following questions. 1. *Is quinsy ever infectious, or ulcerative from the commencement? 2. What would you consider to be the nature of an infectious sore-throat with great prostration, and accompanied by ulceration from its commencement?

* 1. Quinsy—i.e., uncomplicated tonsillitis—is not infectious, nor is it accompanied by ulceration in the early stages. 2. A disease combining all the characteristics described can scarcely be the "ulcerated throat" common among attendants in hospitals, etc., as that does not seem to be infectious. It would probably be one of the severe diseases—cynanche maligna or tonsillitis maligna—distinguishable by the locality of the ulceration. Possibly scarlatina anginosa or maligna, *sine exanthemate*, might be considered to be included in the description.

DR. W. H. DAVY.—We think not. The gentleman in question is described as an English surgeon dying in Paris.

HOSPITAL ABUSE.

UNDER this head, G. W. writes to us as follows:—I had under my care a few days ago a young married man occupying a position as clerk in a large wholesale house in the City, having a fixed salary of £250 a year. He has on several occasions paid me bills over £5 in amount. This patient was suffering from stricture of the urethra, catarrh of the bladder, and hæmaturia; and, although under my care but for a fortnight, his employers, getting impatient, wished for further advice. A consulting surgeon attached to one of our large hospitals came down, and concurred with me respecting the diagnosis, treatment, and prognosis, for which he received the sum of £3:3. It is now eight days since the surgeon's visit, and seventeen from the day I was first called in. This morning I received the following letter. "Sir,—My husband has taken the advice of his employers, and has this day gone into the hospital." Probably the employers were subscribers to the institution, and presented him with a ticket; but, whether or no, I have ascertained that he is in the hospital to which the consulting surgeon is attached, and, as far as I can learn, under his care and treatment. I make no comments, sir, but leave the profession to judge as to the abuse now going on in our large public hospitals. I am grieved to think that this is a fair sample of very many of the cases that attend as out-patients, as well as in-patients, at our metropolitan hospitals.

MR. BROCKLEHURST (Manchester) is reminded that all communications relating to the business department of the JOURNAL should be addressed to the Manager, Mr. Fowke, and not to the Editor.

L.K.Q.C.P.I.

W. A. C. writes—Will you kindly inform me what is the best course to adopt in this matter? I am an L.K.Q.C.P.I. Am I entitled to style myself Dr.? My College permits it, and says it has a special clause in its charter to permit it, as you will see by the enclosed. The Master of the Rolls ruled its Licentiates had a right to the prefix Dr., though not to the affix M.D. My medical neighbours are all M.R.C.P.s. Surely, if a man expends the extra time and money requisite to become a physician, he ought to profit by it. Will you direct me as to the name to put on my door-plate?

He further encloses the following:—

King and Queen's College of Physicians in Ireland.

College Hall, Kildare Street, Dublin.

SIR,—In reply to your queries, I beg to inform you that a full report of the decision of the Master of the Rolls, in *Re Trinity College v. College of Physicians*, will be found in the Dublin morning papers of the 27th April, 1864, to the effect, that this College has not the power to grant the degree of M.D., but in no way affecting the right of its Licentiates to the usual prefix of Dr.

I am, Sir, your obedient servant,

J. M. FINNY, M.B., Fellow and Registrar.

* * In reply to this query, we may quote for the benefit of W. A. C., the following extracts from a full report of a judgment of the Master of the Rolls in the *Daily Express* of April 27th, 1864. The Master of the Rolls decided that, "Under the Charter of the College of Physicians, the person who practises physic must obtain a licence under the common seal of the College, to use or exercise the faculty of physic, and the College is authorised to grant such licences; and, I am of opinion"—he went on to say—"that the power given to the College of Physicians to grant such licences, did not give them the power of conferring the degree or title of Doctor of Medicine." Further on in his judgment he says:—"I am clearly of opinion that the College of Physicians had no right, under the provisions of their Charter, to confer either the degree or the title."

This, then, is the upshot of the judgment; but, we must add, that any Licentiate of the K. & Q. Coll. of Physicians receives the courtesy title of "Doctor." Our correspondent would be justified by custom in putting on his door, "Doctor," for, in doing so, he would be only acting as nearly all the Licentiates of his College do in Dublin.

It is merely, as we have said, a courtesy denomination, to which he is as much entitled as any "M.B." To sign himself "M.D." would, however, be highly reprehensible.

SYPHILIS.

SIR,—The manifestations of syphilis are very irregular: the graphic descriptions of writers on the subject are untrue, and consequently misleading. Let the objectionable terms "secondary" and "tertiary" be abolished. Call the exordial sore "chance"—hard or soft as the case may be—and the resulting phenomena "constitutional syphilis," or "syphilis" simply. For a long time it has been held by great authorities, that in the so-called "tertiary stage" of syphilis the syphilitic virus is exhausted, and, therefore, contagion impossible. Perhaps this dictum may turn out as fallacious as that other dictum formerly held by equally great authorities, conspicuously by Ricord—viz., that the secretion of a secondary sore was not infectious. No one, however, at the present day, who dares trust the evidence of his senses, will subscribe to such an opinion. My own observations lead me to believe that syphilis is far more widely spread by means of so-called "secondary sores" than by the irritating chancre. When it is proved, then, that "tertiary syphilis" is not syphilis at all, the terms "sequelæ of syphilis," or "syphilitic cachexia," will be unobjectionable.

I do not see how *per se* can in any way influence the character of a syphilitic eruption. Premature old age must arise from some defect of constitution; and that constitutional defect would, no doubt, determine the character of the disease. Beyond this, I think, we can scarcely go.

With regard to that *questio vexata* the treatment of syphilis, I agree with Mr. Balmanno Squire, that if the theory propounded by Mr. Lane were true, no constitutional symptoms should ever occur after a full and early course of mercury given for Hunterian chancre. Practice negatives this theory.

Maida Hill, Oct. 28th.

I am, etc.,

R. S. SISSON, M.D.

HOUGHTON-LE-SPRING MEDICAL ASSOCIATION.

At a meeting of the Houghton-le-Spring District Medical Association, held at Smyth's (White Lion) Inn, on 16th inst.—R. P. Edger, Esq., in the Chair—the following was arranged.

The Chairman read over the resolutions adopted at last meeting, which were approved of.

It was then reported by two or three members from outlying places that, in consequence of the threatened action of the miners to resist to the utmost the full increase agreed upon at last meeting, they had accepted two-thirds of it by way of compromise, with the promise of the full advance in the course of a little time. As this Association is founded upon conciliation principles, it was resolved that these members had done wisely for the time, but were urged to work on steadily in the attainment of the full advance.

It was next resolved that the system of gratis visits to patients be entirely abolished within the district, but each individual member to charge a visiting fee according to the circumstances of each individual patient. In like manner, gratis vaccination was condemned; and it was ruled, that in future when any member vaccinates, who is not a public vaccinator, a fee of no less than half-a-crown be charged in every case.

Finally, it was resolved that the Secretary be instructed to draw up, in accordance with the suggestion of the Registrar of General Medical Council, a memorial to the Council, upon the subject of qualified men planting in remote branches unqualified assistants, who do great injury to qualified men in their neighbourhood; and that this memorial be ready for approval and signature next meeting day.

I am glad to report that three new members were enrolled at this meeting, so that all qualified men within the radius, except three, are now members of the Association, and I earnestly hope that by next month even these may see fit to join us for their own and the common good.

Houghton-le-Spring, Oct. 18th, 1873.

J. O'FLANAGAN, Secretary.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Daily Post; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Oct. 29th; The Anti-Gam-Law Circular, Nov. 1st; The Northern Echo, Oct. 31st; The Daily Post, Nov. 3rd; The Bedfordshire Mercury, Nov. 1st; The Eastern Daily Press, Oct. 31st; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; etc.

COMMUNICATIONS, LETTERS, &c., have been received from:—

Dr. Rumsey, Cheltenham; Mr. Gutteridge, Birmingham; Mr. Callender, London; Mr. Young, Haslar Garrison Hospital, Gosport; Mr. Curling, London; Dr. W. H. Day, London; Mr. James Reid, Ellon; Mr. Brown, Dorchester; Dr. Lewis Sayre, New York; Dr. West, London; Mr. Louis Lewis, London; The Registrar of the Royal College of Physicians, London; Assistant-Surgeon Atkinson, Cheltenham; Staff-Surgeon Moriarty, M.D., Central Barracks, Woolwich; Our Liverpool Correspondent; Mr. J. Ashburton Thompson, London; Mr. Aitchison, Newcastle-upon-Tyne; Dr. J. W. Moore, Dublin; Mr. T. Holmes, London; An Associate; Mr. Greenway, Plymouth; Mr. T. H. Bartlett, Birmingham; The Secretary of the Harveian Society; Dr. Allan, Fort William, N.B.; Mr. Lawson Tait, Birmingham; Dr. Marshall, Nottingham; Mr. Head, East Grinstead; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Dr. G. M. Humphry, Cambridge; Dr. D. Embleton, Newcastle-upon-Tyne; Dr. A. P. Stewart, London; Mr. W. H. Michael, London; Dr. George Johnson, London; Dr. Daldy, London; Mr. Williams, Barrow-in-Furness; The Secretary of the Clinical Society; Dr. Dolman, Derby; Mr. Septimus B. Farr, Andover; Mr. Brocklehurst, Manchester; Lord Lansdowne, London; Our Paris Correspondent; Dr. Moorman, St. Colomb, Cornwall; Dr. Berkhardt, London; A Member; Dr. T. Radford, Manchester; Dr. R. Southey, London; Our Dublin Correspondent; Dr. Bell Taylor, Nottingham; Dr. Embleton, Newcastle-upon-Tyne; Dr. J. Wilkie Burman, Devizes; Dr. Radford, Higher Broughton; Dr. A. P. Stewart, London; Dr. Rumsey, Cheltenham; Dr. Laidlaw, Tranmere; Dr. Stanley Haynes, Malvern; Our Glasgow Correspondent; Dr. Hughlings Jackson, London; Mr. Reeves, London; Dr. Edis, London; Mr. Prescott Hewett, London; Mr. Andrew Murray, Aberdeen; Dr. Squire, London; Mr. Poole, London; Mr. Whealey, London; Mr. Benson Baker, London; Mr. Eastes, London; Dr. Parkes, Netley; etc.

REMARKS

ON

CHRONIC BRIGHT'S DISEASE; PARTICULARLY
THE CIRRHOTIC FORM.*By T. GRAINGER STEWART, M.D., F.R.C.P., F.R.S.E.,
Physician to the Royal Infirmary, and Lecturer on Clinical Medicine, Edinburgh.

THE object of the present paper is to attempt to clear up the true pathology of that form of Bright's disease which is commonly described as the granular gouty, contracting or cirrhotic kidney; and to elucidate certain points as to its causes, mode of origin, symptoms, complications, and results.

The first point upon which it appears to me necessary to insist is, that the term "chronic Bright's disease" is not applicable to a single pathological process, but must be held to include all the forms of the malady, and not the individual forms alone, but their various combinations. Thus, I have watched one case of pure waxy or amyloid disease, the form associated with disease of the vessels, for a period of eleven years, and others for five or six years; while in regard to the inflammatory form, the disease proper to the tubules, I have had one case under observation for seven years and another for four. Cases in which the waxy and inflammatory forms existed I have also known to go on for several years. But in the presence of such an audience, it is not necessary further to insist upon this; for the experience of every physician who has closely studied the subject, must supply abundant illustration of what I am asserting. Still, granting these points, it must be admitted that, as the progress of the cirrhotic disease is eminently insidious and tardy, to it may be applied pre-eminently the term "chronic Bright's disease."

The second point which seems to require comment, is the error which appears to prevail that a granular condition of the surface, with contraction of the cortical substance, constitutes an unfailing evidence of the cirrhotic form. But my experience has satisfied me that in the waxy and inflammatory, as well as the cirrhotic form, a granular contracted kidney results, if life be sufficiently prolonged. I have traced the different stages of atrophy both in the waxy and in the inflammatory forms, and find that it is often possible to divine, with tolerable accuracy, the exact stage likely to have been reached in any individual instance. It may be suggested by some that, while this certainly does occur, it may, in all the forms, be due to one common process, such as the increase and subsequent contraction of the connective tissue; but my observations satisfy me that this is not the case, but that while in one form that is the cause, in others the change originates in ways entirely different.

Having made these preliminary remarks with the view of defining more clearly the opinions which I wish to maintain, I leave out of consideration the inflammatory affection of the tubules, and the waxy or amyloid disease of the vessels, and proceed to consider the pathology of the cirrhotic form. Three views with regard to the pathology of this affection at present find favour with different observers.

1. The first I shall consider is the theory of Sir William Gull and Dr. Sutton, that the disease is merely a local manifestation of a peculiar change of the blood-vessels, which they describe, and to which they give the name "arterio-capillary fibrosis." It may be best to give the summary of their conclusions in their own words. With regard to the microscopic appearances, their conclusions are as follows.

"1. The arterioles throughout the body, in that condition usually called chronic Bright's disease, with contracted kidney, are more or less altered.

"2. This alteration is due to a hyaline fibroid formation in the walls of the minute arteries, and a hyaline granular change in the corresponding capillaries.

"3. This change occurs chiefly outside the muscular layer, but also in the tunica intima of some arterioles.

"4. The degree in which the affected vessels are altered, and the extent to which the morbid change is diffused over the vascular system of the different organs varies much in different cases.

"5. The muscular layer of the affected vessels is often atrophied in a variable degree."

The general conclusions at which they have arrived they sum up as follows.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in London, August 1873.

"1. There is a diseased state characterised by a hyaline fibroid formation in arterioles and capillaries.

"2. This morbid change is attended by atrophy of the adjacent tissues.

"3. It is probable that this morbid change commonly begins in the kidneys, but there is evidence of it also beginning primarily in other organs.

"4. The contraction and atrophy of the kidney are but part and parcel of the general morbid changes.

"5. The kidneys may be but little if at all affected, whilst the morbid change is far advanced in other organs.

"6. This morbid change in the arterioles and capillaries is the primary and essential condition of the morbid state called chronic Bright's disease, with contracting kidney.

"7. The clinical history varies according to the organs chiefly and primarily affected.

"8. In the present state of our knowledge, we cannot refer the vascular changes to an antecedent change in the blood due to defective renal secretion.

"9. The kidneys may undergo extreme degenerative changes, without being attended by the cardio-vascular and other lesions characteristic of the condition known as chronic Bright's disease.

"10. The morbid state under discussion is allied to the conditions of old age, and its area may be said hypothetically to correspond to the area vasculosa.

"11. The changes, though allied with senile alterations, are probably due to causes not yet ascertained."

In seeking to determine the correctness of their opinions, I have first, by the kindness of Dr. Sutton, examined a number of preserved specimens, so as to satisfy myself of the exact appearances to which they have applied the term arterio-capillary fibrosis; and secondly, I have carefully examined the small vessels in every case of examination after death to which I have had access during the past three or four months. These cases are only twenty-three in number; and although I admit that such a number is totally inadequate to afford a foundation for any new view, it is, I submit, quite sufficient to test the correctness of views already advanced. All the more is this true in the present instance, as among the cases there was a considerable proportion of examples of Bright's disease.

The conditions which I have observed are—besides the presence of fatty granules, and of pigment on the surface of the vessels, and the occasional occurrence of small aneurisms in their walls, and of thrombi within them—first, a more or less marked thickening of the outer coat of the small arteries. This is in some cases so distinct as to attract attention by its wavy, fibrous appearance, and the sinuous outline of the vessel where no reagent has been applied. But these appearances become much more distinct when the specimens are placed for a short time in water, or in glycerine, or when a little dilute acetic acid is added.

In many cases, the application of these reagents produced an appearance as of thickening, certainly of increased prominence, of the external coat, even when the vessel without reagent appeared natural. But the appearance thus artificially produced differed from that of the true thickening, in that it was never wavy or fibrous-looking. I found no evidence of free exudation, or of the presence of any solid material in connection with the outer coat.

The condition thus described corresponds exactly to the appearances of the specimens of so-called hyaline fibroid disease which I examined. I have some difficulty in deciding what the elements were which so appeared thickened or became distinct by reagents; but I am satisfied that they are not any new material exuded, and I think that they include the tunica adventitia, and probably another sheath; whether lymphatic or a mere prolongation inwards of the pia mater, as Dr. Batty Tuke suggests, I am not prepared to say. With regard to the influence of various reagents, it appears to me that they produce their effects mainly by being imbibed into the space bounded by the delicate membrane. Secondly, I found in several instances distinct thickening of the middle coat, with increase of the muscular fibres. I found no evidence of atrophy of this coat in any case. Thirdly, I found the internal coat in some parts thickened. I have met with all the peculiarities above referred to in a single artery, the whole three coats being thickened; but I have never seen evidence of diminution of the lumen. With regard to the capillaries, I have failed to find any evidence either of thickening or of exudation upon their walls.

Of my series of 23 cases, there were 12 in which the vessels presented no abnormality. There were 5 which had the middle coat thickened, 3 to a marked extent, and 2 to a slight. There were 10 in which the outer coat was thickened, in 4 of which the middle coat was also thickened. Of the 12 in which the walls were natural,

there was—(1) one case of chronic peritonitis; (2) one of phthisis, with slight cirrhosis of kidneys; (3) one of cystic disease of kidney, fatal by uræmia; (4) one of slight cirrhosis of liver and kidneys; (5) one of tubercle of lungs, pleura, and peritoneum; (6) one of typhoid fever; (7) one of pleurisy and double pneumonia, and cerebral embolism; (8) one of cirrhosis of kidney, with aneurism; (9) one of phthisis, with combined waxy and inflammatory Bright's disease; (10) one of phthisis, with inflammatory and slight waxy disease; (11) one of insolation, with slight cirrhosis of kidney, with hypertrophy of heart; and (12) lastly, one of waxy Bright's disease.

Of the 5 cases in which the middle coat was hypertrophied, (1) one was a case of inflammatory Bright in the second, passing into the third stage; (2) one was another example of the same disease, fatal by hæmorrhagic apoplexy; (3) one was a case of cirrhosis of kidney, in which the kidneys were of about the normal size; in these it was well marked; (4) one of perinephritic abscess, with atrophy of one kidney and compensating hypertrophy of the other; (5) one of advanced cirrhosis of kidneys and of liver.

Of the 10 cases in which the outer coat was thickened, (1) one was a case of valvular heart-disease, with congestion of viscera; (2) one was a case of inflammatory Bright's disease, fatal in commencement of third stage; the middle coat was also thickened; (3) one was a case of acute alcoholism; (4) one was a case of carcinoma of the uterus, with hydronephrosis; (5) one was a case of typhoid fever; (6) one was a case of cirrhosis of kidney; the middle coat also was hypertrophied; (7) one was a case of perinephritic abscess; the middle coat here also was somewhat hypertrophied; (8) one was a case of inflammatory softening of the cord; (9) one was a case of commencing cirrhosis of kidneys and liver; and (10) one was a case of advanced cirrhosis of kidneys.

Let me now note the relationship between the cases of Bright's disease and the state of the vessels. There were 12 cases of Bright's disease, and of these the vessels were natural in 7. These 7 were—1 of waxy, 2 of waxy and inflammatory combined, and 4 of cirrhosis. Morbid conditions of vessels existed in the remaining 5 cases, of which 3 were cases of cirrhosis and 2 of inflammatory disease. One of the last-named had the outer coat natural. These facts seem to indicate—1st, that the waxy forms of Bright's disease, and the inflammation in its early stages, have no relationship to the state of vessels under consideration; 2nd, that, in regard to cirrhosis, although changes in the vascular walls were present in 3 cases, they were absent in 4. There seems, therefore, to be no constant relationship between the one condition and the other. Now turn to another aspect of the question. Of the 10 cases in which the outer coat was thickened, there were 6 in which there was no Bright's disease whatever; that is, in a majority of the cases in which the arterial fibrosis existed, there was none of the so-called corresponding renal lesion. We must therefore conclude that my facts are opposed to the view under consideration. But the facts seem to point to another relationship between renal disease and disease of the vessels. The middle coat of the arteries was hypertrophied in 5 cases, and 4 of them were cases of long-standing Bright's disease, while in the fifth one kidney was destroyed. Does not this tend to confirm Dr. George Johnson's observations that hypertrophy of the middle coat is a frequent result of renal disease? It is quite true that, according to his views, we might have expected it in a larger proportion of the cases; but it is to be noted that it occurred in none of the whole series that was not renal.

Turning now for a moment to the relationship between this condition of vessels and cardiac hypertrophy, we find that, of the 12 cases in which the vessels were normal, the heart is noted as hypertrophied in 4, and three of these had Bright's disease. Of the 5 cases in which the vessels had thickened middle coats, the heart was hypertrophied in 4, and all of them were cases of Bright's disease. Of the 10 cases in which the outer coat was thickened, it was hypertrophied in 5, of which 4 were cases of Bright's disease, and 1 had valvular affection, while it was normal in 3 and small in 2. These facts seem also to indicate that hypertrophy of the heart bears no special relationship to thickening of the outer coat of the vessels. For these reasons, as well as others to which I shall presently refer, I am unable at present to accept the theory of Sir W. Gull and Dr. Sutton.

2. The second theory is that maintained by Dr. George Johnson, both in his former publications and in the valuable course of lectures which he has been recently publishing in the JOURNAL of the Association. According to him, we have all the essential changes originating within the tubules. He finds, to quote his own words, "that the epithelium is opaque and granular, in a state of cloudy swelling; the tubes crowded and opaque, with degenerated and disintegrated epithelium; some contracted; others dilated in various degrees; some lined by transparent uninucleated cells; others filled with unorganised fibrine, rarely with blood, or with oil; lastly, the basement-membrane and the Malpighian

capsules thickened, this thickening being often more apparent than real" (BRIT. MED. JOURNAL, Feb. 15th, 1873). It is thus, according to Dr. Johnson, all intratubular—not an affection of the connective tissue. His theory of the production of these changes is, that the cells lining the tubules undergo alteration in consequence of morbid nutrition due to blood-disease from gout or other malady; the work of elimination of these materials being thrown upon them. I fully recognise the accuracy of Dr. Johnson's anatomical description, but not as applied to the form of disease under consideration. I have not in these cases found changes in the epithelium, but have never failed to find increase of the connective tissue. I value Dr. Johnson's descriptions highly, as accurate delineations of the third stage of the inflammatory form of Bright's disease; but it does not accord with my experience of true cirrhosis.

3. The third view, which is supported by Dr. Dickinson and other authorities, appears to me to be correct. According to this view, the essential change is supposed to be situated in the intertubular connective tissue. The organ is at first enlarged in consequence of increased growth of connective tissue, and subsequently becomes atrophied, the vessels becoming obstructed, and the nutrition of the gland-elements interfered with. The obstruction of the vessels is due to the mechanical pressure of the hypertrophied connective tissue in the early stage, and afterwards to the cicatrix-like contraction of that material. This change begins always at the surface, and is associated with thickening of the capsule, and gradually spreads inwards till, in some cases, almost the whole cortical substance is destroyed. These alterations sufficiently explain the deficiency of the amount of urea excreted by the organ. It has been commonly assumed that this change is inflammatory in its nature; but of this I have no satisfactory evidence. Certainly the extreme slowness of its progress and the absence of free exudation seem to me to indicate that it is truly an hypertrophy.

It will be thus apparent that my further experience and study of this disease incline me to maintain the correctness of the view of its pathology which I had formerly expressed. While asserting that it consists essentially in an hypertrophy of connective tissue, I do not in the least doubt that the change is a result of constitutional causes. Among the reasons which compel this belief, are the following.

1. The disease almost constantly affects both organs.
2. It is pretty equally diffused throughout both.
3. In many cases, other organs, such as the liver and spleen, are similarly affected.
4. It is often associated with well recognised changes in the blood, such as gout and chronic lead-poisoning.

With a view to clearing up the history of cirrhotic kidney, I have prepared a table showing the results of a series of *post mortem* examinations made during the years of my pathologistship in the Edinburgh Royal Infirmary, and another showing the leading points of the history of twenty of the cases which I have treated in the wards of that institution.

The pathological cases are thirty-six in number; and, for convenience of reference, I have reduced to percentages the results found. It will be understood that the statements given apply only to the anatomical conditions found at the necropsies. There was some degree of dropsy in 25.5 per cent. The heart was hypertrophied in about 66.6; but of these there were about 8.4 per cent. in which other conditions than the renal disease probably had contributed towards the hypertrophy. Œdema and congestion of lungs existed in 52.8 per cent; tubercles of lungs in 13.9 per cent. Of serous inflammations, pericarditis was present in 11.1 per cent; pleuritis in 16.6 per cent; peritonitis in no case. The liver was fatty in 22.2 per cent., cirrhotic in 16.6 per cent. The capsule of the spleen was thickened, and its substance fibrous, in 33.3 per cent. There were tubercular ulcers of the intestine in 8.33 per cent. Sanguineous apoplexy was present in upwards of 8.33 per cent.

Of a series of twenty cases which I have observed clinically, only three were women. Allowing for the preponderance of male over female patients in most hospitals, and for the fact that my male ward is larger than my female, it is clear that my cases afford further evidence of the generally recognised fact that the male sex is more frequently affected with this disease than the female.

With regard to age, the oldest was 70, and the youngest 21. Of the 20 cases, 5 were between 20 and 30, 6 between 30 and 40, 4 between 40 and 50, 7 between 50 and 60, 3 between 60 and 70, and 1 70. In the cases between 20 and 30, it was clear that the disease had existed for a considerable number of years; so that we have in these cases a confirmation of the fact that, while it is most common after 50, it is by no means rare in youth and early manhood.

With regard to habits, of the 20 cases, 12 were undoubtedly intemperate; most of them having been spirit-drinkers, some beer-drinkers,

and some promiscuous drunkards. Now, if we take all the forms of Bright's disease together, we find no very striking connexion between them and intemperance; but if we take, as here, the cirrhotic form alone, the relation is at once apparent. The cause assigned in 12 cases was the intemperance; in one of these, lead-poisoning co-operated with that cause; in another, gout. There was one other case in a patient not known to be intemperate, but whose illness was assigned to lead-poisoning. In the remaining seven cases, the cause was not known. It is further worthy of notice, that the three youngest victims of the disease were intemperate; and it appears to me probable that intemperance in early life specially tends to induce this malady.

It will be observed that I have not given heart-disease as a cause in any case. My reason for so doing is, that I regard the changes induced by passive congestion, in consequence of heart-disease, as distinct from those of true cirrhosis.

With regard to the mode of origin, it was in every case insidious. It never was marked in its early stages by dropsy and diminished urine, as is the inflammatory, nor by polyuria without dropsy, as is the waxy. Sometimes an apparently early symptom was frequent nocturnal micturition, but in a large number of cases there was nothing to attract notice until convulsion, or dimness of sight, or palpitation, or debility drew attention to the disease already well advanced. The quantity of urine was large in four cases; all of these were far advanced and had hypertrophy of heart; it was slightly increased in two; it was natural in five; and diminished in six; in three the quantity was not noted. In almost all the cases the colour was pale; in two it was occasionally bloody. The urine was acid in all but one. Its specific gravity was generally below the normal standard, but in some it was up to it. The amount of albumen varied, in many cases being a mere trace, in some very copious. In certain cases the quantity varied remarkably from time to time, both during the same day and on different days.

Hyaline and granular casts were found in a large proportion of cases, and in four instances in which the amount of urea was determined it was found diminished. The amount was determined and found diminished in other cases besides those included in the table. Three of the patients suffered from pains in the loins, only one to a considerable extent.

These facts confirm remarkably the ideas generally prevalent as to the conditions of the renal secretion in this form of Bright's disease.

Of symptoms connected with the alimentary canal, the most common were nausea, vomiting, and catarrh of the stomach. One or other of these was present in eleven of the cases, but not constantly, nor in the early stage. The blood presented in three cases a slight increase of white corpuscles. It is noted as natural in thirteen cases, and as poor in red corpuscles in one; but these remarks apply only to microscopic examination, and I have made no chemical analysis of the blood.

Hæmorrhages occurred to a serious extent in four cases, and slightly in one. The heart was hypertrophied in sixteen of the cases, the hypertrophy generally most marked in the left ventricle. In four the heart was natural. Vessels of the size of the radial were noted as thickened and sclerosed in thirteen. The pulse was, in almost all, full and hard. In two of the three cases, in which I have notes of the condition of the minute arteries, there was thickening due to hypertrophy of the middle coat. The degree of hypertrophy of heart and of alteration in the middle-sized arteries strictly corresponded to the advance of the disease, so that evidently from the operation of a common cause, or in consequence of the disease, hypertrophy took place.

From all I have seen of these conditions, both in this and in other forms of Bright's disease, I am satisfied that the changes, both in heart and arteries, are, in some way or other, consequences, as Bright and Johnson suppose, not mere concomitants of the affection. Statistics which I formerly published (see *Bright's Disease of the Kidneys*, 2nd ed., p. 308) shewed that, of cases of the inflammatory form fatal in the first stage, hypertrophy of the heart was present in 12.5 per cent.

Among the nervous symptoms, none is so common or so persistent as neuro-retinitis. This was present in eight of the twenty cases, and in several constituted the first symptom which attracted attention. Many cases had the oedematous conjunctiva, and one or two had hæmorrhage into that structure. The cerebral symptoms consequent upon the disease existed in seven of the twenty cases, convulsions occurred in six, severe headache in about the same number, and coma ushered in the fatal result in five. In several cases convulsions occurred occasionally, and afterwards disappeared. Of those fatal in the second stage, it occurred in 38.5 per cent.; and of those in the third, in 100 per cent. These statistics prove that the changes in the circulatory system are consequences of the renal affection.

I have hitherto believed that the old theory of embarrassment of circulation from impurity of blood explained the change; but I cannot

altogether refuse credence to the ingenious hypothesis of Dr. Johnson, which would refer it primarily to a protective action on the part of the small arteries. This hypothesis certainly affords an explanation of the hypertrophy of arteries which Dr. Johnson discovered; and I must say that no other explanation occurs to me, unless this thickening could be shown to promote the propulsion of the blood. But, before accepting Dr. Johnson's hypothesis, it would be necessary to explain the occurrence in certain cases of cardiac hypertrophy with normal vessels.

It appears to me that the sclerosis in the smaller arteries and the thickening of the outer coat of the minute vessels are both to be ascribed to increase of connective tissue, which may be a result of increased tension within the vessels, or, perhaps, a local manifestation of that tendency to increase of connective tissue, which is so marked in the kidneys. Had the theory of Gull and Sutton been that the renal disease was a local manifestation of a constitutional tendency to increase of connective tissue, those who are of my way of thinking would have had nothing to say against it.

Among the diseases of the respiratory system, the most common were congestion, oedema, and bronchitis. These occurred in nine of the cases. They are extremely common towards the end. Emphysema is not unfrequently associated with the condition, and pleurisy occurred as a complication in three of the twenty cases. There was slight dropsy in a considerable number of the cases, but it was persistently present in none. Occasional swelling of the feet, puffiness of the eyelids, and oedema of the conjunctiva, are symptoms very frequently present. In one case the patient made a temporary recovery from coma. Delirium occurred also in a few of the cases; mania in one.

Besides these consequent complications, there were several chronic degenerative diseases of the nerve-centres. One patient had glossolabial paralysis and muscular atrophy, three had aphasia and slight hemiplegia. Of the fatal cases, nine in number, death resulted from exhaustion in one; from uræmia in five; from pulmonary oedema and congestion and pleurisy in three.

The study of these cases appears to me fully to confirm the views which I have elsewhere advanced as to the symptoms, clinical history, and complications of the disease; and I hope that this paper may be accepted by the profession as a slight contribution towards the consolidation of our knowledge of these affections.

CASES OF COLOTOMY.*

By CHRISTOPHER HEATH, F.R.C.S.,

Surgeon to University College Hospital, and the Hospital for Women.

HAVING had during the last three years occasion to perform the operation of colotomy in the left loin nine times, I wish to bring the particulars briefly before the members of the surgical section, being convinced that the operation is a most valuable one, and applicable with great advantage to many cases otherwise irremediable.

Of my nine cases, which all occurred in females, two operations were undertaken for cancer of the rectum, causing obstruction, which had existed many days before the patients came under my notice: both died. Three operations were performed for scirrhus in an earlier stage before obstruction had occurred, and of these one died and two recovered; one of these patients dying seven months afterwards, and the other being about and well seven months after the operation. Two operations were performed for syphilitic ulceration and stricture; both recovered, and are alive now. One operation was performed as a last resource in a patient worn out with extensive fistulæ and ulceration (probably syphilitic) before she came under my notice, and proved fatal. One operation was performed for the relief of a recto-vesical fistula, and was perfectly successful. The result, therefore, was four deaths and five immediate recoveries. (See Postscript.)

CASE I.—Sophia D., aged 49, married twenty-six years, having had four children, was admitted into the Hospital for Women in January 1871. For six months she had had constant inclination to go to stool, with little result; there was no blood passed, and no pain during the act. Three months before, she began to pass blood with great straining, and had been treated for piles. On admission, two inches up the rectum there was a ring of hard irregular growths, admitting the point of the finger; the bowels had not acted for five days, but were relieved by an enema and medicine.

Colotomy was performed on January 28th, and the patient was dis-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

charged on February 25th. All difficulty of defæcation was relieved by the operation; but the disease of the bowel made progress, and the patient eventually died on July 31st, after suffering great pain. The *post mortem* examination showed a cancerous mass, occupying Douglas's pouch, involving the rectum, and firmly adherent to the uterus.

CASE II.—Sarah J., aged 42, married twenty-one years, had had three children and four abortions. She was admitted into the Hospital for Women on February 3rd, 1871, for obstruction of the bowels, which had existed for seven days, and was accompanied by stercoraceous vomiting. She had some months before been under treatment for scirrhus of the rectum, but had failed to attend. Colotomy was performed on the following morning, and the patient was relieved for the time, but gradually sank and died on the tenth day. At the *post mortem* examination, the walls of the rectum were found infiltrated with cancer, and the passage almost completely closed.

CASE III was a private patient, and her case has already been brought before the Clinical Society of London. She was brought to me by Dr. Grigg in January 1872, suffering from the constant passage of feces through the bladder, and occasional blocking of the urethra. Twelve years before, she had had a pelvic abscess on the left side after the birth of a dead child, and three years afterwards she passed some membrane *per urethram*, since which time feces had constantly passed with the urine, giving rise to very great and constant agony. The operation was performed on January 22nd, 1872, and the patient made a good recovery, being at once relieved from all inconvenience as regarded the bladder, and having but little trouble with the artificial opening. She is now alive and well, and able to go about as usual.

CASE IV.—Sarah Jane R., aged 32, married twelve years, who had had four miscarriages, was admitted into the Hospital for Women on April 22nd, 1872, in a very feeble and emaciated condition, and with the perinæum riddled with fistulae, through which fecal matter constantly oozed. There was also ulceration and stricture of the rectum, with a recto-vaginal fistula, due to the syphilitic ulceration, under which the patient had suffered for at least four years—*i.e.*, since the last miscarriage. The case was almost hopeless; but her only chance of life lay in relieving the constant irritation and suffering caused by the flow of feces, and I therefore recommended the operation of colotomy. This was done on April 27th, the patient being in a very exhausted condition, from which she never fully rallied, but died on the following morning. This patient had been for the six weeks before her admission in another metropolitan hospital, where she had decidedly lost ground daily; but the question of operation does not appear to have been entertained.

CASE V.—Charlotte T., aged 49, single, was admitted into the Hospital for Women on January 14th, 1873, with almost complete obstruction of the rectum by masses of scirrhus, one of which, of the size of a walnut, protruded through the anus. For nearly a year she had suffered from difficulty and pain about the rectum, and had passed blood. The nature and danger of the disease, and the relief to be gained by the operation, were fully explained to the patient, and colotomy was performed on January 18th, and at the same time the protruding cancerous mass was removed with the galvanic cautery. This latter proceeding was repeated on February 8th, with great relief, and the patient was discharged on March 11th. She has since that date attended as an out-patient, and is very comfortable, her only complaint being the discharge, which exudes from the cancer in the bowel.

CASE VI.—Elizabeth F., aged 64, married, but no family, had been an out-patient at the Hospital for Women since May 1871, having a year before that time began to suffer from pain in the rectum. Scirrhus was diagnosed, and she was relieved by palliative treatment; but the disease advanced so that complete obstruction became imminent, and she suffered considerable pain. Under these circumstances she was admitted into the hospital, and colotomy was performed on February 22nd, 1873. Some difficulty was experienced in reaching the bowel, owing to its undistended condition. The patient was very restless after the operation, and complained of a good deal of pain. In the evening, the abdomen was resonant and distended, but not painful. On the following day, the pulse was 120, temperature 102.6 deg., and the expression anxious. On the 24th, the pulse was 120, temperature 101 deg., and she was restless and excited, the abdomen being tense. On the 25th, she had had a good night; pulse 116, temperature 101.2 deg. The abdomen had become less distended under assiduous poulticing, and feces had begun to pass by the wound. Towards evening, however, she was sick, the abdomen became rapidly distended, and she died at 10 P.M. The *post mortem* examination showed peritonitis in the left loin, but no opening in the peritoneum or escape of fecal matter. In the rectum was a scirrhous mass of the size of a large orange, ulcerated at one or two spots on the mucous surface. The wound was healthy.

CASE VII.—Katie R., aged 23, mother of two children, was admitted

into the Hospital for Women in February 1873, with syphilitic ulceration and stricture of the rectum, with profuse discharge. She was suffering from constant diarrhoea when admitted, and was in a very weak condition. Colotomy was performed on April 4th, and, it being impossible to keep the bowel distended, in reaching it I found that I had opened the peritoneum; I therefore put in extra silk sutures, so as to prevent fecal matter from becoming extravasated. The patient had some pain in, and distension of, the abdomen afterwards, but no marked peritonitis. The relief from pain given by the operation was marked, though a good deal of discharge continued *per rectum* whilst she remained in the hospital. She was discharged on May 27th.

CASE VIII.—Louisa K., aged 27, was admitted into University College Hospital, for the second time, on May 31st, 1873, with syphilitic ulceration and stricture of the rectum. She was constantly passing liquid feces, mixed with discharge, and experienced great pain, which disabled her from following her occupation as a needlewoman. Colotomy was performed on June 4th, the bowel being distended with warm water, and the patient made an uninterruptedly good recovery, being completely relieved from pain, and almost entirely of the discharge.

CASE IX.—A married woman, aged 51, was admitted into University College Hospital on July 4th, 1873, with a history of three weeks' obstruction of the bowels, following upon difficulty in defæcating of some months' duration. She had been under medical care, and various remedies had been tried, without relief. The abdomen was greatly distended, and the patient was in great suffering. *Per rectum*, nothing could be discovered; but percussion showed the large intestine to be greatly distended with fecal matter. Colotomy was performed on the 5th without any difficulty, the distended colon being easily reached and opened, giving exit to a large quantity of liquid feces. The patient was relieved, but never rallied thoroughly, and died exhausted fourteen hours after the operation. At the *post mortem* examination, the upper part of the rectum was found completely obstructed by a cancerous stricture. The wound was healthy; but it was found that in opening the bowel, the reflexion of peritoneum had just been divided, making a clean cut opening of one-eighth of an inch. There was no evidence whatever of peritonitis, and death must be attributed rather to shock and exhaustion.

The preceding cases illustrate some of the affections for which, in my opinion, the operation of colotomy is both necessary and advisable. When performed in proper time, before the patient has become exhausted by pain or obstruction, the operation is a fairly successful one, the immediate risk being small. The operation is by no means difficult in the majority of instances; and though it may be occasionally impossible to avoid opening the peritoneum, that accident is not necessarily fatal. The operation is distinctly curative in the frequent cases of syphilitic ulceration of the rectum, and prolongs life in comfort, in cases of cancerous disease, by preventing the occurrence of obstruction.

POSTSCRIPT.—Since this paper was written, I have had two other successful cases: one operated on at the Hospital for Women, in the presence of several members of the Association, on August 8th, for syphilitic disease of the bowel; and the other at University College Hospital, for cancer. I have, therefore, had eleven cases, with four deaths, and seven immediate recoveries.—November 1873.

SEQUEL OF A CASE OF COLOTOMY.

By THOMAS B. BOTT, M.D.,
Surgeon to the Bury Dispensary.

I SEIZE the present opportunity, when Mr. Christopher Heath is about to draw the attention of the profession to the subject of colotomy (in a paper which he has promised to read at the annual meeting*), to send a brief continuation of the case of colotomy which was published in the JOURNAL on November 17th, 1870, at page 551.

The former account of James Walkden ceased at about eight months after the operation. At that time, he had been out to be photographed. He soon tried his old employment of brick-making; but he found it too laborious and gave it up, as he had friends who supplied his daily wants. After a time, a donkey and cart were bought for him, and he occupied himself in carting coal. The artificial anus did not appear to be a very great nuisance to him, if he let out the excrement twice a day. On one occasion, when he caught the prevailing diarrhoea, he had to lay himself up, in consequence of the fluid excrement escaping at inconvenient times. After using the plug for the artificial anus about eighteen months, it was so worn that he required a fresh one.

* This paper was received a short time before the Annual Meeting of the Association in August last.

In the autumn of 1872, he consulted me about pains in the abdomen, flatulence, and dyspepsia; he became jaundiced, and it soon became evident that he was suffering from malignant disease of the liver. He lingered until December 25th of that year. As the man had lived two years and eight months with an artificial anus, I was anxious to see what changes time and the operation had effected. Strong opposition was made by the friends to a *post mortem* examination. However, the consent of a part of the family having been obtained, I made a hasty inspection with the kind assistance of Mr. Barr, house-surgeon of the Dispensary, and during the temporary absence of the demurres.

POST MORTEM EXAMINATION, December 26th, twenty-six hours after death.—The body was emaciated; the abdomen tumid. The peritoneal sac contained some serous fluid. The omentum was adherent by about half its inferior margin. The sigmoid flexure of the colon was enormously distended, and its coats hypertrophied. It projected out in front of the other intestines, and extended to the right side. It was at least about four inches in diameter, and about two and a half feet long. It contained a large amount of semifluid clayey faeces. At about the junction of the colon with the rectum was the stricture. It appeared as if the gut had been tied with a string. There was some little external thickening. The stricture allowed the index-finger to pass through it, so that another finger passed *per anum* could touch it. The artificial anus appeared granular and congested. There was no induration. There was a limited fold of mucous membrane at the lower edge of the opening extending into the bowel; but the communication with the sigmoid flexure was as free as with the descending colon. The colon, with the exception of the sigmoid flexure, was contracted and almost empty. The rectum was contracted and empty. The liver was enlarged, hard, and congested. It was extensively infiltrated with cancer, which also appeared in white patches on its surface. Cancer was not found in the other viscera.

REMARKS.—It is evident that the faeces passed from the descending colon direct into the sigmoid flexure, and there lodged until their accumulation caused the bowel to contract, or a voluntary or semivoluntary effort to be made for their expulsion. The large size of the sigmoid flexure would lead one to suppose that the bulk of the faeces were retained for some time, and that the reservoir was never entirely emptied. It seems strange that the rectum should have been so completely "blocked" during life, that the stricture would allow nothing to pass, and yet that after death the finger should pass easily. There must have been some muscular spasm. To all appearance, the man might have been a useful member of society for many years, but for the unfortunate advent of malignant disease.

REMOVAL OF A FOREIGN SUBSTANCE FROM THE MALE BLADDER BY LITHOTRITY.*

By WILLIAM CADGE, F.R.C.S.,

Surgeon to the Norfolk and Norwich Hospital.

In January 1871, a young engineer, aged 25, was sent to me by a medical friend under the following circumstances. A few evenings previously, while pursuing his studies by the help of a stearine candle, he noticed that the candle had "roped" down on one side, so as to form a long stick, like the slender wooden handle of a steel-pen. Detaching it from the candle, and moulding it between the thumb and forefingers of each hand, so that it resembled a straight bougie, he foolishly passed it down his urethra to a considerable extent. The warmth of the body probably softened it, so that on withdrawal it separated like melted glass, leaving several inches in the urethra. This gradually found its way into the bladder, and he said nothing about it for nearly a week. By degrees it began to cause some uneasiness; he had pain when running or walking fast, or when the bladder was empty. When the bladder contained urine he had no inconvenience, and the urine was clear and healthy.

Supposing that the material was real stearine, I found that its fusing point was 124 deg.; but having been once melted, as this had, its fusing point became 147 deg., so that there was no hope of melting it by any heat the bladder could bear. At the temperature of the blood it became soft and pliable, and quite insoluble by any possible agent. I had, therefore, no hope of removing it, except by mechanical means.

I examined the bladder carefully with a common sound, and also with a lithotrite, but could not detect or seize it. After a time, I tried again under chloroform, but could recognise nothing but a healthy bladder. Remembering that the specific gravity of stearine is less

than that of water, I could not of course expect to find it, like a stone, at the bottom of the bladder; but neither at the top nor bottom, neither with the bladder full nor empty, nor with any kind of instrument, could I meet with any foreign body. With such a soft and smooth substance I did not expect to elicit any sound; but with a fairly sensitive touch, and abundant experience in manipulating the human bladder under all conditions, I did expect to detect the enemy; and, not finding it, I began to suspect that the amount of it was smaller than the patient asserted it to have been, and that possibly it had been voided.

He went on for a month or two, still feeling sure that the foreign body was there, but not suffering much, except when he ran or walked briskly, or allowed the bladder to empty itself; then he had pain and irritation along the urethra. I desired him to take effervescing citrate of magnesia, and this had a curious effect. After a few doses, the urine let fall a considerable quantity of white flocculent deposit, the like of which I had never seen, and which at first sight I hoped might be the stearine, in some way disintegrated by the urine and the salt. This happened time after time; it only required one or two spoonfuls of the citrate, and this curious deposit surely occurred, and ceased when the medicine was discontinued; but I found that it was entirely a phosphatic deposit; it disappeared with heat and nitric acid, and exhibited the well known crystals under the microscope.

He left Norwich and went to reside in Somersetshire, and one day he passed a spiculum of the candle, very slender, nearly an inch in length, and studded with minute calculous crystals. Small atoms of uric acid and phosphatic stone were occasionally passed with the urine, and he had gradually increasing vesical irritation.

He returned to Norwich in August for further investigation. While he was under chloroform, after careful searching with a common sound, I detected something which gave a rough feel, and almost a sound when touched, lying at the bottom of the bladder towards its right side, where it seemed to be fixed: it was not a very distinct sensation. I dare not have performed lithotomy on such slight evidence of a foreign body; still I thought it was there, and, noting exactly its situation, I introduced a No. 9 lithotrite with a narrow blade. Almost at once I seized some soft material, which by pressure seemed to mould itself into the instrument. Holding it firmly, but still gently, I withdrew the lithotrite. It required some tractive force to make it leave the bladder; I even felt a doubt whether I had not got a fold of mucous membrane in the blades; but I held to it, and gradually it yielded and came away. It was a portion of the candle, filling the whole length of the blades of the instrument, and extending an inch from the tip, where it had clearly separated by a fine tail from another portion still in the bladder. At a second and a third introduction of the lithotrite other pieces were removed, each about the length and size of the male blade of the instrument, and all studded over with uric acid crystals; then the urine escaped, and I deemed it advisable to do no more at that sitting. Considerable cystitis followed, and he was sharply ill for a few days. He voided fragments of calculous matter, and two or three other pieces of candle; then the cystitis ceased, the urine cleared, and he felt greatly better. Putting the pieces together, they measured about six inches. I have no doubt that the foreign body had become entangled and fixed in the mucous membrane of the bladder at the point indicated, and that it was detached and disintegrated, and chiefly removed by the lithotrite.

Again he left Norwich, but in about a month he wrote to say that twice since the operation the flow of urine had suddenly stopped. Each time he drank freely of weak brandy-and-water, and each time he succeeded in passing a piece of candle encrusted with stone. All irritation then quite subsided, and he has remained up to this time perfectly well.

ABSCESS OF LIVER AFTER TYPHOID FEVER.

By GEORGE CHATER, Esq., Tenby.

SARAH, wife of Drum-Major Conel, 2nd Battalion 9th Regiment, aged 26, was first seen by me on May 23rd, 1873, and recommended to come into the cottage hospital, Tenby, as soon as possible. On May 28th, she was admitted, and a more unpromising case could hardly be received into the wards. Her skin was sallow, harsh, and dry; tongue coated with a brown fur. She had constant thirst, with disposition to vomit, attended with distressing pain in the right side and abdomen, sometimes of a tearing, at other times of a dull aching character. There was very great emaciation, and she had had no sleep or rest for many weeks past. The bowels were at times constipated or very much relaxed. She described her life as a "continued misery", and entreated that something might be done to give her ease, if possible. The pulse

* Read before the annual meeting of the East Anglian and Cambridge and Huntingdon Branch.

ranged from 140 to 160, and the temperature from 102 to 103. An enormous enlargement in the region of the liver, extending below the line of the umbilicus to the crest of the ilium on the right side, to midway between the ensiform cartilage and the anterior spine of the ilium on the left, could with ease be traced through the abdominal walls. She measured round the waist 42½ inches, although rather a slight figure in her natural condition.

She is the mother of three children, all living, the last born at the barracks, Shorncliff, where her husband's regiment was quartered, on May 19th, 1872. Her labour was natural in every way, as she informed me. About a month after her confinement, she had a severe attack of typhoid fever, attended with constant diarrhoea, degenerating into dysentery with bloody slimy motions, lasting, with little if any intermission, to the middle of August—the last three weeks passed in bed, by order of the medical officer in attendance upon her. During the last three or four weeks of her illness, she complained of stitches in the right side, which never left her; but at this date, according to her own statement, no swelling could be seen or felt. The stitches, as she calls them, gradually gave place to dull aching pains in the right side of the abdomen, and profuse perspirations, alternating with cold chills, sometimes twice in twenty-four hours. About the end of September 1872, the pain in her side and back had increased in severity, and extended to the right shoulder, side of the neck, up to the angle of the jaw on the same side. From her account, she was visited by various medical officers at Shorncliff, receiving every attention that kindness could suggest. The exact date of the commencement of the swelling in the side is doubtful. I think it must be placed somewhere about this time, as in the third week of October a decided fulness on the right side was evident, which continued to increase gradually, accompanied by hectic, etc., until my attention was called to the case by Surgeon-Major Carey, 23rd Regiment, then stationed at Pembroke Dock and Penally Huts (May 23rd, 1873). I should state that the woman had been passed from Shorncliff to the residence of her parents near Tenby, three or four weeks before I visited her. I had known her from childhood, and she expressed a wish to see me.

On May 30th, assisted by Mr. Lomax (Sheffield), then staying at Tenby, Surgeon-Major Carey, Mr. Lock, etc., I introduced a fine trocar in a line with the tenth rib and to the right of the gall-bladder, and drew off eleven ounces of sanguineous brown purulent matter, with evident relief to her sufferings, particularly the feeling of distension, of which she complained so much, "as though something must burst in her inside." It was agreed that she should take fifteen-grain doses of hydrate of chloral every three hours, to procure sleep, if possible. Opium had been tried, but had given so much distress from the vomiting it excited, that, at my first interview with her, she requested me not to give her opium, as the doctor had told her she could not take it. After the third dose of chloral, she slept; and, when I visited her in the evening, she expressed herself easier and inclined to sleep—a marked change, after the incessant vomiting and sleeplessness. At 8.30 P.M., she asked for something to eat. Hitherto the vomiting had been so distressing and persistent, that every kind of nourishment was rejected almost as soon as taken. Everything we could suggest or she could think of had been tried in vain up to this time. She now took some sparkling Burgundy and dry toast with a relish, and kept it down. Two hours after the operation, the bowels acted. The urine was natural and free from deposit.

May 31st. She was much in the same state, exhausted and restless. Pulse 140; temperature 101½. As the chloral appeared to be less efficacious than at first, and the pain and feeling of distension were returning with as great if not greater severity than before the operation, I ventured to give half a grain of morphine; but the first dose obliged me to abandon the remedy. Sickness of the most distressing and persistent character set in. Sparkling Burgundy with ice was ordered as freely and as often as she could take it; and, at the expiration of about three hours, I had the satisfaction to notice that some of it was retained upon the stomach. She requested to have the effervescent citrate of magnesia, to quench her thirst. She had tried it before, with advantage in controlling the sickness.

June 3rd, 11 A.M. The patient was sufficiently restored to undergo a second operation. Upon this occasion, I had the benefit of being assisted by Mr. Lomax, Surgeon-Major Carey, Mr. Lock, etc. Before the operation, the girth was 42½ inches. I passed a common hydrocele trocar and cannula into the abscess a little below and to the right of the usual position of the gall-bladder, and by slow degrees drew off 104 ounces of sanguineous brown pus, having a most peculiar odour. She bore the operation better than I could have expected (the operation lasted forty-five minutes), and expressed herself much easier. A severe pain above the crest of the ilium on the right side, brought on by the vomiting after the dose of morphine, no longer troubled her.—

3 P.M. She took her wine freely, and had asked for something to eat, as she felt hungry. She selected for herself a mutton-chop and potatoes. I consented with some hesitation, and she ate it with a relish unknown for months past.—4.30 P.M. She was prostrate, but cheerful. Pulse 116; temperature 100. The bowels were freely relieved, and, all things considered, she was as well as I could expect. I had persuaded the patient to keep the cannula in the wound as long as she could bear it, promising to take it away if it caused her much distress. At 7 P.M., I was obliged to withdraw the cannula, and introduced a No. 5 flexible catheter with a small wooden plug to exclude the air. By this, the second operation, she was diminished in girth 5½ inches, as nearly as we could judge. As she wished to try to sleep without medicine, I left her in charge of a careful and attentive nurse, with directions for her to take all the nourishment she could during the night when awake.

June 4th. She had slept at intervals during the night, was free from pain, and cheerful. I withdrew the catheter, which was blocked up, and with considerable difficulty introduced a second. A small quantity of matter, about three ounces, made its escape through the second instrument. At 8 P.M., she complained so much of tenderness and of a dragging sensation in the region of the liver, as she said, occasioned by the instrument, that most reluctantly I was obliged to withdraw it. Four ounces more of most offensive matter escaped through the catheter before I closed the wound.

June 5th. She had passed a better night, and at intervals had taken a fair supply of beef-tea, wine, etc. Pulse 118; temperature 100½. The fluid was evidently increasing in the region of the old swelling. She had a decided rigor at 3 P.M., followed by hectic and profuse perspiration, and was very much prostrated thereby. At 8 P.M., the pulse had risen to 126; temperature 103. The appetite was bad; she had increased thirst, and a certain painful sensation in the locality of the last rib when she attempted to make the slightest change in her position, apparently from increasing distension of the abscess. Otherwise, she complained only of feeling exhausted and inclined to doze.

June 6th. She was much the same,

June 7th. She had passed a tolerable night, and, when quite still, said she was free from pain. Pulse 140; temperature 103½. There was increased fulness in the hepatic region; great prostration following a rigor, with perspiration, etc.—4 P.M. There was disinclination to take nourishment of any kind, on account of her fear of sickness. She was ordered to take her wine, jelly, etc., as often as she could, and to suck small pieces of ice from time to time. The bowels acted in the morning. The urine was rather copious than otherwise.

June 8th. She was not so well, and complained of increasing fulness in the right side, and a feeling as though something must give way.—1 P.M. She had another rigor, etc., succeeded by rapid and feeble pulse, 160. Temperature 103½. She could take no food or liquid of any kind, ice excepted.—9 P.M. The prostration was very great. Pulse 165. She had an attack of vomiting, brought on during my visit by attempting to take a small quantity of sherry wine. Nothing was rejected but mucus and saliva. No food of any kind had been taken during the last twenty-four hours. By her own request, citrate of magnesia was again ordered, and, after an hour or more, the sickness subsided; but the prostration was so great, and the pulse so rapid and feeble, that I almost despaired of her surviving the shock. At 9.30 P.M., I left her hardly conscious, but inclining to sleep.

June 9th, 10 A.M. Her condition was most critical, the swelling evidently extending into the right lumbar region. She could not bear the slightest movement, the sickness returning if she attempted to change her position. I told her that only one thing could be done to relieve her, and that was to evacuate the matter again. She consented. At 1 P.M., I again introduced the trocar and cannula as nearly as I could in the same spot, and drew off sixty-four ounces of most offensive matter (the bowels had acted prior to the operation); and requested her to keep the cannula in the wound, if possible. She appeared relieved; the pulse fell from 156 to 128. Considering the desperate condition of the patient, she bore up surprisingly.—4 P.M. The pulse had fallen to 112. Temperature 99½. She could take her wine freely in oatmeal-gruel (her own suggestion), with no return of sickness. In the evening, I withdrew the cannula, of which she complained as hurting her, and substituted a No. 6 elastic catheter, through which six ounces of most offensive matter escaped. Having secured the instrument in the wound, I left her to sleep, without medicine of any kind.

June 10th. I reintroduced a larger sized catheter. Four ounces of matter escaped, but, if anything, it was more offensive than ever, although I took the precaution to plug the end of the catheter, to prevent air from entering the cavity of the abscess. She passed a tolerable night. There was no rigor; the appetite was improving; and there was less thirst.

June 11th. I removed the second catheter, and introduced No. 8, through which sixteen ounces of the same offensive matter escaped (under the microscope, composed of albumen coagulated, blood-corpuscles, and pus-globules in large quantities). Before the operation on this day, the pulse, from 135, temperature 100½, fell to 115, and temperature 99½. She asked for some chicken and a glass of wine. By careful manipulation, the last catheter could be introduced the whole length, twelve and a half inches, and seemed to traverse the region of the liver in the direction of the left kidney, so far as I could judge by trials at this time and afterwards, without any pain, except at the opening through which the catheter was passed.—9.30 P.M. She was in a calm sleep, and had taken a mutton-chop and glass of wine for supper. On this day, for the first time, she expressed a hope of recovering, and of once again seeing her children.

June 12th. Nine ounces of the same kind of offensive matter escaped. The tongue was clean, and the bowels acting regularly. Pulse 109; temperature 99. The appetite was improving.—9 P.M. I withdrew the last catheter, which was obstructed, and introduced a No. 12. Sixteen ounces of the most offensive matter passed—twenty-five ounces in the last twenty-four hours. She felt better, and free from pain of any kind. She felt hungry, and wanted her supper, which she wished to be cold roast-beef and bread and butter, with a glass of wine. I almost invariably gave a glass of wine before the withdrawal of the plug from the catheter, both morning and evening. At this date, I noticed that the matter, after it had passed into the utensil, had a more flocculent appearance, as though the internal lining of the abscess were beginning to detach (under the microscope, it presented all the characters of albumen). Pulse quick, 130; temperature 100.

June 13th. She had not had so good a night; had slept about four or five hours. I drew off at 11 A.M. twelve ounces, at 9 P.M. ten ounces. Pulse 120; temperature 100. She took her food and wine with a zest.

June 14th. She had had a good night. At 11 A.M. I drew off ten ounces, in the evening three ounces, not so purulent, but having a yellowish brown colour, and less offensive. On this day, we measured her waist, and marked a reduction of rather more than eight inches in the circumference. Her friends were struck with the improvement in her appearance.

June 15th. Four ounces and six ounces passed. Pulse 100; temperature 99. She now looked forward to seeing her husband again, and her children, who were to come and see her one at a time. She continued to improve during the next five days. On the 21st, there was so much pain in the bowels, particularly the right side, with disposition to vomit, accompanied with great prostration and coldness of the lower limbs (no diarrhoea), that I began to fear perforation of the abscess into the peritoneum or intestine. She could not bear the slightest pressure. Only one ounce of yellowish bilious-looking matter passed through the catheter in the morning, and three ounces in the evening, of a like character. I ordered her to take ten minims of chlorodyne every half-hour, and sparkling Burgundy as freely as she wished during the day. After the fourth dose of the chlorodyne, she expressed herself better, and inclined to sleep.

June 22nd. She passed a most offensive greenish yellow motion from the bowels, very much resembling the matter passing from the catheter in her side. She was evidently better, and again inclined to take nourishment. The pulse fell from 144 to 99 during the day, and the temperature was 98. Six ounces and a half only of flocculent yellow matter passed during the last twenty-four hours.

June 23rd. She was much the same.

June 24th. She had had a bad night; complained of pain in her head, and described it "as though it ran up from her belly".—10 A.M. I drew off eleven ounces and a half of greenish-looking matter (with little if any smell), by which she seemed relieved; five ounces and a half ounces in the evening.

June 25th. She had vomited in the morning about three ounces of most offensive matter, in appearance very much like matter from the abscess. As there had been no action of the bowels since the 23rd, I ordered her a soap-and-water enema, which brought away a copious evacuation of most unhealthy feces. From this time onwards, with occasional slight interruptions, she continued to progress. The discharge from the abscess gradually diminished, and by the end of August little else than pure bile flowed from the wound; so that on September 5th I withdrew the catheter entirely, and on the 10th of the month she returned to her native village. During the last month or five weeks, she gained flesh rapidly, and, when she left the hospital, must have weighed many pounds more than I had ever known her to do before. Visitors were asking if Conel could be the same woman. The total amount of discharge by measure was 558 ounces during the fourteen weeks she was a patient in the hospital. The only medicine taken

regularly during the last seven weeks was vinum ferri in teaspoonful doses three times a day.

I place this case on record as the only one that has occurred in my practice, and one of the few that have been published, where the success was so decided and the prospects so unpromising.

ADDITIONAL REMARKS ON A NEW MODE OF HOSPITAL CONSTRUCTION.*

By HENRY GREENWAY, M.R.C.S., Plymouth.

[Continued from BRITISH MEDICAL JOURNAL, May 11th, 1872.]

PATIENTS will require practically (on account of the two corridors) a much larger space than they could do with in a general ward, which increase partly makes the plan more costly. In comparing cost, however, advantages must be considered; namely, those already mentioned in my former paper, and there would be fewer deaths and more rapid recoveries; and I maintain that I give more than a *quid pro quo*. It should be remembered that many existing hospitals, in consequence of decorations, etc., cost as much or more than the estimate for my plan.† Besides, if the adoption of my plan be the means of saving life, extra cost, if within reasonable limit, ought not to be regarded. It would be just as idle to compare the cost of a chronometer with that of a common watch not to be depended on. Extra cost of administering would be very small. Of course, the patients could not be attended to with such rapidity as in a large ward, where the nurse or surgeon walks from bed to bed. But, after all, the main point is—What is best for the patient? I also consider the plan of having patrols will tend to increased watchfulness on the part of the nurses, just as a sentry is more alert while pacing his beat. There would be no difficulty in the matter of ventilation. The compartments being made of glass, it will be seen when they require to be washed.

The cases *specially* requiring this plan of hospital are—wounds, whether caused by operation, accident, or disease; infectious diseases, and obstetric cases. Thus cared for, it is believed that hospital erysipelas, pyæmia, and gangrene (the pests in the surgical wards of our existing hospitals) would seldom or never occur, and would not spread through the building, as the wound of one patient would not be exposed to air tainted by the wound of a neighbouring patient, and the compartments themselves would not be a source of evil. It is believed that all wounds (some more than others) injuriously affect the air of a room either immediately or ultimately, if the walls be porous, and that they (the wounds) are very prone to absorb the organic particles thus suspended.

In a general medical ward some patients suffer, and even die, by being exposed to the same ventilation and temperature which may be considered necessary for other patients. This would not occur in my plan of building, where the ventilation and temperature of the different compartments may be varied as circumstances may require. With complete isolation there will be the chances of a patient, not considered seriously ill (and therefore not specially watched), but taken suddenly worse, being unable to summon the nurse by bell, or of the emergency being unnoticed by his neighbour, or by the nurse when casting her eye through the range of compartments, or even when acting as patrol; all this might possibly but very improbably happen. On the other hand, there is the *certainly* of patients, congregated in a general ward, occasionally proving hurtful to one another; and there is, in any form of building, the chance of negligence on the part of the nurse. I have said that patients in various compartments may require air of different temperature. This want can be economically met by placing on or removing from the hot-water pipes felt jackets. As a further means, already adopted, for regulating the warmth of the patients, blankets may be added to or withdrawn from the bed.

My plan of hospital construction has, by some surgeons, been considered unsuitable for connection with a medical school, on account of the inconvenience which students would suffer when following the surgeon from one compartment to another. My reply is, that the primary object of a hospital should be the *patients' welfare*, and whatever interferes with the attainment of that must yield. Once let the public imagine that any hospital, or portion of one, deemed perfect for cases (especially wounds) requiring isolation, and therefore tending to save life, is objected to by a surgical staff on the score of its being inconvenient for students, we may be quite certain a cry will be raised demanding the

* The result of discussions on my former paper. The manuscript, together with drawings and model of the proposed hospital, were placed in the Annual Museum of the British Medical Association, August 1873.

† The estimate, per bed, in 1871, was £150. It would now, most probably, be somewhat higher.

utmost that art or ingenuity can provide for saving life, and we might hear of the establishment of hospitals apart from medical schools. I am quite aware students must be taught, but that can be done by making a rule allowing only a limited number to visit each patient, the number of patients for each student to be decided on according to circumstances. The result, in an educational point of view, would be good, and I think the plan should be adopted in all forms of hospitals. At present, a crowd of students "walk the hospitals" and obstruct each other's view at the bedside, and, I fear, a large number go into practice with little else than book-knowledge. A few well observed cases at a time would prove far more useful than the hap-hazard information gained in a throng over a number of patients. With the most perfect form of hospital there will still be required perfect administration. Great care should be bestowed on the bedding and bedsteads; each surgical case should be provided with a separate sponge, which could be disinfected before being used on another patient; instead of sponges, charpie or fine oakum may be used, and then thrown away; nurses and dressers attending wounded cases should wear smooth waterproof overclothes, the sleeves to fit closely at the wrists, these clothes to be frequently cleaned; students engaged in the dissecting-room should either not attend surgical practice, or, if attending, should also be thus clad whilst dissecting; no dissector, working with exposed hands, should act as dresser in the hospital, or attend a midwifery case.

Construction.—At present, the inlet ventilating tubes of opposite sides are not designed to meet in the centre of the building. Probably it would be an improvement if they were made to pass transversely through the building, and perhaps project a foot or two on one side, the projecting portion to be perforated. In the event of high side winds, their force would then pass completely through the tubes, from one side of the building to the other, without unpleasantly affecting the compartments; and the projecting ends would act like "wind-sails" by catching a fore-and-aft breeze, thus increasing the circulation of air in the tube. I would also suggest a second inlet ventilating tube for each compartment, to pass across the ceiling of the corridor and open into the compartment, over the doorway. I think a downward current of cool air would mix with the upward current from the floor. Either of them could be shut off if necessary. The compartments would be warmed with hot-water or steam-pipes, placed in the air-tubes underneath the floor-grating, or longitudinally, just above the floor. Iron guards would be placed around the interior of the compartments up to a certain height to protect the glass. Special appliances in the form of nettings should be used on the bedsteads of delirious patients in every form of hospital. As a substitute for glass, certain portions of the compartment walls might be made of sheet-iron, coated with white enamel. A receptacle would be placed in each compartment, as no infected patient should be allowed to visit the water-closet. Cotton-wool screens, and vessels containing a solution of permanganate of potash, or such like material, may be placed in the inlet ventilating flues. The air would thus be filtered and ozonised. Charcoal filters may also be placed in the lower end of the outlet flues to disinfect the outgoing air, the charcoal to be occasionally reburied.

I am happy to say my plan has been very favourably received by several of the leading members of the medical profession in civil practice and in Her Majesty's service—Inspector-General Smart, of Haslar Hospital, having done me the honour to advocate, in the JOURNAL, its adoption in tropical climates, and also as an appendage to our existing hospitals in this country. The plan has also been approved of by many outside the profession. It now remains to be carried out, either as a general hospital or as a building for special cases.

CASE OF STRANGULATED UMBILICAL HERNIA: OPERATION: RECOVERY.*

By M. G. B. OXLEY, L.K.Q.C.P.I., Liverpool.

MRS. R., aged 73, had always, as long as she could remember, had a slight protrusion at the navel, and of late years had been much troubled with colic and constipation; otherwise she had enjoyed good health. On April 3rd, I found her suffering from sickness and constipation, and my attention was called by Dr. Caldwell, who was in attendance, to the umbilical hernia, which was of the size of a large hazel-nut; just above this, outside the umbilical ring, was a second protrusion. The patient could not say when this second lump came, or whether the hernia ever went back. Ineffectual efforts were made to reduce the hernia. On the following day, the sickness continuing, and there being great pain about the navel of a dragging character, as well as constant hicough, it

was decided to operate, if the hernia could not be reduced, when she was under chloroform.

Chloroform having been administered, and it being found impossible to return the rupture, an incision was made over the neck of the upper tumour, and the stricture divided. This hernia proved to be a piece of omentum, and was easily returned. I now made an effort to reduce the other portion, which was evidently a small knuckle of intestine; failing in this, I opened into the cavity of the abdomen, and, with my finger nail, stripped the bowel from the interior of the sac; in doing this, an ovarian cyst (not previously noticed) was ruptured, and a large quantity of the contents found its way out. I immediately closed the wound with wire sutures, applied a good solid pad of dry lint, and supported the abdomen by means of broad strips of soap plaster. A draught, containing 5 minims of tincture of aconite and the same quantity of tincture of opium, was ordered to be taken every three hours, and brandy and milk to be given every half-hour in small quantities.

She did very well, never having any return of the sickness, and the bowels acting naturally the second day after the operation. On the 6th, I removed the lint and plaster, and found the wound free from supuration and apparently healed by first intention. On the 11th, the eighth day after the operation, I removed four of the six sutures, and the wound, as I thought, was firmly healed. During the night, a large quantity of viscid fluid escaped from a small opening in the centre of the wound; this continued to flow till the 17th, and then ceased entirely; the remaining sutures were removed a few days afterwards, and since that time she has continued to do well. The ovarian tumour seemed at first to have been stimulated to increased growth; but, for the last few weeks, it has become, if anything, slightly smaller. The rupture is now of greater size than before the operation, but is readily kept in its place by a truss, which she has orders to wear constantly.

OBSTETRIC MEMORANDA.

THE ANTICIPATION AND TREATMENT OF POST PARTUM HÆMORRHAGE.

THE contributions upon this subject of Dr. Ewing Whittle of Liverpool, and Dr. Atthill of Dublin, are so full of interest to the medical profession, and of so valuable a character, in respect not only of the signs by which *post partum hæmorrhage* may be expected, but also of some of the means of checking or averting this fearful condition, that the readers of the JOURNAL must indeed be thankful to these gentlemen for their excellent observations. It has been my sad lot, through a practice of forty years, to witness a fatal issue in three or four cases of uterine hæmorrhage; while, in many other cases, I have realised the value of ergot administered both before and after the expulsion of foetus and placenta.

And, as pointed out by Dr. Atthill, I have seen the advantage of the cautious use of the forceps in cases marked by uterine fatigue or general exhaustion of the mother's power. But there are other modes of treatment, upon the actual occurrence of large hæmorrhage, which seem to me to be deserving notice, especially as, in such conditions, the obstetric attendants cannot safely wait for the effects of ergot. I refer to cold affusion over the face and abdomen, as affording a powerful stimulus to uterine contraction; and I am confident that I have seen several lives saved by this proceeding, under circumstances which would, from their urgency, admit of no other practice.

At the same time, from actual observation and experience, I must admit that this measure should be adopted with care and judgment, as the prolonged application of cold to the surface might set up pneumonia or some other visceral inflammation, while the hasty movement of the patient for the application of dry clothing may induce a return of hæmorrhage.

Dr. Whittle and Dr. Atthill do not furnish us with their views and experience upon the practice of the direct application, to the interior of the uterus, of the diluted solution of perchloride of iron, either by the syringe or the use of a proper sized saturated sponge, with the object of producing ready and firm coagulation of blood, and further, by means of the sponge, stimulating to increased contraction. Perhaps like many others in practice, I have no experience of this remedy; and, accordingly, I should receive most thankfully any suggestion upon this point of practice, which may come from those whose experience and observation give weight to their opinions.

I believe that many will agree with me, that no so deep and heavy responsibility attaches itself to any employment as is found by him who engages in obstetric practice—a responsibility, which in kind and degree is wholly unknown to those who are outside the medical

* Read before the Lancashire and Cheshire Branch.

profession; but, of all the many sources of anxiety in this branch of practice, the subject of puerperal hæmorrhage stands as the most pressing, whether that hæmorrhage be *post partum*, or accidental and unavoidable, as well shown and distinguished by Rigby; and thus it is that I venture to solicit any instruction or observations which may come through the columns of the JOURNAL upon the subject to which I refer.

WM. MOORMAN, St. Columb, Cornwall.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

WESTMINSTER HOSPITAL.

CASES LATELY UNDER THE CARE OF DR. FINCHAM.

Subacute Rheumatism and Endocarditis: Death on the eighth day from Obstruction of the Pulmonary Artery.—Cases of sudden death during rheumatism are fortunately not common, and it is not always that a necropsy can be obtained. The following instance is remarkable also on account of the very subacute character of the primary affection. A stout, well-grown girl, aged 16, attended as an out-patient on June 23rd. She complained of pain in the knees and ankles, which were slightly swollen; still she was able to walk; her skin was cool, pulse quiet, and heart normal. Her previous health had been good, and she had never had rheumatism before. The pains had begun in the ankles on the 20th. She was ordered an alkaline mixture, and advised to apply for admission into the hospital if the pains became worse. She was accordingly admitted on the 25th; she had then pains in both hands and shoulders; there was moderate perspiration, but little fever. Pulse 92; the heart-sounds were clear at the base, but, at the apex, a soft, blowing, systolic murmur was audible; the impulse distinct, and in the proper position. The alkaline treatment was continued. Next day, the patient was lively and cheerful, sitting up in bed, free from pain; she wanted to know if she might "get up to-morrow." The pulse was somewhat soft, but quiet and regular; the *bruit* at the apex was louder and harsher; no friction, no increase of cardiac dulness. June 27th.—The patient seemed very well last evening, and was talking of going out shortly; but, about 1 A.M., Mr. Davies, the resident medical officer, was called, and found her suffering from most urgent dyspnoea; her face blue and livid, expression anxious, pulse very rapid and weak, heart acting violently; she was quite sensible, and there was no paralysis. The lividity increased; there was cold perspiration, the patient gradually became insensible, and died about 6.30 A.M.

Necropsy.—The lungs were congested, but not to an extreme degree; they were everywhere firm and crepitant. The pericardium contained from an ounce to an ounce and a half of slightly turbid yellowish fluid; but there were no flakes of lymph, and both surfaces of the pericardium were smooth and shining—no distinct evidence of inflammation was to be seen. The left ventricle contained a number of shreds or strips of fibrine interlaced with, and adherent to, the columnæ carneæ. The free edges of the mitral valve were completely covered by a band of fine granular deposit—like a border of fine sandpaper—from one-twelfth to one-eighth of an inch broad; the granulations were easily rubbed off with the finger: the valve would be competent but for this thickening of the free edge. The right auricle and ventricle were lined throughout by a very firm fibrinous clot, tightly adherent to the walls, especially in the ventricle; it was white at the attached, and darker on the inner or free surface. A prolongation of this clot entered the pulmonary artery and terminated at the bifurcation in a blunt, whitish knob; this clot lay free in the centre of the vessel, occupying half or more of its calibre; round it was a perfectly distinct soft red clot, which extended along the vessels quite into the lungs. The muscular tissue of the heart was firm and of good colour. The abdominal organs were much congested, but otherwise healthy.

Chronic Ulcer of the Stomach opening into the Splenic Artery: Death from Hæmorrhage.—The remarkable point in this case was, that, although the ulceration into the spleen had evidently been going on for some time, the margins of the perforation through the wall of the stomach being quite healed, yet no symptoms occurred until it reached nearly to the hilus and perforated one of the main divisions of the splenic artery. A stout, strongly-built woman, aged 25, was admitted on July 7th, absolutely blanched by hæmatemesis, and, in spite of every care, died in the course of an hour. She had led a very irregular life, but had always enjoyed good health; had suffered occasionally from slight dyspepsia, apparently due to alcoholic excesses; but had never

been troubled with any acute pain or vomiting. On the 5th, she suddenly vomited a considerable quantity of blood; she obtained some medicine from a chemist, and next day had no return of the bleeding; but, on the morning of the 7th, the hæmorrhage recurred with such severity as to be fatal in about two hours.

Post Mortem Examination.—The stomach was found greatly distended by a mass of coagulated blood, in which were a few hard, undigested peas; the cardiac end was firmly adherent to the spleen and diaphragm. On opening the stomach from the pylorus, along the greater curvature, an oval aperture about the size of a sixpence was seen on the posterior wall, quite at the cardiac end. The margin of this opening was everywhere pale, smooth, shiny, and but little thickened; it was evidently perfectly healed, all the coats were firmly joined together, and there was not the least sign of any raw or granulating surface. The hole led into a cavity hollowed out of the inner part of the spleen; it contained about three drachms of black clotted blood; the walls were covered with a greenish-black slough. On washing out the clot carefully, one of the primary divisions of the splenic artery from the hilus was exposed at the bottom, with an opening in it which would admit an ordinary knitting-needle. All the other organs of the body were blanched, but healthy.

Scirrhus Cancer of the Omentum, complicating Chronic Cystic Disease of the Ovary, of fourteen years' duration.—This case was somewhat puzzling as regards diagnosis; no essentially vital organ being involved, there was complete absence of cachexia, and the tumour was so indistinctly felt, owing to the obesity of the patient, that its exact nature was only ascertained at the necropsy.

A stout, hearty-looking woman, who stated her age to be 68, though she might have been ten years younger, was admitted under Dr. Fincham on July 4th, suffering from a very great enlargement of the abdomen. She stated that, with the exception of "winter cough," she had generally enjoyed good health, and had always been very stout; she had a large grown-up family. Fourteen years ago, her abdomen began to enlarge, owing, as she thought, to her having run against the corner of a table in the dark; the accident, however, was slight, and gave her no great inconvenience at the time. Twelve years ago, the abdomen being rather large, though not half so large as on her admission to the Westminster Hospital, an operation was attempted at a metropolitan dispensary, but was not proceeded with. After this, the patient continued very well; she went about wearing a suspensory bandage, and the size of the abdomen remained stationary until the spring of this year, when it again began to increase rapidly, and on admission measured 47 inches in circumference. As the result of his examination, Dr. Fincham diagnosed ascites and some abdominal tumour, probably ovarian or uterine. As she had considerable oedema of the legs, as well as some bronchitis and pulmonary congestion, paracentesis abdominis was performed. The cannula struck against, and was constantly blocked by, some solid mass a little below the umbilicus; this caused the fluid to run very slowly; but, for some hours after the operation, a large quantity drained away. The patient was now greatly relieved; in a few days she was able to get about again, and, at the end of a fortnight, was discharged at her own request. A solid nodular tumour could now be distinguished in the umbilical region, but the woman was so fat that an examination was more than usually difficult. She had no pain, and seemed in very fair health. However, on September 5th, she was readmitted; the abdomen had refilled, and she had been troubled for some days with abdominal pains and occasional vomiting. On admission, moreover, the dyspnoea was so intense that she was again ordered by Dr. Fincham to be tapped. Thirty-one pints of clear fluid came away, but with only temporary relief, and she died on September 11th.

Necropsy.—There was about an inch and a half of subcutaneous fat over the abdomen, which contained a very large quantity of ascitic fluid; the peritoneum was thick and opaque, covered here and there with patches of recent lymph. In front of the intestines, covering them like a shield, was a thick, rough-looking nodulated mass, the omentum, composed of nodules of hard gristly scirrhus set in fat; below this, projecting from the pelvis, was a bunch of cysts, the largest and most prominent of which was as large as a child's head at birth, and, below that, another about two-thirds of that size, besides several smaller. These were found to spring from the left ovary. Large masses of scirrhus projected round the base of the larger cysts. The whole fibrous stroma of the ovary was infiltrated with it; some of the smaller cysts were actually seated on these cancerous nodules. Under the broad ligament, and under the peritoneum at the back of the uterus, were scirrhus tumours of considerable size, and there were many smaller in various other places about the abdomen; but the stomach, liver, spleen, and kidneys were all free from any malignant deposit. The right ovary also was quite small.

ROYAL FREE HOSPITAL.

EXCISION OF THE TONGUE.

(Under the care of Mr. GANT.)

From notes by Mr. RECKITT, House-Surgeon.

EXCISION of the tongue was successfully performed by Mr. Gant on October 25th. The tongue was reached by an incision through the cheek, made from the corner of the mouth to the angle of the lower jaw. Some bleeding from one or two small arteries having been controlled by torsion, the tongue was drawn well forward with a vulsellum, and two sharp aneurism needles passed through the base. The chain of a large *écraseur* was passed round the base of the tongue behind the needles, and cut through the organ in thirty-eight minutes. There was no hæmorrhage. The wound in the cheek was brought together with harelip-pins, and healed by the first intention. The patient swallowed some milk four hours after the operation, and slept well the same night. He articulates very fairly, swallows without difficulty, and has not had any pain or unfavourable symptom.

NEW BOOKS AND NEW EDITIONS.

DR. T. HENRY GREEN'S Abstract of Rindfleisch's *Pathological Anatomy*, issued by Renshaw, has rapidly passed through an edition, and appears now enlarged and revised by the editor. Dr. Green is very well known as an accomplished physician and skilful histologist, well versed in the literature and the practical study of pathological anatomy. He has probably acted wisely in adopting as a basis the able work of Rindfleisch; but he is quite capable of producing a reliable original treatise. As it stands, this handbook of pathological anatomy is a valuable guide to the study of pathology, and on a level with the views of modern workers in that progressive branch of science.

SIR JOHN LUBBOCK'S work on the *Origin and Metamorphoses of Insects* (Macmillan) is one of a series of popular treatises on scientific subjects arising out of the collection of papers originally published in our valuable contemporary *Nature*. This little book treats of the classification of insects, the influence of external conditions on the form and structure of larvæ, the nature of metamorphoses, the origin of metamorphoses, and the origin of insects. Banker and politician, Sir John Lubbock is none the less a man of science, trained to exact and original observation from his early youth; and he has earned the right to appear as a popular expounder of the larger principles involved in the study of insect-metamorphosis by years of patient and acute observation of the actual biological facts. The book is full of highly interesting observations, well described and well illustrated. The facts observed by Sir John Lubbock in respect to the developmental changes and metamorphoses of insects, lead him to concur in the Darwinian explanation of natural selection, and to regard it as a *vera causa*. He endeavours to trace the actual line of development of insects, which, of course, cannot have passed through all the lower forms of animal life. He points out that many beetles and other insects are derived from larvæ closely resembling *Campodea*, and asks: "Since, then, individual insects are certainly in many cases developed from larvæ closely resembling the genus *Campodea*, why should it be regarded as incredible that insects as a group have gone through similar stages? That the ancestors of beetles, under the influence of varying external conditions, and in the lapse of geological ages, should have undergone changes which the individual beetle passes through under our own eyes and in the space of a few days, is surely no wild or extravagant hypothesis. Again, other insects come from vermiform larvæ much resembling the genus *Lindia*; and it has been also repeatedly shown that in many particulars the embryo of the more specialised forms resembles the full-grown representatives of lower types. I conclude, therefore, that the *Insecta* generally are descended from ancestors resembling the existing genus *Campodea*; and that these again have arisen from others belonging to a type represented more or less closely by the existing genus *Lindia*. Of course it may be argued that these facts have not really the significance which they seem to me to possess. It may be said that, when Divine power created insects, they were created with these remarkable developmental processes. By such arguments the conclusions of geologists were long disputed. When God made the rocks, it was tersely said, He made the fossils in them. No one, I suppose, would now be found to maintain such a theory; and I believe the time will come when it will be generally admitted that the structure of the embryo, and its developmental changes, indicate as truly the course of organic development in ancient times as the contents of rocks and their sequence teach us the past history of the earth itself."

ANÆSTHETICS.

XXII.—ETHER AS AN ANÆSTHETIC IN OPHTHALMIC OPERATIONS.

SIR,—My attention has just been directed to Dr. A. H. Jacob's interesting communication on ether as an anæsthetic in ophthalmic operations, published in your issue of October 18th; and as I have now administered ether in some hundreds of similar cases, I conclude that a few words from myself on the same subject may not be unacceptable to the readers of the *BRITISH MEDICAL JOURNAL*. I first administered this anæsthetic on a towel, after the manner of Dr. Joy Jeffries of Boston, U.S., to whom we are indebted for the reintroduction of ether, and whose practice I had the advantage of studying during his stay in London; subsequently I used Mr. Morgan's apparatus, of which Dr. Jacob speaks so highly. According to my experience, however, neither answer so well as a simple cone of pasteboard, padded on the inside with cotton-wool, and fitted at the summit with sponge. The wool and sponge together will easily take up from half an ounce to an ounce or more of ether; and if the cone be held firmly over the face and nostrils, the patient is readily brought under the influence of the anæsthetic. A cone similar to the one I have represented in the accompanying woodcut, but made of gutta-percha, was used by Mr. Morgan, formerly



house-surgeon to the Moorfields Hospital, for administration of bichloride of methylene. Pasteboard is, however, a much better material, as I find that ether in quantity dissolves out the gutta-percha, rendering the handling of the mask a very sticky and unpleasant process for the operator. To produce any effect with ether it is necessary to exclude air, and this exclusion of air, together with the pungency of the vapour, renders the administration of ether, so long as the patient is sensible, a very unpleasant process; a feeling of suffocation is experienced, and considerable resistance is provoked. This, however, which constitutes one of the principal objections to ether anæsthesia, is readily overcome by commencing with chloroform, or some other anæsthetic which will bear the free admixture of air, and, applying the ether-mask so soon as the patient drops off into slight stupor, or the preliminary sleep which precedes narcotism. In this way distress is averted, time saved, and the patient is as safe as it is possible for him to be while absolutely insensible.

I generally administer the chloroform myself, and then hand the ether-mask to a nurse or assistant, and proceed with the operation free from embarrassing anxiety as to the effect of the anæsthetic. Perhaps I do not manage Mr. Morgan's apparatus so well as the inventor; but, according to my experience, a much larger quantity of ether is consumed, and the time requisite to produce anæsthesia is much greater than by the method I have described: in fact, with the Moorfields mask and a few preliminary whiffs of chloroform, the operation is over quite as quickly as if chloroform alone had been used. To test this, I timed my operations at the Eye Infirmary lately. 1. Double extraction for cataract; patient, a male aged 73, very feeble and decrepid; from commencement of inhalation to removal of patient, eighteen minutes. 2. Extraction for cataract of left eye; patient, female aged 65, feeble; twelve minutes. 3. Child; strabismus; seven minutes. 4. Double iridectomy for glaucoma; fifteen minutes; female aged 65. 5. Extirpation of eyeball, male aged 40; twelve minutes. The after-excitement, which I have sometimes found to be excessive with ether alone, seems to be favourably modified by a combination of anæsthetics, as is also the tendency to subsequent sickness. It is also advantageous, in prolonged operations, to alternate the ether and chloroform.

I am, etc., CHAS. BELL TAYLOR, M.D., F.R.C.P.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

XXIII.—DEATH FROM CHLOROFORM.

A DEATH from chloroform occurred at Hamilton, in the practice of Dr. Dickinson, to a man to whom the anæsthetic had been administered, in order to facilitate the reduction of an old-standing dislocation of the shoulder-joint. The deceased had been a hard drinker. Dr. Dickinson used the venous injection of ammonia without any result. It is reported in the *Australian Medical Journal*, August 1873.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 15TH, 1873.

THE ADULTERATION OF BREAD.

ACCORDING to a published report in the daily papers of last week, it appears that at a meeting of the Shoreditch Vestry, a deputation of master bakers attended to complain of the unsatisfactory character of certain analyses of bread recently carried out by the public analyst of the district, Dr. Stevenson, and to present the following resolution passed on the 20th ult. at a meeting of master bakers, ratepayers of the parish of Shoreditch:—"That in the opinion of this meeting the present method of analysing bread is far from satisfactory to the respectable portion of the trade, who have a desire to conform to the existing Act of Parliament in regard to the Adulteration of Food Act." Mr. Butler, the spokesman of the deputation, said that a sample of pure bread made by himself was recently sent to Dr. Stevenson, who analysed the same, and gave a certificate to the effect that it was one of the best that had been analysed, and that it contained no adulteration which would be injurious to health. As this was a somewhat qualified statement in regard to a pure article, he was instructed at a subsequent meeting of master bakers to procure two samples of cheap bread, which there was every reason to believe was not pure. Two such samples were submitted to the analyst, who pronounced them "not adulterated," and cast not the slightest suspicion upon them. He (Mr. Butler) was then deputed to make an adulterated loaf of bread, and in accordance with his instructions he made a 2 lb loaf, containing one drachm of alum—a quantity sufficient to be injurious to health. It was submitted for analysis, the usual fee of half-a-crown being paid, and the certificate returned was—"not adulterated." A portion of this sample was then taken to the Royal Polytechnic Institution for analysis, and handed to Professor Gardner, who charged half-a-guinea, and afterwards returned the following certificate:—"I have examined this piece of bread left with me; it is perfectly free from alum." On receipt of this astounding information Mr. Butler wrote to Professor Gardner, informing him that one drachm of alum had been purposely put in the loaf, and expressing his surprise that no adulteration had been detected. In reply, Professor Gardner wrote that unless a quantitative analysis were performed it was impossible to tell the quantity of alum in bread. For the half-guinea he had only performed a qualitative analysis, and had certainly found indications of alum, but of so slight and feeble a character that he did not think it worth while to mention it in his report, lest it should be used as a cause for prosecution. The charge for a quantitative analysis was five guineas. He (Mr. Butler), on behalf of the deputation, hoped the Vestry would give the matter their serious consideration, for heavy fines were in some parishes being imposed upon those who adulterated bread, and the respectable bakers of this parish were anxious that the law should be put in force against dishonest tradesmen, but at the same time if the certificates of public analysts could not be relied upon, the question would arise—of what use were such officers? After a long discussion a select committee was appointed to investigate the matter, and report to the Vestry.

Mr. Edward V. Gardner, F.A.S., L.S.A., wrote subsequently to the *Times*, saying that the bread handed to him was not a loaf, but a small piece of pan bread. Mr. Butler asked him what the fee would be for analysis. He was told that fees varied commonly from 10s. 6d. to

£5 5s., that a rigid quantitative examination of bread would be £2 2s. He said that he did not want an expensive analysis; that bad bread from various bakers had been examined in his locality and pronounced to be pure; that the sample he produced had been examined with a like result, and he desired to know whether it was bad and adulterated with alum, but he did not want an estimation. Mr. Gardner most positively affirms that the bread handed to him did not contain alum in any appreciable quantity. He carefully examined it, as did an assistant. The organic matter was effectually destroyed in a platinum vessel. The ash was examined for alum—that is, for alumina and sulphuric acid. After two days' standing only the slightest possible turbidity, in answer to the test, was observed. The blowpipe reactions were attended with almost negative results. There was no room for the possibility of error. Mr. Gardner adds that in these days adulterants are adulterated. Salt much used in bread sometimes contains alum; inferior alum is often adulterated with salt; one sample of "sweepings" sold for alum on examination was found to contain but little of that substance. Wheat grain has been found to contain alumina in small amount, and common spring water frequently contains it, so that analysts are obliged to pursue their inquiries carefully before arriving at conclusions. A proportion of one ounce of true alum in 60lb. weight of flour, if well mixed, can be easily detected in any portion of the mixture or in bread made from it. There are, however, so many circumstances to consider that would modify the conditions, especially in mixing the dough to make it into bread, that a small piece of a loaf containing alum might be almost free from the adulterant.

If these statements are to be accepted as facts, it must be observed that for a public analyst (who, by the way, is examiner in toxicology in the University of London) to find no alum in a 2 lb. loaf which had been adulterated with sixty grains of alum, and to certify positively to the absence of alum in that case, whilst returning a doubtful verdict in the instance of bread of undoubted purity, is not reassuring to the public, and reflects discredit on the condition of official chemistry in this country. It is quite true that there are difficulties in the detection of a trace of alum in bread; but these difficulties are perfectly well ascertained, and have been overcome. It is true also that traces of alum in bread cannot be detected without expending some degree of trouble on the operation; but that fact is well known, and an analyst who has not taken the necessary trouble to accomplish the testing for alum ought to abstain from certifying on the sample.

In many respects it is to be regretted that the question of alum in bread has been taken up so early in the career of the public analyst. Is sixty grains of alum in a 2 lb. loaf injurious to health? On this point information is by no means too abundant; and whether, in much smaller proportions, alum is injurious is exceedingly doubtful. The lamentable failures of the public analyst in the detection of alum in bread depend to a great extent on the defects in the ordinary methods of teaching of chemistry. The sharp distinction which is drawn between qualitative and quantitative analysis lies at the root of this kind of blundering, and the failure to detect alum has often arisen from the analyst having operated upon too small a quantity of bread. In the instance before us, there were sixty grains of alum in two pounds of bread; and, as will be manifest on making the necessary calculations, the proportion of alum in 100 parts of the bread is only 0.5 part. To have half-a-grain of alumina to operate upon, as much as a hundred grains of bread would have to be taken. The hydrate of alumina is semitransparent, and sometimes is not very conspicuous when it is precipitated. It is likewise very far from being absolutely insoluble in ammonia. When the chemist fails to get his precipitate of alumina, he has only proved that his solution of alumina is not above a certain degree of richness. Another source of error depends upon the impurity of the reagents. The potash or soda employed in the testing is liable to contain silica and alumina, which are liable to be confounded with the alumina of the bread. The deluge of hydrochloric or nitric acid which some chemists employ is likewise fatal to a delicate opera-

tion. We have no absolutely pure reagents, neither can we make absolutely pure reagents. All that is open to us is to make them pure enough for the purpose intended. The chemist has satisfied the needs of the case when he has made sure that there is less silica and alumina in the reagents which he employs than he gets from the bread which he has submitted to them. Considerations of this nature are, we fear, not always sufficiently present to our official analyst. Besides defects in general method, we have to record a curious example of special error. One of the chemists to whom the aluminised bread was submitted founded his judgment partly on his having detected no sulphuric acid in the bread-ash. The gentleman appears to have overlooked the circumstance that at a red heat the sulphate of ammonia in the alum would have volatilised, and that the sulphate of alumina itself would have suffered decomposition.

THE ELECTRO-PUNCTURE TREATMENT OF ANEURISM.

THE subject of the treatment of aneurisms generally has been, and must still remain, one of the deepest interest to practical surgeons and physicians. The time has, fortunately, long gone by, when our sole reliance was on medical means alone; and now we have at command pressure, both direct and indirect, electrolysis, and ligature. Of the ligature, and, when applicable, of the superior plan of pressure, we need now say nothing; but on the treatment by electric action—a method which is of comparatively modern introduction, and which is now on its trial in several metropolitan hospitals—some observations seem *apropos*.

Considering that electro-puncture has been known over forty years, and has been frequently performed, it seems surprising that it should have attracted so little attention in this country. Modern surgical works say little or nothing on the subject; and what is said is, for the most part, inaccurate and confused. Like many other discoveries, this gave rise to contentions as to priority. It appears to have been proposed in 1832, and Liston is said to have performed the operation on a subclavian aneurism shortly afterwards. These early attempts being unsuccessful—perhaps because not persevered with—were lost sight of, and it was not revived till 1845, by Pétrequin, since which time much experience has been gained. M. Abeille made several experiments on the occlusion of arteries by this means in 1849, and the Milan Scientific Society subsequently appointed commissions to investigate the matter. Their results were eminently satisfactory.

In the *Archives Générales de Médecine* for 1849 will be found an account of the experiments of M. Abeille, the results of which are very encouraging. In eleven experiments on dogs and sheep, he invariably found, on examining the animal a few days afterwards, a firm and even laminated clot, closely adherent to the vessels; and M. Asson reported to an Italian Committee that galvanism is a mode of producing a firm obstructing clot, which is composed of fibrinous granulations, connected together and adherent to the walls of the vessel. Some have considered that this was due to the inflammation which the needle or galvanic current excited in the walls of the vessel; but this has been disproved by experiments made by Dr. Duncan of Edinburgh, who showed that, if the animal were killed directly after being operated on, a clot would be found at the seat of operation. Mr. Phillips, who was the gentleman who operated in Liston's case, had also noticed that it required forty-eight hours to obstruct a vessel by merely passing needles through it.

Up to 1856, when the Italian surgeon Ciniselli published his memoir *On the Electro-puncture of Aneurism*, about sixty cases of aneurisms, or of tumours containing blood, had been thus treated; and the table given by him, although at first sight unfavourable, is really not so, if various disturbing circumstances be taken into account. Thus many of the cases were only submitted to this method when ordinary treatment had failed, and may, perhaps, justly be considered to have been beyond the hope of cure, although recent experience tends to prove that,

even in extreme cases, the progress of the tumour may be temporarily checked, and the more urgent symptoms much ameliorated; others died of affections quite unconnected with the tumour or of the results of its treatment; and in yet others it may be fairly said that the operation was frequently imperfectly performed. Altogether, this table, and the results of much experience in various countries since its publication, prove not only that aneurisms may be cured by electro-puncture, but that, if the case be almost hopeless when the treatment is begun, still the benefit so often derived from the operation is sufficient to make it incumbent on us to perform it.

The mortality-lists of this method will bear comparison with those by the other methods, leaving the balance in its favour; and, when it is considered that the danger of the operation is slight, and that it is applicable in cases where other methods are almost out of court, additional reasons are added for giving it an extended and fair trial.

During recent times, metropolitan practitioners have been adopting the method; and cases have been recorded by Mr. Holmes, who drew attention to the subject in his admirable lectures at the College of Surgeons; by Mr. Beck and others; and Dr. Duncan of Edinburgh has tried it on several occasions, his first case occurring in 1866. Dr. McCall Anderson has also published a case; but, as yet, our experience has not been favourable, if we consider the *cure* only, without due regard to important collateral benefits. The cases are few; possibly the treatment was undertaken at too late a stage of the disease; and at present we are far from having perfected the instruments and other means at our command. It is not unlikely that some have formed an unfavourable judgment as to the merits of this treatment, forgetting that, in comparing it with the ligature and pressure, they are contrasting methods which are perfected in their details with one which is yet in its infancy.

The questions which naturally suggest themselves to the practical mind are: In what cases is electro-puncture suitable? How is it to be performed? What are its risks? What may we expect from it? To these we purpose to reply in another article.

THE HISTORY OF A PROVIDENT DISPENSARY.

I.

MR. H. NELSON HARDY, late Senior Surgeon of the Marylebone Provident Dispensary, furnishes us with particulars which may be interesting at a time when many influential members of our Association appear to consider the Provident Dispensary system to be the great remedy for hospital out-patient abuses. It can, indeed, hardly be uninteresting or unimportant to trace the history of the oldest institution of the kind in London—an institution which for forty years has held its ground in spite of the enormous development of the gratuitous out-patient system during the same period. The St. Marylebone Provident Dispensary was founded in the year 1833 or 1834 by the Very Rev. Dr. Chandler, who, in those pluralist times, was permitted to combine the offices of Dean of Chichester and Rector of All Souls, Marylebone. It was originally called the North Western Provident Dispensary, a title which was changed ten years later to that by which it is at present known. Its benefits were to extend to persons residing in that part of the metropolis bounded by Euston Road on the north, Oxford Street on the south, Tottenham Court Road on the east, and Edgware Road on the west; an area of a mile and a quarter in length by rather more than half a mile in breadth. Provision was made in the rules for forming branch establishments on a similar plan and in connection with it; but this, it appears, has never been even attempted to carry out. The funds of the Institution were at first kept in two distinct accounts called "The Members' Fund" and "The Honorary Fund;" the former, consisting of the members' payments, was devoted to defraying the cost of drugs and remunerating the medical officers; while the Honorary Fund, consisting of subscriptions and donations from the public, was expended upon the general charges of the establishment, such as rent, dispenser's salary, coals, candles, etc. The midwifery fees (half a guinea per case)

were handed over to the medical officers according to the cases each attended.

The payments of the members were fixed at one penny per week for all above fourteen years of age, and one halfpenny per week for children under fourteen, except in a family with more than two children, when one penny was to suffice for all the children under fourteen.* Any person entering when ill, paid a fine of ten shillings in addition to the monthly subscription. With these arrangements the Dispensary seems to have started under auspicious circumstances—peers, members of Parliament, and other influential gentlemen not only giving it their support, but taking an active part in its management. It also appears to have been very well officered, Dr. George Burrows and Mr. Alexander Shaw having been among the consulting staff, and Mr. J. E. Erichsen among the medical officers in ordinary, during an early period of its history. From the records of the Committee meetings in the year 1840 (the earliest which are preserved), Mr. Hardy finds that the total number of members in the middle of that year was 650, and that by the end of the year they had increased to 710. The payments to the medical officers for that year amounted to £36 : 15 : 6 (exclusive of midwifery fees), which, being divided among the four medical officers in ordinary, gave them a trifle over £9 each for their year's work. About this time, the subscriptions seem to have been inadequate to defray the ordinary expenses; for we find in April 1841 the mention of a debt of £65 : 11 : 4, which was rather increased than diminished by the end of the year. During 1841, the total number of cases of illness attended by the medical officers was 1,064, being 279 above the total for 1840, and the payments by members having also been larger, there was £38 : 7 : 8 to be divided among the medical officers; but in consequence of several changes having taken place among the staff during the year, this sum had to be divided among *seven* gentlemen, two of whom received £9 : 11 : 11 each, and the others £6 : 8 : 11, £6 : 14 : 11, £3 : 3, £1 : 16, and £1 : 1 respectively.

By the end of 1842 the debt had increased to £130, and early in the following year the benevolent gentlemen who had started the Institution and kept it afloat for ten years, appear to have got tired of the experiment, and actually came to the resolution that it was not expedient to continue the Dispensary after Midsummer (1843), in consequence of want of funds. They were careful to explain that this was not in consequence of any failure on its part to do a great deal of good (as they believed) to the class for whose benefit it was established, but in consequence of the subscriptions from the public not being sufficient to pay current expenses—so little was the idea of an entirely self-supporting institution present to their minds! In accordance with the above resolution, the accounts of the Institution were made up to the end of June 1843, and a special subscription having been raised to pay off the debt, the lease of the Dispensary premises was given up, and it seemed to be on the point of being closed. Before, however, this could be done, a proposal to continue it was made by the medical officers in ordinary (already reduced in number to three, and shortly afterwards to two), and being agreed to, the Dispensary, under its new name of the St. Marylebone Provident, made a fresh start, the principal changes being a reduction in the charge for persons entering while ill from 10s. to 2s. 6d., and a reduction in the expenses by taking smaller premises. During the year 1843, the number of new members admitted was 253, and the total number from the opening of the Dispensary is stated to have been 3,963.

In the year 1844, an arrangement was made with a District Visiting Society belonging to All Souls' Church, to permit patients recommended by that Society to have medical attendance and medicines gratuitously for one illness, on payment by the District Society of half-a-crown for each case so recommended.

This arrangement, which at first sight appears to be totally foreign to the scope of a Provident Dispensary, was intended, it is believed, to act as a feeder to it, by inducing the patients whose treatment the District

Society had in the first instance paid for, to become paying members; but that it was not very successful in this way appears from a resolution of the Committee in 1857, that not more than 250 cases be admitted annually from All Souls' District Society, and not more than 150 from Trinity District Society, with which latter a similar arrangement to the above was made in 1850. The following table will show, by statistics, the progress of the Dispensary from the year 1845 to the present time.

Statistics of the St. Marylebone Provident Dispensary, from 1845 to 1872.

Year.	No of New Members.	No. of Provident Patients.	No. of District Patients.	Members' Payments.	Payments for District Patients.	Drug Bill.	Payments to Medical Officers.	Honorary Fund. Subscriptions and Donations.	Total Income.
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1845	1757	151	..	..	..	16 10 1	79 0 0	..	..
1846	392	1877	170	90 17 5	..	17 4 2	74 10 0	94 11 0	209 6 6
1847	..	1870	69	87 7 11	..	18 0 0	70 0 0	79 2 0	182 9 4
1848	..	2354	12	89 3 10	..	18 2 3	72 0 0	91 3 6	206 17 7
1849	..	2383	125	110 9 6	..	26 6 9	85 0 0	38 9 0	217 2 8
1850	..	2043	253	..	..	26 14 6	88 1 1	..	..
1851	..	2622	581	142 18 5	72 12 6	58 5 11	162 7 7	90 17 6	345 0 6
1852	..	2615	664	155 1 11	..	38 5 7	102 0 0	..	..
1853	..	2468	838	151 17 8	107 5 0	46 18 11	198 5 0	95 11 0	406 4 8
1854	..	2486	1010	159 1 1	126 0 0	47 10 7	222 10 0	69 12 6	394 11 10
1855	..	2311	647	143 8 5	..	44 5 4	165 15 0	..	..
1856	..	2658	499	165 1 7	..	41 19 6	159 0 0	..	..
1857	..	2866	317	169 14 4	..	27 1 4	67 9 8	..	..
1858	..	2625	459	177 12 3	..	31 7 10	133 15 9	..	..
1859	..	2978	444	181 9 8	..	33 16 3	154 6 0	..	..
1860	..	3043	392	192 1 4	..	44 4 0	101 13 2	..	..
1861	587	3220	490	201 9 0	55 10 0	38 12 6	102 10 4	71 7 6	363 1 6
1862	656	3187	503	205 4 6	26 0 0	39 15 5	160 0 0	58 16 5	342 7 5
1863	607	3649	410	195 8 5	52 11 6	45 8 7	100 0 6	55 2 6	312 11 10
1864	701	3320	441	224 6 2	51 5 5	51 9 4	100 0 0	51 16 6	364 9 10
1865	698	3165	310	226 10 1	54 17 6	45 11 7	130 0 0	63 8 0	381 18 10
1866	698	2883	235	225 17 1	19 2 6	38 7 0	130 0 0	44 12 6	343 12 1
1867	758	2683	128	226 16 1	30 5 0	37 19 0	100 0 0	61 0 0	347 10 7
1868	748	2511	195	231 2 8	16 2 6	63 17 0	100 0 0	44 11 6	303 3 3
1869	968	2630	111	247 3 0	25 5 0	81 19 8	100 0 0	46 0 0	357 11 8
1870	801	3253	102	255 13 8	14 10 0	88 1 11	100 0 0	43 13 6	346 16 10
1871	479	2998	56	246 12 6	22 25 0	75 8 8	100 0 0	113 8 6	407 14 1
1872	344	2921	23	226 2 10	..	72 0 0	102 10 0	40 0 0	333 10 4

Now it is curious to notice in this table how, with the gradual increase of the paying members, the honorary subscriptions and donations slowly declined, so that, whereas in the year 1846, when there were but 392 new members joining in the year, the honorary subscriptions amounted to £94 : 11 ; in 1869, when 986 new members joined, the subscriptions and donations were but £46. Coincidentally with the falling off of subscriptions came the decline of district cases; so that it happens that in the year 1870, when the largest payments on record were made by the members—£255 : 13 : 8—the smallest recorded amounts were received from the public either as subscriptions or as payments for district cases. However satisfactory it may seem to the advocates of the provident principle, pure and simple, to find the Dispensary thus being restricted more and more to what they may regard as its only legitimate source of income, it will hardly be considered a subject for congratulation to find that, in spite of the most economical administration of its funds, the year 1869 closed with a debt of £50, which, in 1870, was increased to £79 : 19 : 3; and although this was cleared off by a special appeal to the public in 1871, the year 1872 again closed with a deficit of £96 : 4 : 10.

At a Special Board held November 11th, 1873, Mr. Richard Davy, F.R.C.S., was elected surgeon to the Westminster Hospital, in the room of Mr. G. Legge Pearse, F.R.C.S., resigned.

THE *Carlisle Journal* contains an account of a remarkable suicide by phosphorus. The leading symptoms during life were inordinate thirst and vomiting of matters streaked with blood. It was with some difficulty that the jury were persuaded to adjourn for an autopsy. It is hard to say how much crime may be covered by the idle and slovenly objection to *post mortem* examinations.

* Mr. Hardy believes this was the scale of payments recommended by the originator of the provident dispensary system, the late Mr. H. L. Smith of Southampton.

DR. BARRINGTON CHEVALLIER has been elected mayor of Ipswich.

THE return of the collections on Sunday last in aid of the Amalgamated Charities of Birmingham, amounted to £6,120 15s. 6½d.

MR. FRANCIS MASON has been elected consulting surgeon to the St. Pancras and Northern Dispensary, in the room of the late John Bishop, Esq., F.R.S.

DR. OCTAVIUS STURGES, of the Westminster Hospital, has been elected to succeed the late Dr. John Murray as assistant-physician to the Hospital for Sick Children.

IN the financial year 1872-73 stamp duty was paid on 12,431,753 packets, boxes, etc., of patent medicines. The number is considerably above a million over that of the preceding year.

IT is stated that Sir Henry Holland leaves a large fortune—as much, it is said, as £9,000 *per annum*. He has one son, his heir, in the Colonial Office, who is married to Miss Trevelyan, the niece of Lord Macaulay. He has several daughters, one of whom is the widow of Charles Buxton. Sir Henry's second wife was the daughter of Sydney Smith.

THE death of Sir Henry Holland left vacant a post of Physician in Ordinary to Her Majesty; to this title, Dr. Burrows, lately Physician Extraordinary, has succeeded. Dr. Sieveking, for many years on the roll of the household of the Prince of Wales, is now promoted to the title of "Physician Extraordinary to the Queen."

IN our advertisement columns will be found a notice convening a general meeting of the governors of the Royal Medical Benevolent College on Tuesday, December 2nd, to consider the proposal of the Council to increase the charge to the pupils to the extent of £3 a year to those under fourteen, and £6 a year to those who are fourteen and upwards.

IN consequence of the news recently received from Cape Coast Castle, it has been announced at the Army Medical Department, Chatham, that thirty additional medical officers are to be immediately despatched to the Gold Coast for service with the troops engaged in the operations against the Ashantees. It is understood that the medical officers to be sent out will be those who have volunteered for service on the coast of Africa.

HOSPITAL SUNDAY IN AUSTRALIA.

HOSPITAL Sunday has now become a colonial as well as a British institution, so promptly contagious are our newest institutions. Recent advices from Victoria announce that Hospital Sunday at Sandhurst was well observed; above ten thousand people attended the service at the camp, where the reserve rifle corps and cavalry turned out. Over £600 was collected in the district. At Geelong also a good collection was made.

MEASLES IN LONDON.

THE recent weekly returns of mortality of the Registrar-General have exhibited a remarkable rise in the death-rate from measles in London. Until October 4th, the weekly mortality from that cause has never, for fifteen months, exceeded 33, and the average weekly rate for 1873 was 20.1 only; during the last five weeks, however, the recorded deaths from measles have been 48, 55, 76, 103, and 116 respectively. The prevalence of the disease has varied greatly in different localities; thus, of the 116 deaths registered in the week ending Saturday last, 35 were returned in the North, 34 in the East, 32 in the South, 9 in the West, and 6 in the Central Registration Districts. This large mortality was wholly confined to children. In 107 of the 116 deaths of last week, the victims were under five years of age, whilst in none of the remaining nine cases did the age exceed twenty years. The influence of season in the production of measles in England seems generally to be trifling,

though epidemics of the disease prevail mostly in the winter and autumn, or in cold damp summers, and have a singular tendency to recur every second year or so. An epidemic is due in England in 1874, and it would seem to be already beginning in London. The mortality is as yet chiefly confined to the children of the poor, and one need not go far a-field for explanations of its incidence upon these helpless sufferers. The huddling together of the sick and healthy in the single bedroom, from which fresh air is most rigidly excluded during this cold weather, when coals are at famine prices; a wide-spread belief that measles is a trivial complaint, from which all must, once in life, suffer, and for which neither the isolation of the sick, nor even medical aid is required—these, amongst other similar conditions of the lives of the poor, favour the death-toll which measles is now exacting. It is computed that on an average one in fifteen cases of measles terminates fatally: at that rate there were over 1,700 cases of the disease in London last week, each one of which formed a focus for the possible spread of the malady. He will be a bold minister who, putting aside the wretched squabbles of party, shall deal largely and wisely with sanitary reform, as it is required for the people, and check these preventable deaths; he will be remembered by a grateful posterity as one of the truest benefactors of mankind.

THE CHOLERA EPIDEMIC OF 1873.

IN the kingdom of Poland, since the commencement of the epidemic to the middle of September, 37,586 cases of cholera have occurred, of which 16,248 cases proved fatal; of these, 4,483 cases were in Warsaw, with 1,578 deaths. In Prussia, the total number up to the present time amounts to 38,624, of which 19,655 have proved fatal. In Vienna, since the 16th of June, 3,158 cases have occurred, with 1,293 deaths.

THE ASHANTEE EXPEDITION.

WE have just been informed of a fact of great importance, and much to be regretted, with regard to the arrangements for the Ashantee war. As is well known, a hospital-ship is being got ready, the *Victor Emmanuel*, to which Surgeon-Major Bleckley has been appointed. In the Abyssinian and China campaigns, such ships were put entirely under the command of the medical officers (except, of course, as regards nautical matters), and the results showed that that confidence was not misplaced. It is with infinite disappointment that we learn that the Horse Guards have determined to put a military officer in command over the surgeon-major in the present instance. The Medical Department at Whitehall Yard have, we believe, protested, but at present without effect. There can be no excuse for the proceeding, except it be to find a post for some military officer, or directly to humiliate the Medical Department, for there are officers of the army hospital corps already appointed for the routine military duties. One of the consequences of the arrangement will be, of course, to deprive the surgeon-major of the cabin accommodation proper for his rank, and necessary for the due performance of his duties. The present appointment may seem a small matter, but it is, indeed, a great scandal, and will cause just and widespread indignation. It involves the perpetration of a mischievous job of the worst kind.

KILLED IN THE SERVICE OF THE STATE.

THE death of Dr. Gwynne Harries at the age of 33, from the sudden stroke of malignant fever contracted in the service of the State, is to be noted as the fate of a man who has fallen in the discharge of a dangerous public duty, and, as such, deserves the same sort of consideration as is given to that of a soldier who meets his death in the field. The service of the Public Health Inspectors of the Local Government Board is, indeed, one of constant danger. They expose themselves, at every visit into an infected district, to the attacks of an unseen enemy, whom they track into his hiding-places, and seek to expel from his strongholds. More than one member of the staff has already succumbed. The State, however, makes no permanent provision for loss of life incurred in civil services of the kind. In this, it differs from most other European states. We understand that Dr.

Harries leaves a young widow. An application has, we believe, been made to the Treasury to recognise the special circumstances of this case. Dr. Harries was a man of splendid *physique* and fine constitutional powers; but the dose of fever-poison which he inhaled was so strong, that he survived its first shock only a few days. The care lavished on him in that excellent institution, the Fever Hospital, was beyond praise.

OVER-TRAINING.

THE premature death of John C. Heenan, the antagonist of Sayers, will serve to impress the fact, which ought now to be well known, that the excessive and severe "training" which is customary amongst athletes prior to attempting feats of strength and agility, is detrimental rather than serviceable to the health. Nothing, indeed, is better calculated to break down a strong constitution than ordinary habits of indulgence alternated with fits of "hard training".

HOSPITAL STOPPAGES IN THE GUARDS.

It will be within the recollection of our readers that, on the occasion of a recent order condemning every soldier under hospital treatment for disease caused by his own misconduct to forfeit the whole of his pay, we took occasion to enter our strong protest, and to point out how such a regulation must infallibly defeat its own object. Every one who has the slightest acquaintance with military practice, will bear us out in saying that, under these circumstances, concealment of disease will become the rule rather than the exception, and that the hospital will be looked upon as a place of punishment rather than as a refuge in sickness. An intelligent non-commissioned officer has lately informed us that very wide dissatisfaction exists in his regiment on this account; and we are also aware that surgeons feel very keenly the invidious duty imposed upon them in deciding absolutely when punishment should be awarded. We have much satisfaction, therefore, in appending a document which, we are informed, has recently been drawn up by the medical officers of the Brigade of Guards, and has received the authority of their military superiors, and which seems to hit the happy medium between unreasoning severity on the one hand, and undue leniency on the other.

"We are of opinion that the whole of the pay of the soldier, in accordance with Army Circular of October 1st, 1873, clause 126, shall be liable to stoppage, whilst he is in hospital, for all diseases and self-inflicted injuries which are immediately dependent upon intemperance, and for all cases of enthetic disease, primary syphilis, gonorrhoea, etc., which in the opinion of the medical officer have through negligence not been reported in the early stage of development; and for all cases of purposely inflicted injuries, malingering, and a few others mentioned below.

We herewith append a tabular statement of those injuries and diseases which, we consider, ought to be included in this return.

Disease and injuries dependent upon intemperance.

Wilful self-mutilation.

Neglected external diseases, such as itch, ulcers, etc.

Feigned diseases.

Neglected primary and secondary venereal disease."

MILK AND TYPHOID.

IN reference to the recent outbreak of typhoid fever at Maidford, near Towcester, which the rector has connected with the distribution of milk from a farm of which the inmates were suffering from typhoid, we learn from Mr. Arthur Hill of Towcester, under whose care most of the cases have been, the following particulars. 1. The first case coming under Mr. Hill's care was a girl, aged 14, who fell ill the last week in August. 2. A shoemaker and small farmer, on September 16th. 3. A girl, aged 12, nurse-girl to No. 2's children, on October 4th. 4. A child of No. 2, aged 4, on October 8th. 5. A child, aged 6, October 5th. 6. Two children in a publican's family, October 14th. 7. A woman and her child, aged 11, October 23rd. 8. A girl, aged 11, October 22nd. 9. Three more children in No. 7's family, October 25th. 10. A woman, mother of Case 5, October 26th. 11. A girl, aged 11, October 30th. 12. A man, husband of No. 7, November 11th. 13. A girl, aged 6, sister of No. 3, November 11th. Upon

making inquiries, Mr. Hill ascertained that Cases Nos. 1, 2, 3, 4, 5, 6, 7, 9, 10, 12, and 13 had their supply of milk from No. 2. At the same time, he says that samples of water, used by the inhabitants for drinking purposes, have been tested, and he understands it has been found that the majority of them are bad. With the exception of Cases Nos. 6, 11, and 13, all the fever-patients live in the same quarter of the village. He further states that, though some of the cases have been very severe and dangerous, he has not had a fatal case hitherto. There is therefore evidently *prima facie* ground to conclude that the outbreak will prove to be due to the use of polluted drinking-water (this time not added to milk).

THE HOSPITAL FOR CONSUMPTION AT VENTNOR.

THE Royal National Hospital for Consumption, on the Cottage Principle, situate at Ventnor, has received two gifts of £1,400 each from Messrs. Samuel and John Courtauld, of Essex, for the erection of a pair of houses to accommodate twelve patients. There now remains but one block of two houses to complete the entire design of the hospital, which embraces sixteen semi-detached houses, and will accommodate more than one hundred patients, each inmate having a separate sleeping apartment. Considerable progress has been made with the erection of the buildings at Ventnor. Of the eight pairs of houses of which the hospital will finally consist, four are fully occupied by men and women patients; the fifth pair is nearly completed, the sixth is in course of erection, and the seventh will now be commenced. The chapel for the use of the patients is far advanced, and will be shortly opened by the Lord Bishop of Winchester, though the Committee regret to state that they will have to open the building with a debt of over £1,000, as the chapel is being built from a special fund. The great advantage which this hospital possesses in providing the patients with separate sleeping apartments, and giving them the medical care and treatment of a hospital together with the comforts of a home, entitle it to the warm support it has hitherto received, and which we trust will be continued.

THE OLDEST STUDENT'S MEDICAL SOCIETY IN LONDON.

THE hundredth session of the Middlesex Hospital Medical Society was opened on the 6th instant, when Mr. H. H. Smith, the senior house-surgeon, read a paper on Erysipelas before several members of the hospital staff, about sixty students, and numerous visitors. An animated discussion followed.

VERNACULAR MEDICAL EDUCATION IN BENGAL.

WE learn from the *Indian Medical Gazette* that the vernacular classes have outgrown their accommodation, and this fact has become more evident than ever during the present session. The numbers of the different classes on the rolls at the commencement of the session were—Primary or English classes, 445; Apothecary class, 41; Military or Hindustani class, 136; Bengali classes, 772. The College authorities strongly represented to Government that teaching was almost impossible under the circumstances; the class-rooms, dissecting-rooms, and hospital, being all too small, and not affording space or means for imparting instruction. Sir George Campbell at once took up the subject, and has dealt with it with characteristic promptitude and vigour. A circular was addressed to the Surgeon-General, the Principal of the College, several of the senior professors, and one or two experienced civil surgeons, calling for an expression of opinion on the subject. The replies went clearly to show that the Bengali classes have not been so thoroughly trained in medicine as is desirable; that, while they have received a good deal of theoretical instruction, and imbibed parrot-wise much book- and lecture-knowledge, they have not had the amount of practical and clinical instruction which is necessary, and that more tutorial and hospital teaching is absolutely requisite. The Medical College, already overburdened with the English classes, cannot afford the necessary space and opportunities, and suitable conditions for establishing vernacular medical schools must be sought elsewhere. The principal desiderata were shown to be a sufficient supply of bodies for

dissection, and a sufficiently large hospital with attached dispensary for clinical and pharmaceutical training. It has finally been determined to remove the vernacular classes from the Medical College to the Pauper Hospital at Sealdah, where there is an abundant field for clinical study, and to establish schools at Dacca and Patna. The arrangements necessary for these purposes are now in progress. An effort is at the same time to be made to utilise the larger dispensaries throughout the province for purposes of practical instruction in pharmacy and hospital work. The necessity for providing the vernacular classes with textbooks framed in accordance with a rational and uniform system of scientific nomenclature, has also had the Lieutenant-Governor's attention, and steps are to be taken forthwith to realise the very important object of providing the vernacular classes with a good set of Bengali manuals or translations embracing the principal subjects comprised in a medical curriculum. Medical education in Bengal has thus entered on a new era, and in a few years the people of the province will have an abundance of useful practitioners of rational medicine placed at their disposal, who will supplant the koberajes and quacks who now infest the towns and villages of Bengal.

BABY-FARMING.

A COMMUNICATION from Maidstone states that a baby-farming establishment has been discovered in the village of Loose, situate about two miles from that town. An inquest was lately held at Loose on the body of a child named Maud Thompson. Elizabeth Thompson, the mother, a married woman, whose husband deserted her a short time ago, proved that the infant was just three months old; and said that, some seven weeks ago—in consequence of an advertisement in the *Christian World*—she entrusted her baby to the care of Mrs. Spurgeon of Loose, agreeing to pay for its maintenance at the rate of 4s. 6d. a week, monthly, in advance, and to provide clothes for it. At that time the baby was fat and healthy. From the evidence of Dr. Owen, it appeared that Mrs. Spurgeon came to him and asked for a certificate of the death of the child, which he refused, as he was not satisfied with her story. He had made a *post mortem* examination of the body, and found it very much emaciated, but could not speak positively as to the cause of death. The jury ultimately returned a verdict of "Death from natural causes," at the same time expressing a strong opinion that houses of this description should be under the surveillance of the police. Mrs. Spurgeon was cautioned by the coroner as to her future conduct.

OUR MEAT-SUPPLY.

WITH reference to the increased demand for flesh food, a series of calculations, made by Mr. C. Tattersall, gives the following results. In the year 1870, the 31,349,921 inhabitants of the United Kingdom consumed 1,357,189 tons of meat, or 97 pounds per head. In 1871, the 31,628,338 inhabitants consumed 1,438,041 tons, or 101½ pounds per head. This was an increase for 1871 over 1870 of 4¼ pounds per head, equal to an increased demand for more than 1,300 head of stock *per diem*, while the natural increase of the population required the additional slaughter of 270 head only. In 1872, the 31,906,755 inhabitants consumed 1,537,526 tons of meat, or 108 pounds per head, being an increase of 6½ pounds per head for 1872 over 1871.

UNUSUAL DOSES.

THE following circular has been addressed to the presidents and officers of the medical corporations and schools, and leading members of the medical profession, by Mr. Groves, President of the British Pharmaceutical Conference.

Sir,—At the tenth annual meeting of the members of the British Pharmaceutical Conference, held at Bradford during the third week of September, 1873, the important subject of unusual doses in prescriptions, and the position which pharmacists should occupy in relation thereto, was carefully and patiently discussed in its pharmaceutical bearings by members from all parts of the country. By an "unusual dose" was understood a large quantity of potent medicine designedly prescribed in rare cases, but which, as a rule, would not be dispensed by the pharmacist without hesitation. The result of the debate was the

unanimous adoption of a series of resolutions embracing what was believed to be the essentials of safe practice in the matter. Further, the President of the Conference was requested to bring the resolutions under the notice of the presidents of the medical colleges and corporations, and other leading medical authorities, and the medical journals, in the hope that the action taken would be approved and supported by physicians and medical practitioners generally. The proposal is, that the prescriber should call attention to an unusual dose by adding, on the same line, his bracketed initials, thus (F. W.) A similar plan is already adopted on the Continent, and, indeed, in some countries is enforced by law.

The following are the resolutions referred to.

That this Conference having considered various proposals for the use of special signs to mark unusual doses on prescriptions, and the great advantages to be derived from such signs, considers that the bracketed initial letters of the prescriber's signature, written immediately after the unusual dose, is the best suited for the purpose.

This Conference also respectfully urges upon medical men the importance of the prescriber's full name and address being written on *all* prescriptions, to facilitate communication between the prescriber and dispenser.

This Conference likewise considers it desirable for the dispenser to retain *all* prescriptions in which initialled unusual doses are prescribed.

ADULTERATIONS OF MILK.

THE secretary to the Metropolitan Dairymen's Society has just addressed a circular to country dealers in milk, reminding them of the vigorous application, both in the metropolis and the provinces, of the Adulteration Act, which provides that if any milk sold as pure be deteriorated by any addition of water, either by himself or his servants, a dealer renders himself liable, for the first offence, to a fine of £20 and costs, and, for the second, to the publication of his name, address, and offence in the newspapers of his district, in addition to the fine. A similar penalty is also inflicted where any portion of the cream has been removed. "This caution", he adds, "is necessary from the careless and culpable way in which servants and others are often allowed by rinsings or cooling, or otherwise, to lower the quality and depreciate the value of milk forwarded to the metropolis." Dairy farmers are therefore requested to give the strictest personal attention to the subject, so that the milk may leave their hands as it is drawn from the cow.

DEATH AT SCHOOL.

THE following letter, which appears in the *Daily Telegraph*, has created a painful impression, and is not unworthy of serious attention. It was forwarded to that journal by a correspondent, who sends it as an extract from a letter which he has received from his son, who is at a provincial boarding-school.

"Yesterday we had a paper chase. I was not in the pack, but followed part of the way. The first ditch was about two and a half yards wide, and one and a quarter deep. Only one or two cleared it; all the rest jumped into the middle, and scrambled through as best they could. Some fell on their backs, and came out in an awful plight. The next one was a little wider, and a very swift stream indeed, and came up to about your shoulders. One boy dived in and swam across. Soon after, it began to hail and rain very hard. There was also a very high wind; and the poor fellows, dressed only in a jersey and ducks, were drenched a third time. Two new boys out of my study ran, A. and B. A. came in all right. B. was drenched to the skin, besides being very tired; and, amongst all the rain, hail, and wind, started for home. Two brothers—walked with him to within a couple of fields of home; then he lagged behind, said he was tired, and told them to leave him and go quicker if they liked, and not to mind him. B. didn't appear at tea, and his brother was very anxious about him, and told Mr. —, who is his assigned master. So at 7.30, Mr. — and the Sergeant, with lanterns, and all the monitors, as well as a crowd of boys, went out to look for him, and found him, about 10.15 P.M., on the playground—dead, lying down, both numbed and stiff, where he had been some time. He had been out in all the wet, and hail, and wind the whole night, till 10.15. He was lying down with one hand on his head, and the other stretched out. I saw him go through two ditches with all the other fellows, being drenched and covered with dirt. The doctor at first didn't know if he was dead or not, but found afterwards that he was stark dead. He was only twelve years old, and was a little weak fellow, with nothing on but a loose jersey, and trousers, and stockings,

and boots, with no hat; and, thus clad, was out in all the wind, hail, and rain, besides being nearly over head in water in two ditches. His father is ill, and his mother is blind. I believe the Sergeant has gone to —, where he lives, to break the news, but I am not sure. We are all very sorry for him, and his brother, and father, and mother."

Allowing natural schoolboy exaggeration, there seems every reason to believe that this poor little fellow was tempted to join in a sport far beyond his strength; and it seems to us that some restrictions ought to be imposed on the natural eagerness of competition in the very young. In our leading public schools, such an accident would scarcely have been possible, for the following reasons. 1. Boys are seldom admitted so early as twelve years. 2. Delicate lads are invariably precluded, either by orders from home or by direction of their house-master, from joining in games until the doctor's sanction has been obtained. 3. The roll is called at dusk, and the boys' entrance is closed; so that not only is any absentee at once detected, but, on arrival, he is obliged to come in at the front door, and his condition is carefully observed. We are far from wishing to cast any imputation upon this particular school, whose arrangements are necessarily quite unknown to us; but many of these smaller institutions fail, both in discipline and general efficiency, from being too short-handed. We do not mean only the limited number of the actual staff, but the absence of older boys and that species of responsible supervision with which they may be so beneficially intrusted. The sixth-form system, perhaps more than anything else, has been the glory of Arnold's teaching; for not only is it good to know how to rule, but it is, perhaps, even better to know how to serve; and we may be sure that any school is in a flourishing state in which the due relations between the big boys and the little are preserved.

EDINBURGH UNIVERSITY CLUB.

THE quarterly meeting of this Club was held on Wednesday, the 12th instant, at St. James's Hall, Regent Street. Dr. Wilbraham Falconer of Bath presided, and was supported by Dr. Lyon Playfair, M.P., Dr. Sibson, Rev. Dr. Cosmo Gordon, Mr. Kieser, Dr. George Harley, Dr. Huntley Gordon, Deputy Surgeon-General, Dr. Balfour Cockburn, R.E., etc. The President, in a graceful speech, alluded to the losses sustained by the Club in the deaths of Sir Henry Holland and Dr. John Murray; also to the continued prosperity and usefulness of the Association. Dr. Lyon Playfair proposed the toast of the Sister Universities; Dr. George Harley that of *Alma Mater*; while Mr. Savory responded to the toast of the Visitors. There were present thirty-three members and twelve guests.

EPIDEMIOLOGICAL SOCIETY.

DR. W. R. E. SMART, C.B., of Haslar Hospital, Inspector-General R.N., inaugurated the present session of the Epidemiological Society on Wednesday evening, November 12th, by an introductory address of great interest, which we shall hope to publish. The exact limits of cholera-extension to the present time were clearly stated. An account of the appearance of typhoid in two squadrons of our navy in the present year, fourteen days after leaving a port from which the water-supply had been replenished, was of great interest; as also the precise details of the remittent and dysenteric affections from which the first detachment of 110 of our Marines, so hurriedly despatched, were in two months sent back from Cape Coast. The meetings of the Society are held in the new premises of the Medical Society of London. The large room was well filled by an audience not exclusively of the professional friends of sanitary science. At the conclusion of the address, the President alluded to the loss by death the Society had sustained in their Secretary for Russia, Mr. W. D. Michell; and expressed the deep regret that every member of the Society must feel at the loss of "one whose cheerful intelligent countenance was now and then seen, and his voice heard in discussion at our meetings; and none could display a higher regard to the dignity and true interests of our profession, nor a keener spirit in pursuit of that practical knowledge which ennobles it. He has fallen an early victim to the fell diseases which he strove to make his special study, as has frequently happened to many who in

their youth had gained the applause and won the confidence of their professional brethren. In sympathising in the irreparable loss to his family, among whom there is one among us whom we recognise as a veteran in medicine, entitled to our highest regards as an epidemiologist, who viewed with fond pride the rising reputation of the kinsman bearing his name, with the promise of a bright future, our sympathy with him in his bereavement is greater than words can express." As Dr. John Murray was near the President, no name was mentioned; nor was it needed to make all present understand his words.

BRITISH ASSOCIATION.

A MEETING of the local executive was held on Monday, at Bradford, and the financial account which was submitted showed the total expenses of the late meeting in that town to amount to about £3,300. The guarantee fund subscribed amounted to £5,200. A call of 50 per cent. upon this sum was made a short time ago, and it was resolved to make a further call of 1s. 6d. in the pound to meet the deficiency.

LIGATURE OF CAROTID FOR OCCIPITAL ANEURISM.

ON Wednesday, November 12th, Mr. James Lane ligatured the left common carotid at St. Mary's Hospital, in the case of occipital aneurism recently reported in the JOURNAL. Between five and six weeks of steady pressure had done little more than arrest the progress of the disease; and, considering the very deep situation of the occipital artery, Mr. Lane thought it most desirable to deal with the main trunk. The operation was done in the ordinary way, the carbolised catgut ligature being cut off short, and the only difficulty arose from a somewhat unusually enlarged thyroid body overlapping the vessel. Mr. Lane took occasion to remark on the great importance of opening the sheath towards the inner side, and thus avoiding the great inconvenience which he had seen to result from bulging of the internal jugular vein through the incision.

SURGICAL STATISTICS.

IN the course of his introductory address last week at the school attached to the Richmond, Whitworth, and Hardwicke Hospitals, Mr. Stokes, after referring to the matters which have recently appeared in our columns, added—"In the Richmond Hospital, I may mention, during the past four years I have had thirty-eight amputations, fortunately with only two unfavourable results; and, during the period of my official connection with the Meath Hospital, the results of the cases of amputation treated by my colleagues were equally satisfactory. The facts I have mentioned in reference to the results of amputation-cases in the three hospitals I have alluded to, of the results obtained in two of which I have had personal experience, are, I think, of the greatest practical value in disproving the confident assertions of Sir James Simpson. I may mention also that I have recently spoken to five eminent surgeons of this city, all of whom enjoy a large amount of public confidence, in reference to this question, as to whether better results are obtained after amputations in private or in hospital practice; and it is a remarkable fact that three of them asserted positively that the results obtained in hospital practice were superior to those in private, and the remaining two were of opinion that the results obtained were about equal. I mention this, as it is certainly not in accordance with what has recently been asserted by Mr. Erichsen."

IRELAND.

WE are requested to state that Dr. Wharton was not a candidate for the professorship of surgery in the University of Dublin.

A JUST TRIBUTE.

MR. STOKES last week paid in his introductory address a just tribute to two Irish worthies.

"Of one of those who have resigned, our late senior surgeon and the honoured father of Irish surgeons, Robert Adams, I will only say that in retiring from the active duties of this institution he bears with him the sincere regard and esteem of his former colleagues and pupils, all of whom

hope that he may often revisit the scene of his former labours, assist and guide by his sage advice, and encourage by his example; and that he may be long spared to look back with pride and satisfaction on his distinguished career—a career so beneficial to the public, so useful to the profession, so honourable to himself, and so creditable to the country of his birth. The voice of the other—of Robert William Smith—is now hushed in the stillness of death; the voice that for forty years has been heard so often within these walls, and who, until a fell disease prostrated and enfeebled him, worked with a vigour, a zeal, a fidelity, and an enthusiasm, combined with a pure love for truth, that has been in the annals of our profession, I may say wholly without example, and who was rewarded by acquiring for himself an undying fame, and what he prized far more—the deep respect of his professional brethren, the admiration of his countrymen, and the warm and lasting affection of his friends. Scientific workers may be divided into two great classes. There are those who advance it by patient investigation, by honest criticism, and by faithful endeavours to verify or disprove the opinions and theories of others. They are like the stars that shine by a reflected light; but worthy are they of praise and honour, for their work is useful and it is good. If they have not creative power, they have the power to adorn, to strengthen, and make permanent the work of others. But Robert Smith belonged to a nobler band of workers—those, namely, who illumine the rugged paths of science with lamps of their own—lamps which shed no borrowed light, and which they fashion by honest and bitter toil and light with their genius. No petty ambition for worldly honours, no sordid love of gain stimulated him to labour. His great aim, the goal he ever strove after, the one noble ambition of his pure, his blameless, his religious life was, in the hitherto unexplored regions of the great art and science to which I may say from his early boyhood he devoted himself, to unfurl the glorious banner of truth. He felt and knew that by so doing he best advanced Christ's work here on earth."

BELFAST BRANCH OF THE ROYAL MEDICAL BENEVOLENT FUND
SOCIETY OF IRELAND.

THE usual quarterly meeting of the committee of this local branch of the above most useful and excellent society was held lately, Dr. H. S. Ferguson, in the chair. The proceedings of the last quarterly meeting having been read, were confirmed, and signed by the chairman. Arising out of them, it was now reported that copies of the resolutions adopted on the lamented deaths of the late Dr. Thomas Reade, and Dr. J. M. Pirrie, had been duly transmitted to the immediate families of each, and a letter of acknowledgment was now read from Mr. Robert Reade, expressing the grateful thanks of himself and relations for the sympathy manifested by the committee for the bereavement they had sustained. It was also reported that a copy of the resolution of sincere thanks to Lady Johnson, for her liberal donation of £100 had been duly forwarded to that excellent lady for so considerably and voluntarily aiding the funds of the Society. After the transaction of some further routine business, and making arrangements for the annual meeting, in February next, of the supporters of the Society, and for the appointment of office-bearers for the ensuing year, the meeting was adjourned.

ROYAL COLLEGE OF SURGEONS, DUBLIN.

MR. TUFNELL, of the City of Dublin Hospital, was elected Vice-President on Thursday. He proceeds to the Presidency in June, and Dr. Mapother, Mr. Edward Hamilton, and Dr. Tabuteau, a leading provincial surgeon, are spoken of as his successors. Dr. R. McDonnell is likely to succeed Mr. Tufnell as Examiner; and Mr. Smyly and Mr. Tyrrell seek the seat on the Council which he vacates.

DR. ROBERT LAW, OF DUBLIN.

WE regret to state that the health of this distinguished physician is at present very precarious, and has caused much anxiety to his friends. Some few months since, whilst going out to dine with the late Dr. Robert Smith, he received an attack of paralysis, the right side being affected, but without any loss of speech. Within the last few weeks, however, a change for the worse has come on, and at present his speech is very much affected. Electricity was applied for a considerable time to the paralysed muscles, but without any good result. He has sent in his resignation as Professor of the Institutes of Medicine in the Uni-

versity of Dublin, and the election for that post will take place on the 13th of next February. The gentleman appointed will not be permitted to belong to any other hospital than Sir Patrick Dun's.

UNIVERSITY OF DUBLIN.

ON Saturday, the 8th instant, the election for the Professorship of Surgery, vacant by the death of Dr. Robert Smith, took place, when Dr. Edward H. Bennett was elected. The appointment is a satisfactory one, and Dr. Bennett, who has been lecturer on anatomy for several years in the School of Physic, well deserves his promotion. The chair of anatomy is now vacant, but it is believed that one of the demonstrators—rumour mentioning Dr. Evelyn Little—will be selected for the post.

THE ASHANTEE WAR.

REMARKS on the above have been forwarded to us by a correspondent, who says:—

Every report seems now to lead to the belief that European troops will be engaged in this guerilla warfare which is now going on amongst the savage tribes of the Gold Coast protectorate. As the climate is almost uninhabitable, and, as is well known, it is very pestilential and very pernicious to Europeans, we ask the British Medical Association to appeal to Government, in the interests of the very few medical officers who have their lives insured for the benefits of their families, and who may, perhaps, be ordered to proceed to the Gold Coast, to lessen their reluctance to do so by guaranteeing to their widows and families the amount for which they are insured, or pay the extra premium which insurances offices demand for the risk of serving in this climate. At present, we know of no office which will accept an insurance at a moderate premium, and many, we hear, will not do so at all; so the insurance which was to be the means of saving the family from destitution, or a help to meet liabilities, must be allowed to lapse. This appeal cannot be regarded as unreasonable either by the Government or the public; we well know that this war must be terminated by the aid of European troops. The native tribes will give as little assistance as ever they can, if we are to judge from the remarks of a correspondent in the JOURNAL of the 8th instant. If they work or aid us at all, we who have been amongst them believe they will only do so either by coercion or by being well paid. Sir Garnet Wolseley's offer of a few pence a day will not, we expect, be largely (if at all) availed of. It appears he is not very well acquainted with the habits of the African negro, whose love for idleness and rum is his most baneful vice. All along the West Coast, the women may well be said to be the slaves of the men. War in such a country is beset by hardships and difficulties almost incalculable. The way from Cape Coast to the River Pra, which constitutes the boundary of the protectorate, lies through a forest in which there is no open space, if we except the neighbourhood of those wretched, ill-conditioned krooms or villages, which are as readily built up as they can be destroyed. The ground is covered with thick-set brushwood and sharp-pointed bramble, which it is absolutely impossible to break through, and so thick that one is obliged to keep to the narrow pathway, which is rarely wide enough for three people to walk together. In consequence of the narrowness of these paths, an army starting with the early morn will only get to their destination late at night. The length of a march is usually thirteen miles; but it is for the most part regulated by villages, for the purpose of being able to procure water of some kind. The greater part of the march is performed before breakfast hour, as the morning sun is very intolerable; and we are of opinion that this morning sun should be as much as possible avoided by those who are desirous to preserve their health. The head should at all times be well protected from the bright rays of the sun, which plays with great force on the temples and back of the head.

Now that the Fantee territory has been infected by "small-pox," which has always proved a very fatal disease amongst the negro race, we should suggest to every commanding officer the necessity of avoiding the villages or their vicinity as camping grounds. The greatest obstacle to a speedy termination of this war will be caused by the difficulty there exists in procuring either a sufficient or an efficient transport. Horses will not live in this climate of the Gold Coast, and the transport has altogether to be entrusted to men who carry on their heads with ease some sixty or seventy pounds weight of meat or biscuit. As well as we can remember, in the *quasi* expedition of 1864, the greater number of carriers consisted of Kroomen, who were brought from Cape Palmas. Very few of the natives of the Gold Coast would willingly undertake such duties; and, until they give us that alliance and that aid which we should hope for, we should be in no hurry to meddle

in the war of a country which may prove to be the resting-place of many Europeans.

There is not much reliance to be placed in the promises or pledges of native kings, queens, or headmen; they are all too much given to "palaver" now, as in 1864. They may be found ready to find causes for grumbling, which involve much unnecessary delay; and this expedition, like that under Colonel Conran, may never go beyond the Prah. We may, later on, hear that the message sent by King Coffey Calli to the English troops is similar to that which he sent to the West Indian creoles, viz., leave them alone; the climate will do for them!

We would also suggest that the Government should grant lodging money to the wives and families of married medical officers during their absence on the coast, and that this should continue during the period of leave of absence which has always accompanied service on the West Coast of Africa. The Secretary of State for War has never granted this allowance for more than twelve months, even though a man may have served for a longer time on the Coast. When men's rights are not fairly recognised, they have but little heart for their work. The gain to the public is very small, while the hardships inflicted on individuals press heavily and deprive them of domestic luxuries, if such are at all consistent with their present rate of pay.

What profession is so responsible as, or more consoling than this to which we belong? All my civilian brethren say we should be paid better and worked more, in which idea I coincide. Army medical men believe that they are deeply indebted to the President and members of the British Medical Association for the energy they have displayed in trying to improve their position. We trust they will not be found unwilling to add another claim, and to appeal to Government to come to the aid of those who may have their lives insured for their families. As a harmonious body, we are a great power.

MEMORIAL TO THE LATE DR. JOHN MURRAY.

The following subscriptions have been received and promised since the publication of the former list:—

	£	s.	d.		£	s.	d.
The Students of the Mid-				Timothy Holmes, Esq.	1	1	0
dlesex Hospital	5	0	0	Sir William Fergusson,			
Dr. J. Hall Davis	2	2	0	Bart., F.R.S.	1	1	0
Dr. W. Rutherford	2	2	0	Mrs. G. A. Malcolm			
Erasmus Wilson, Esq.,				Simpson	1	1	0
F.R.S.	2	2	0	Alexander Ross, Esq. ...	1	1	0
J. W. Hulke, Esq.,				Dr. Francis Hawkins..	1	1	0
F.R.S.	2	2	0	Thomas P. Hawkesley,			
H. Spencer Smith, Esq.	2	2	0	Esq.	1	1	0
Prescott G. Hewett, Esq.	1	2	0	Dr. Sam. Wilks, F.R.S.	1	1	0
Colonel Warden, C.B.	2	2	0	J. W. Gurney, Esq. ...	1	1	0
James Anderson, Esq.	2	2	0	Sydney Coupland, Esq.,			
Dr. J. Warburton Begbie	2	2	0	M.B.	1	1	0
Colonel R. W. Fraser	2	2	0	Dr. Henry Rayner	1	1	0
The Rev. Alexander				Alfred Stovell, Esq. ...	1	1	0
Anderson	2	2	0	T. Everitt Norton, Esq.	1	1	0
Dr. John Tatham	1	1	0	Dr. A. Henry	1	1	0
Dr. T. Lauder Brunton	1	1	0	Dr. A. James Duncan	0	10	6
Benjamin T. Lowne,				J. Wallis Mason, Esq.	0	10	6
Esq., F.L.S.	1	1	0	S. R. Challice, Esq. ...	0	10	6
Dr. William C. Lucey	1	1	0	Jas. Charlesworth, Esq.	0	10	6
Dr. John A. Macdonald	1	1	0	Dr. W. Wilberforce			
Geo. Eastes, Esq., M.B.	1	1	0	Smith	0	10	6

At a meeting held at the Town Hall, Aberdeen, on Wednesday, the 12th instant, it was unanimously decided to found a Bursary or Scholarship in memory of the late Dr. John Murray. Dr. Patrick Blakie Smith was nominated Honorary Secretary, and James B. McCombie, Esq., Treasurer. Some large sums were promised, including one of one hundred pounds. The Treasurer (Mr. Campbell De Morgan) and Secretaries in London will meanwhile receive any contributions to the fund.

The following subscriptions for the Murray Prize, Bursary, or Scholarship have been already promised.

	£	s.	d.		£	s.	d.
Dr. John Murray, In-				Dr. Arthur W. Edis ...	10	10	0
spector - General of				Wm. Duff Gibbon, Esq.	10	10	0
Hospitals	25	0	0	Dr. G. A. Malcolm			
Ernest Hart, Esq.	10	10	0	Simpson	5	5	0
Mrs. E. Hart	10	10	0	C. Creighton, Esq., M.B.	5	5	0
Dr. Morell Mackenzie	10	10	0	Dr. Dyce Duckworth...	1	1	0
The Rev. A. Anderson.	10	10	0	Dr. William Draper ...	1	1	0
Alexander Murray, Esq.	10	10	0	G. W. Rouse, Esq.	1	1	0

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Cholera.—Hairy Men.—Effect of Lead-pipes on Drinking-water.—Removal of Fatty Tumours by Vienna Paste.—Deaths.

THE cholera epidemic in Paris is decidedly on the decline, if we may judge not only from the weekly returns issued from the office of the Prefect, which merely give the number of deaths, but from the admissions into the different hospitals. These have been reduced almost to nought; and, to take only one hospital as an example, I may mention that there has not been, for nearly three weeks, a single admission in the Hôtel Dieu from cholera, and the ward (a medical one) in which the disease broke out, and which was cleared out to prevent further contagion, is again open for the reception of ordinary patients. I may here remark, from personal observation, that the disease seems to lose in intensity or virulence according as it advances in age—in other words, it is more fatal at the commencement than at the decline of an epidemic—which would tend to confirm the theory, that the cholera-germ is subject to the same laws that govern all living organisms, and, like them, it goes through the inevitable stages of nativity, development, and death or decay. Like them also, the cholera-germ has the faculty of reproduction; and, although it possesses this latter to a prodigious extent, yet there are other viruses or germs which are a hundred times more prolific—to wit, the small-pox. I have been led to these reflections from the fact that, at the outbreak of the present epidemic of cholera in Paris, the mortality, under every variety of treatment, was nearly 100 per cent.; and I remember that, at the Hôtel Dieu, out of the first batch of cholera patients, numbering 25, which were admitted about a month ago, all, with the exception of one, succumbed to the disease; whereas latterly, with much the same system of treatment, the results were almost reversed.

But, if the cholera is dying out in Paris, the discussions at the Academy of Medicine, which were consigned to a commission, are being revived, and M. Chauffard, who was prevented from entering the field sooner, delivered a long discourse on the subject. In this discourse, M. Chauffard supported the doctrines of the International Conference of Constantinople, and tried to refute the theories of Jules Guérin; but the latter is not so easily beaten, and he has promised to reply to M. Chauffard, to whom, however, he paid the compliment of saying that he was glad to have such an adversary to deal with. There is really nothing new in M. Chauffard's arguments, which may be summed up as follows. Sporadic and epidemic cholera are two distinct affections, the former being due to local causes, whilst the latter is produced by contagion or importation alone. But the most remarkable part of M. Chauffard's discourse was his discovery of the fact, that, of all European countries, France was the least favourable for the acclimatization of cholera or other imported disease, such as typhus, etc.

In the JOURNAL of the 27th September, you gave a graphic description of the two hairy individuals, Andrian and Fedor, who were lately exhibited in Berlin. They are just now in Paris, and form the great attraction of the day. They are being exhibited as living phenomena, under the unnatural title of "l'homme chien," or man-dog, and the Academy of Sciences are trying to find out their true place in nature. I shall not trouble your readers with a description of these inhuman-looking creatures, as they have been so well portrayed by yourself and many of the daily papers on both sides of the Channel; I may, however, observe that, at the Academy of Sciences, they are looked upon simply as monsters, and that their hairy and edentulous condition is purely pathological, and does not constitute the characteristics of any particular race, whether extinct or now known to exist. Others deny their being monsters at all, and assert that they are the subjects of that form of congenital deformity of the skin termed *navi materni*.

A great sensation was lately caused in Paris by the circulation for signatures of a petition addressed to the municipal council of this city, purporting to point out the danger that exists in the use of leaden pipes in the distribution of drinking water, and proposing, in order to obviate the risk of being poisoned, to have the leaden pipes lined with tin; but, as the council were keen enough to discover that the petition was got up by an individual interested in the tin trade, submitted the matter to a most searching examination, and, in concert with the Council of Hygiene, have come to the following conclusions:—That the use of leaden pipes, which has been general throughout Europe from time immemorial, has never given rise to any accident; that the experiments

performed by the chemist to the council are sufficiently conclusive, and corroborate those of other chemists and engineers charged by the Academies of Sciences and of Medicine to investigate the matter, the results of which demonstrated the innocuity of water running through leaden pipes. M. Leblanc, chemist to the council, tested five litres of such water condensed by evaporation, and the most sensitive reagents failed to detect in it the presence of any salts of lead. He states that lead is readily affected by distilled water, the result being carbonate of lead, which renders the water milky; but the presence of an infinitely small quantity of carbonate of lime is sufficient to remove from the water its action on the lead.

Now this is exactly the condition of the whole of the drinking water in Paris; even rain-water, which absorbs lime from the atmosphere, or that which it meets with on the roofs of houses, contains a sufficient quantity of that substance to render lead unattackable. This would explain why leaden pipes last almost indefinitely without being deteriorated, whereas iron and other metallic pipes are rendered completely useless in the course of a few years from being corroded and pierced through. The council see no advantage in lining the leaden pipes with tin; the latter has the drawback of being costly, and, moreover, owing to its fusibility, would readily jam the pipes. The President of the Council dwelt on the fact, that the present leaden pipes in Paris were put down centuries ago, and have undergone no change whatever either in their structure or in their internal surface. This, he concluded, was evident proof of their being unaffected by the water that runs through them, and the greatest publicity ought to be given to this fact, in order to dissipate the fears that have been instilled by certain unscrupulous members of the craft in the minds of the public.

A very interesting discussion took place at the last meeting of the Société de Chirurgie de Paris, on the occasion of two cures of fatty tumours by the application of the Vienna paste. The two cases were described by M. Dubreuil, and this gave rise to a discussion on the comparative merits of treating tumours with a caustic or with the knife. The adversaries on this occasion were MM. Dubreuil, Desprès, Chassagnac, Marjolin, and Tillaux, who were in favour of the caustic treatment; the partisans of the knife were MM. Trélat, Blot, and Larrey. The three latter surgeons related a great number of cures effected with the knife, which are certainly in favour of this method. Baron Larrey states that he has obtained, in a case of fatty tumour of the size of the head of an adult, a cure by the first intention in thirty-six hours. The other two surgeons named have removed fatty and other tumours of various sizes with the knife from the head and different parts of the body by the aid of linear incisions and methodic compression, and in nearly every case the wound was healed by the first intention in from twenty-four to thirty-six hours. But the partisans of the caustic method brought forward instances in which the use of the knife was attended with disastrous results, and in some cases proving fatal. When union by the first intention does not take place, the most serious consequences are apt to result, such as erysipelas and purulent infection, whereas, by the use of the caustic, the patients are less exposed to such dangers. Such was the opinion of these gentlemen, and M. Tillaux added that, among the working classes, this method had the advantage of not compelling the patient to lay up. M. Marjolin, moreover, remarked that it was necessary, for the obliteration of the sac of certain sebaceous cysts, that they should suppurate, and this was best effected by the use of caustics.

Death has removed from us two distinguished members of the profession during the past week. Dr. Matice, friend and medical coadjutor of the late M. Nélaton, was Physician to the Hôpital Beaujon. He took his degree in 1846. The other, the Baron Jules Pelletan, was Honorary Physician to the Charité Hospital. He took his degree in 1831.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

The Queen's Hospital: Opening of the New Wing.—Midland Medical Society: Sir Henry Thompson's Address.—Clinical and Microscopical Sections of the Branch.—Children's Hospital Elections.—Hospital Sunday.—Success of Public Hygiene Classes.

THE new wing of the Queen's Hospital was formally opened on the 7th instant, by the Bishop of Worcester and the Mayor of Birmingham, in the presence of a large assembly, and with suitable addresses, speeches, and music. It has been known to us as the "Working Men's Extension," in acknowledgment of its origin, and more than £4000 of its cost has been contributed by the artisan class. This circumstance alone being, as it is, unique, makes the occasion a specially interesting one. To the "Fund in aid" Her Majesty had contributed, and now, by special permission, the building is to be called the "Alexandra"

wing. Its principal feature is a fine waiting-hall, 60 feet by 40, and also 40 feet in height. The flooring is of Minton tile and stone; the ceiling and doors of pine; the warming by Haydon's hot-water system. Along the sides of the hall are good consulting and other rooms, and, above these apartments for resident officials, a large glass building, which is to be a conservatory and convalescent-room, communicates with the older block; and at the rear is a new laundry and a new mortuary (including a jury-room). Besides the now excellent arrangements for out-patients, twenty new beds will be available, raising the total to 170.

The Midland Medical Society has well inaugurated its session by a largely attended and very successful *soirée*. Mr. Wilders, the newly elected and justly popular president, did the honour on the occasion, and Sir Henry Thompson favoured us with an able address on the subject he has made peculiarly his own. "Stone in the bladder was a malady to be prevented and exterminated as much as plague, small-pox, or typhoid, and, in order to do this, efforts must be directed to finding the stone early." Referring to lithotripsy, "its problem was quite solved with regard to stones of a certain size, but not yet for larger ones; the suitable size was four to six drachms; for one of eight drachms, he should cut." But to attempt an abstract of such an address is, perhaps, scarcely fair; we hope it will be published in full. At its close, an extremely cordial vote of thanks was presented. At the supper which followed, Mr. Gamgee, in proposing Sir Henry Thompson's health in eloquent terms, alluded to the recent imperial case; and, in replying, our esteemed guest observed how impossible it was for him to make public remarks on the subject, or to reply to the insinuations of the newspapers. "But the time would come when an explanation would be made, and he should certainly insist that all the particulars should be made known, and then he should not, in the slightest degree, flinch from any verdict his professional brethren passed upon him. He was quite ready to rest any reputation he might have upon anything he might have done in connection with the case. He did not look back with the slightest regret upon anything he did, and that he should be able to show when the time came." On the following morning of his visit, Sir Henry held an interesting *clinique* at the Queen's Hospital.

At a recent meeting of the above society, Mr. Gamgee showed osseous tumours from the children of a man whose leg he amputated at the hip for an enchondroma ten years ago. In a paper on Provident Dispensaries, Dr. Crespi, from personal experience, animadverted strongly on the one at Leicester, which is generally considered a model. He showed how hardly it pressed upon the medical men connected with it.

The Clinical Section of the Branch held their first sessional meeting last week, and elected Mr. Manley president.—The Microscopical Section have reappointed their officers according to the list you published last week. The section was only founded last year, and its meetings have been particularly interesting and agreeable.

Dr. Wade, the esteemed president, directs special attention to the practical clinical bearings of specimens, a section of liver starting a discussion on cirrhosis, etc. The actual specimens find their record in the proper place.

At the Children's Hospital, Mr. G. H. Evans has been appointed acting-surgeon, Dr. J. B. Welch extra acting-physician, and Mr. Fowler surgeon-dentist, to fill vacancies already announced. Mr. H. C. Burdett has, amidst general expressions of regret and esteem, resigned his office of superintendent-secretary of the Queen's Hospital, in order to enter the medical profession.

The annual reports of our Orthopædic Hospital and our Ear and Throat Dispensary have recently been presented, and give satisfactory accounts. The Hospital Sunday collection for the "Amalgamated Charities" this year has produced more than £5000.

The much disputed question of the salary of surgeon to the borough gaol here has been settled by fixing it at its former amount of £200, instead of £100 proposed by so-called economists. There were no suitable applicants at the latter salary.

In my last, I referred to the commencement of Dr. Corfield's penny lectures on hygiene. Many will be surprised and pleased to learn that the average attendance on each weekly lecture (Tuesdays, 8 P.M.) is 450.

PRESENTATION.—Dr. Fitzgerald, of Folkestone, has been presented by his patients with a very handsome and gratifying testimonial, which, in deference to his musical taste, appropriately took the form of a walnut-wood grand piano, by Collard and Collard. It was accompanied by an illuminated address (the work of one of his patients), containing the names of the subscribers, and stating that the instrument was presented to him by a few of his patients and friends, as a mark of their high esteem and regard.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 28TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

NOTES OF A CASE OF DUCHENNE'S PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS, WITH SPECIAL REFERENCE TO THE TEMPERATURE OF THE OVERGROWN LIMBS, AND WITH GENERAL REMARKS. BY WILLIAM MILLER ORD, M.B.LOND.

The patient, a child aged seven years, had suffered for two years from progressive weakness of the back and lower limbs, of which no exciting cause was known. There was no impairment of the mental faculties, but the child constantly fell while walking, and could not get up again without seizing some firm support by the hands. The sacro-spinal muscles and the muscles of the thigh were thin and poor, but the calves were distinctly overgrown. The observation to which attention was specially directed was, that the calves were distinctly warmer than the thighs by from 1.9 to 3.9 degs. Fahr. The fibres of the muscles, being removed by an *emporte-pièce*, showed no material deviation from a healthy structure, certainly no degeneration; but there appeared to be an increase of the white fibrous element between the primitive fasciculi. It was suggested by these facts that the disease was in a very early stage, and that vaso-motor derangement, probably paralytic, played a great part in its production. The diseases called "progressive muscular atrophy of childhood" and "infantile paralysis" were compared with the pseudo-hypertrophic paralysis. It was noted that, whereas in the former of these a definite wasting of certain parts of the cord had been demonstrated by Dr. Lockhart Clarke and Dr. Bastian, no morbid appearances had been detected in the brain or spinal cord characteristic of the pseudo-hypertrophic paralysis. It was inferred from these and other considerations, that the origin of the disease must be looked for in the sympathetic or ganglionic nervous system. No affection of sensation was detected in this case; and the one morbid condition was the gradual weakening of the muscular power in the lower half of the body generally, associated with the hypertrophy of the calves. This was regarded, not as a true hypertrophy of muscle due to excessive use, but as an overgrowth of interstitial connective tissue due to hyperæmia.

Dr. ALTHAUS said that Dr. Ord had made out a new point when he found an increase of temperature in the parts concerned. He thought it must throw light on the subject, and seemed to point to the trophic system of nerves being at fault. The case was not a pronounced one, but seemed only commencing. There was no doubt about its nature; still it was not very marked in the calves, and the microscopic appearances were slight. Griesinger and Billroth had also described the pale condition of the muscle. In other cases there had also been noted true hypertrophy of the muscular fibres, so that in this disease there seemed to be two stages—one of hypertrophy, one of wasting. Eulenburg and Cohnheim's case was remarkable for the changes in the nerve-centres, there being considerable development of fat about the cord, and wasting of the lateral column; the sciatic nerve was also covered with fat. Duchenne believed the mischief to be cerebral; he had seen marked alteration of sensibility, but that was not noted here. Cohnheim's case pointed to the spinal cord as the seat of lesion. The mischief was also symmetrical in most cases. As faradic sensibility was diminished, that too pointed to a nervous origin.—Dr. LANGDON DOWN thought the disease neither vaso-motor nor spinal, for in nine cases he had noted want of intellectual power. Sometimes, as in one of his cases, there was no loss of sensibility, for the process of removing portions of muscle was very painful.—Mr. W. ADAMS said Dr. Meryon's cases were not referred to. He had seen a good many cases. They were often supposed to be due to a contraction of the parts. Often the muscles of the forearm and leg were large, whilst the arm and thigh seemed wasted. Dr. Meryon thought arsenic did good.—Dr. GEORGE HARLEY asked if the muscular hypertrophy was fibrous or fibrillar. Fibres might vary in size even in the same muscle, but the fibrillæ were not altered. The author seemed to think the rise of temperature due to hyperæmia; in reality, both hypertrophy and increase of temperature were due to the same cause. He thought the condition depended on paralysis of the vaso-motor system of nerves.—Dr. ORD, in reply, agreed that this was an early case. The structures seemed paler than usual. Dr. Althaus and he must surely be referring to different cases of Eulenburg and Cohnheim. Sensation was normal and the intellect fairly good, except that the memory seemed short. The elder brother of the patient was an idiot. Dr. Meryon's cases were disputed, therefore he did not refer to them. His views

were quite agreed with those expressed by Dr. George Harley. He did not measure the fibrillæ.

ON THE ACOUSTIC PRINCIPLES AND CONSTRUCTION OF STETHOSCOPES AND EAR-TRUMPETS. BY C. J. B. WILLIAMS, M.D., F.R.S.

After noticing the invention of the stethoscope by Laennec, its modification by Piorry, and the introduction of the trumpet-end instrument by the author thirty years ago, he enunciated the principle of the stethoscope to be to conduct the sounds from the chest to the ear, both through its solid fibres and through its enclosed column of air. He then considered the material and the form best suited for this office. Wood, as a conductor of sound, is the best material, especially deal, and such woods are as rigid in longitudinal fibre, and yet light; the same reason makes them fit for sounding-boards of musical instruments. The only objection to wood is its fragility, especially when reduced to the shape best suited for stethoscopes. Metals are good conductors; but their coldness when first applied to the chest and ear, and their weight, are objectionable. Horn, *papier maché*, or gutta-percha would answer better; but a more suitable material is found in a preparation of India-rubber called *ebonite*, being easily formed into any shape, being also light, durable, and a good conductor of sound. With regard to the form of the instrument, after long and varied trials of stethoscopes of different shapes, the author was convinced, by reason as well as experience, that the trumpet-end instrument is the best. Conducting the sounds by its enclosed column of air as well as through its solid walls, this trumpet-end brings both its solid and its contained air into closer contact with the chest-walls, from which the vibrations proceed, than can be done with a conical end, or any other; and there is neither too much hollow, which causes a confusing reverberation, nor superfluous weight of solid, which checks the weaker vibrations of sound. This form is also more comfortable to the patient, and easier and more steady for the observer; because its application is by a flatter contact and a firmer base than that of conical instruments, the edges of which often give pain. After discussing the subject of the transmission of sound through flexible tubes, the author admitted their power, but concluded that the sounds are more less modified by reverberation in them, especially when long or with large hollows. Dr. Williams concluded the subject of stethoscopes by a description of two forms made in ebonite—one for the hat, another for the pocket—and some of their uses.

The acoustic principle of the ear-trumpet is quite distinct from that of the stethoscope. The latter simply conducts pectoral sounds through its solid and its enclosed column of air. The ear-trumpet, on the other hand, acts solely as a reflector to receive the waves of sound from the open air, and to direct them into the ear as a focus. The best materials for reflecting aerial sounds are those hard and dense, such as metals, glass, porcelain, etc.; but the weight of some of these, the fragility of others, and the intrinsic tinkling note of all, form objections to their use as ear-trumpets. Still, the best instruments in common use are made of silver, plated metal, or japanned iron. The lightness of aluminium would render it more eligible. Polished ebonite also forms a good reflecting surface, and, although inferior to metal, has advantages over it in lightness and freedom from intrinsic sounds. The form of the ear-trumpet requires careful consideration. The simplest and most efficient reflector is a hollow cone with a wide base open to catch as large a body of sound as possible, and to reflect it in the simplest and most direct way through the apex into the ear. All repeated or secondary reflections of sound, as in parabolic and spheroidal cavities, are to be avoided; because, being retarded, they confuse the sound by an echo following, instead of adding to its distinctness. Such instruments may increase the noise, but they impair the clearness of articulate sounds, which ear-trumpets ought to convey pure and unmixed with extraneous notes. But, in point of fact, these confusing sounds are met with in all ordinary ear-trumpets, causing the conch-like roar, like that of the sea heard in large shells. This noise is a reverberating echo of sounds from without, and takes its tone from the note proper to the size of the cavity or tube in which transverse or longitudinal vibrations are excited, responding to every noise or impulse. These noises are confusing, and often painful to sensitive ears, and should be avoided. They are much lessened by widening the open base of the cone; but they may be further diminished by several other expedients, as exemplified by the instruments exhibited, the most convenient of which is obliquely truncating the cone, leaving open half or more of its length. In so doing, the instrument has an obvious resemblance to the ears of many quadrupeds, and probably this form is wisely designed to aid their hearing without the confusing noise of mere tubes and cavities. Perhaps, too, the air with which the ears are fringed may subserve a like purpose, from which a hint may be taken, if required.

After the reading of the paper, Dr. Williams exhibited and explained various forms of stethoscopes and ear-trumpets. Acoustics had been studied more in relation to musical notes than to common sounds, which could be better understood by bearing in mind the definition which he had formerly given of sound—motion of a certain force resisted by a certain force. The moving and resisting forces acting alternately in opposite directions constitute the vibrations of sound. These are best produced and conducted in hard rigid bodies. But the conduction of sound is favoured also by similarity in density: thus, a solid transmits its vibrations most powerfully through a rigid solid of the same density, and much less freely through air. The sounds of air but feebly affect dense solids, such as metals, which reflect or turn them back. But a solid of tense density and great rigidity, such as wood, transfers vibrations more freely from metal to air, and from air to metal, as exemplified by a tuning-fork on a sounding-board, and this property renders wood the best material for stethoscopes, which have to conduct sounds from the chest, generated both in air and in solids, to the solid structures of the ear. But the aerial sounds of the chest it transfers still more perfectly through the column of air enclosed in the stethoscope, which thus becomes a sounding-board conductor, sensitive through the rigidity of its walls and the lightness of its mass, to receive and transmit the weakest vibrations. To exemplify these remarks, the following stethoscopes were shown, with passing comments:—Solid perforated cylinders introduced by Laennec; one actually made and used by him, too heavy and clumsy, and not well-fitting to the ear or to the chest; unperforated cylinder, inferior in conducting power for breath and voice sounds; Piorry's slender stethoscope, with iron cap and pleximeter: too small at pectoral end; ivory screws troublesome, and impair conducting power; modification of the last, of wood only, with larger conical end and stopper to fit, without screws: a good instrument. One of this kind had a hole in its side, to show that opening the column of air much impairs the conducting power; closing the hole restores it. Another instrument of this shape had a drum of India-rubber at its pectoral end; this, by preserving air-tight the enclosed column of air, enabled it to conduct sounds well without full contact, as on the ribs of very thin patients. The thin India-rubber water-bag of Dr. Scott Alison is useful for a similar purpose with any stethoscope, by increasing the contact and conducting power for thin subjects, or even when applied outside the clothing. Trumpet-end stethoscopes, in wood and in ebonite, made either in one piece (to be carried in the hat), or with the ear-end to take off and fit into the chest-end, thus making it strong and portable for the pocket, are the last stethoscopes devised and recommended by Dr. Williams, and are manufactured by the India-rubber Company at Silvertown and Cannon Street. A binaural stethoscope, constructed by Dr. Williams thirty years ago, was also shown, made of wood, with metal tubes and ear-pieces of wood; it was found to convey sounds from the chest with exaggerated loudness, but, being inflexible, it was awkward for application. The double stethoscope of Dr. Leared, shown at the International Exhibition of 1851, was a great improvement, in being flexible and fitting to the ears with a spring. The binaural and differential stethoscopes of Dr. Marsh and Dr. Scott Alison seemed to promise still further advantages to those whose hearing is equally good in both ears—a capacity which a great many do not possess. But of all these instruments, and of most long flexible stethoscopes, it must be said that, although some sounds are exaggerated, others are impaired, and there is not that distinctness and simplicity which we hear in the sounds transmitted through the short wooden or ebonite instruments.

With respect to ear-trumpets, the members were requested to try some of those in common use, of which several good specimens were before them, kindly lent for the occasion by Messrs. Coxeter and Messrs. Weiss. The long flexible ear-tube answered perfectly well for a *tête-à-tête* conversation with a deaf person, but the ear-trumpets to be used in society or in public assemblies all had more or less of the roar of reverberation, drowning and confusing articulate sounds. Of the wide conical ear-trumpets in which Dr. Williams had tried to obviate this, one was made of japanned tin-plate with eight or ten small holes in the sides, to give vent to the transverse vibrations. This expeditious was partially successful, the roar being slight and the magnifying power about ten times—that is, the ticking of a clock could be heard at ten times the distance at which it could be heard by the unaided ear. A longer cone (about eighteen inches) of stiff paper ending in a short ear-piece of metal was still more free from roar, and magnified the sound twelve times. This was the most successful of all the ear-trumpets. A third smaller cone, of gutta-percha, having two diaphragms of stiff paper running in the axis of the cone, with their planes crossing at right-angles in the centre, to check the transverse vibrations, was partially successful, magnifying eight times. Lastly, a

cone of ebonite, twelve inches long, truncated obliquely to half its length, magnified ten times, with only a slight roar excited by loud sounds. This last Dr. Williams considered likely to be the most available instrument for common use, and it would be improved by opening the cone further to two-thirds of its length, which would make it still more like the ear of a quadruped. Taking this for a model, and avoiding as much as possible tubes and cavities, which are the cause of confusing reverberation, we may hope to get means to aid the failing hearing to some extent, as we do the failing sight.

A short discussion followed, in which Mr. Brudenell Carter and Dr. Leared took part.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 4TH, 1873.

Sir WILLIAM JENNER, Bart., M.D., K.C.B., President, in the Chair.

Sarcomatous Carcinoma of the Kidney.—Dr. DOWSE exhibited a large tumour weighing about six pounds. The man from whom it was removed *post mortem* had been in good health until two years ago, when he experienced pain in the loins coming on in paroxysms, not continuous, at times severe. Diarrhoea and sickness occurred. The urine was albuminous and loaded with blood-cells. When first seen, he exhibited symptoms of prostration and the cachexia of organic mischief. The abdomen was distended, the superficial veins being well marked. In the left hypochondriac and lumbar regions a large tumour was detected. The patient became collapsed, and subsequently comatose, had vomiting of stercoraceous matter, and died rather suddenly. He had had left hemiplegia with want of motor power in the left arm and leg previously to being seen by Dr. Dowse. On *post mortem* examination, the liver was found to be cirrhotic. In the left lumbar region was found a growth weighing about six pounds enclosed in a fibrous capsule. On section, it presented a sarcomatous, pultaceous, and waxy condition, interspersed with cellular tissue, resembling ordinary medullary sarcoma, called by Rindfleisch sarcomatous carcinoma. The spleen was healthy, attached to the tumour by adhesions. There was cancerous deposition in the neighbouring tissues, especially round the ascending colon and duodenum.—Referred.

Suppurating Lymphatic Glands Throughout the Body.—Dr. HILTON FAGGE related the particulars of a case occurring in a very stout cook. She had been quite well two years previously. A year since, a lump in the left groin appeared, which broke and discharged; the leg swelled. She became emaciated and cachectic, had dyspnoea, and died. She had been quite well before her marriage. She had sore-throat and ulcer of the tonsil, but no other evidence of syphilis. At the necropsy, the Fallopian tube was found to be curved round the ovary and closed. There was an abscess containing pus. The ovary was healthy, but the uterine appendages were matted together. This seemed to be the commencement of the affection. There was a chain of diseased glands proceeding from the left iliac fossa, extending up through the chest to the neck, a large mass of enlarged glands pressing on the trachea, as had been found during life, and doubtless explaining the dyspnoea. The glands in the fissure of the liver were suppurating, and there were very large abscesses in the bronchial glands. The liver weighed over seventy ounces; the spleen twenty ounces, and in it were large masses of the size of walnuts, looking like growths; on section, being cheesy, like syphilitic growths. There were no appearances similar to those found in Hodgkin's disease.—Dr. MOXON had published a similar case where the glands of the neck were chiefly involved, found after death to be syphilitic.—Dr. R. KING inquired if the patient had lived in a malarious district, as he had met with similar cases in the fens of Lincolnshire due to malaria.

Large Hydatid Cyst of Liver.—Dr. GREENHOW related a case where a large hydatid cyst of the liver had perforated the diaphragm and occupied the greater portion of the pleural cavity. In 1867, the patient, a female, had been tapped, and forty-eight ounces of fluid drawn off from the cyst. She recovered rapidly. The case had been already published in the Society's *Transactions*. She was admitted into the Middlesex Hospital in May 1873. There was bulging of the right hypochondrium, and under the ribs a rather elastic tense swelling was detected. The heart's impulse was felt in the left axilla. Tapping was performed by Mr. Campbell De Morgan, but the size did not decrease, and only two ounces of fluid blood escaped. In July, rigors occurred; a large trocar was introduced, and two ounces of pus were drawn off; the tumour was again opened and washed out, but she died in September. After death, the left lobe of the liver was enlarged and as dense as cartilage; there was a large cavity occupying the right side of the thorax, the ribs were thinned to mere shells, and all that was left of the right pleural cavity was a small space at the apex. There was

an enormous sac proceeding from the left lobe of the liver, of the size of an adult head, measuring seven inches by eight inches, and capable of holding two pints of fluid; there was also a small hydatid cyst of the size of a duck's egg.

Gall-Stones with Abscess of the Liver Perforating the Pericardium and Pleura.—Dr. W. LEGG related a case where a gall-stone blocked up the duct, entering the duodenum. An abscess formed, and burst into the peritoneum, also through the diaphragm by three circular holes. The patient, a Jewess, aged 23, was admitted into St. Bartholomew's Hospital under Dr. Andrew. The history was obscure, and the patient very taciturn. About five months previously, she had sharp pain in the right side and vomiting, with jaundice lasting a fortnight. On admission, she was not jaundiced, and the stools were of a pale-brown colour. On *post mortem* examination, a conical-shaped gall-stone, tightly grasped by the bile-duct, was found. The duct was of a pale-grey colour below, and of an orange-tint above, the obstruction. The ducts were dilated; the cystic duct was free, but the gall-bladder was not distended. Frerichs narrates in his book on the *Liver* a similar case occurring in an old woman not noticed to be jaundiced until after death, where the stools were natural in colour; concretions were found in the bile-ducts after death. The point of difficulty in both these cases was to explain the absence of jaundice.—The PRESIDENT inquired if the stone obstructed the duct, how was it that the faeces were stained.—Dr. LEGG replied that medicine, as iron, etc., often gave a colour to the stools; and that capillary hæmorrhage was not infrequent in jaundice without any evidences of it being found after death.—Dr. CAYLEY inquired if the bile-ducts were dilated on both sides; if they were only blocked on one side, it would explain the jaundice, as also the presence of bile in the faeces.

Pistol-shot Fracture of the Skull.—Mr. NUNN exhibited a portion of the cranium of a young man who had committed suicide. The specimen had been sent to him by Dr. Spurgin, Surgeon to the B division of Police. The pistol had been discharged at the right ear, fracturing the right side of the base of the skull and the articulation of the jaw. The disfigured bullet was found lying against the inner side of the left temporal bone; the inner plate of the bone had been perforated, and the outer table blown away much more extensively.

Human Hearts Showing Moderator Band.—Dr. ROBERT LIVEING showed two specimens from the human subject, as well as one from a sheep to compare them with. Professor Rolleston, in his Harveian oration, had called attention to the occasional presence of the band, its use being to check the inordinate dilatation of the ventricle; it was rare on the left side, though less so on the right.—The PRESIDENT referred to Dr. Wilkinson King's paper on the subject in the *Guy's Hospital Reports*, wherein he stated that this band was of frequent occurrence; its object being, after great distension of the ventricle, to allow its return to the normal size, being most marked in swift-footed animals—the hare, etc.

Fibroid Induration of the Heart.—Dr. H. GREEN showed the heart removed from a man aged 52, a shoemaker, who had been brought dead to Charing Cross Hospital, having been twenty minutes before perfectly well. On *post mortem* examination, the heart was found to be enormously enlarged, especially the left ventricle, the walls of which were three-fourths of an inch in thickness; the heart weighed 20½ ounces. The pericardium was healthy. The endocardium was thickened and opaque and white, especially at the apex. It was dense and tough, and cut like a piece of tongue. The alteration was due to the growth of fibroid tissue between the muscular layers, especially in the inner third. The fibroid tissue was not uniformly distributed. The right ventricle was dilated, thickened, but not increased in consistence. The surface of the heart was covered with a thick layer of fat, which had partly insinuated itself between the muscular walls of the heart. There were a few patches of atheroma present. Microscopically, the condition was found to be due to the growth of fibroid tissue between the muscular layers, the fibres being atrophied and undergoing fatty degeneration. On looking at the pathology of this condition, there were four classes. 1. A fibroid change secondary to chronic pericarditis, where adhesion had taken place and there was an increase of fibroid tissue on the surface. 2. In a few cases of endocarditis, the internal layer of muscular fibres was replaced by fibroid tissue. 3. In cases of emphysema and dilatation of the right ventricle, a fibroid condition of the right side ensued, the pathology of which was obscure. 4. In certain cases of syphilis, a fibroid induration took place, the patches being irregularly distributed. It was difficult to see to which class this specimen belonged.—Dr. HILTON FAGGE related a similar case found in the *post mortem* room at Guy's Hospital. A gentleman left his home in the morning in his usual health. When on the Exchange, he felt ill and said he should die. The pulse was 40 per minute, and death took place at 5 P.M. On examination, the kidneys were found to be granular; there was old inflammation of the gall-bladder, and there was

fibroid induration of the heart, especially at the apex of the left ventricle. In another case, the disease began on the inner surface, and spread inwards. There was no history of any symptoms observed in either case. No cell-growth was found, merely fibroid.—Dr. GREENFIELD inquired whether the kidneys had been examined microscopically. He had seen a case where the kidneys were large, pale, tough, with nuclear fibroid growths surrounding the vessels. The urine had been albuminous during life. In the heart, small nuclear growths were found in limited patches, the muscular fibres being in various stages of degeneration.—The PRESIDENT inquired whether the vessels of the tissues in the system generally had been examined.—Dr. GREEN replied that he had examined the vessels of the brain, and found them fatty and atheromatous.

Osseous Deposit within the Arachnoid.—Mr. POTTS showed a specimen taken from a woman aged 44. About three years since, she was excited and troublesome, complaining of pain at the top of her head. She had delusions, mostly of a religious character; her appetite failed, she became comatose, and died a few weeks since. On examining the brain, there were plates of bone on each side of the longitudinal sinus, forming a hemisphere. The heart was small, soft, and fatty.

Aneurismal Dilatation of the Aorta.—Mr. RALPH exhibited a case where the sinus of Valsalva was the seat of the dilatation. It occurred in a young Chinaman, aged 25, who suffered from bronchitis and cedema. He had endured great hardships as a Lascar engaged in "coaling" ships in the Eastern Ocean. There was an increase of the heart's impulse; the urine was scanty and albuminous, and he had epistaxis, increasing in severity until venesection to ten ounces was performed, which afforded partial relief. He had urgent dyspnoea, became collapsed, and died. At the necropsy, there was a small quantity of fluid in the pericardium; the heart weighed twenty ounces; the left ventricle was dilated and hypertrophied; the aortic valves incompetent from the dilatation. There was atheromatous deposit in the coats of the aorta. The liver weighed fifty-six ounces. There were four pints of serum in the abdomen. The kidneys were of natural size.

Rupture of the Heart.—Mr. CLARK narrated a case of a patient who had been run over in the streets, and was brought into Middlesex Hospital dead. Mr. Smith, the house-surgeon, stated that there were no external marks of violence. On examination, the second, third, and fourth ribs were found to be fractured, and there was also a fracture between the first and second bones of the sternum. Black blood was found in the pericardium. A small hole existed in the apex of the right ventricle. The heart itself was healthy, with the exception of patches of atheroma. The spleen was also ruptured.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, OCTOBER 16TH, 1873.

THOMAS BALLARD, M.D., President, in the Chair.

Malignant Disease starting from a Congenital Mole.—Mr. EDMUND OWEN mentioned particulars of the case. The patient was a spare woman, aged 30. The mole, which was situate in front of the elbow, began, subsequent to a blow about two years ago, to increase in size, and became painful. The pain, as is so often the case in epithelioma, was intermittent. The axillary glands were not enlarged. The growth was removed by Esmarch's procedure. During the operation, the artery to the growth and the median-basilic vein were both distinctly visible; no blood was lost.—Mr. EASTES had seen Esmarch's method in practice. He thought one great advantage of the plan was, that it enabled the surgeon to see and examine most accurately the tissues cut through. No blood wells up in the wound, obscuring the deeper parts.

Pelvic Hæmatocele.—Dr. ALFRED MEADOWS read a paper upon this subject. He limited the term to cases in which blood was effused into the pelvic peritoneal cavity. He designated as "thrombus," the very rare cases in which blood was extravasated into the cellular tissue beneath the peritoneum. The swelling in these cases, he thought, could never be very considerable. The tapping of a thrombus was likely to be attended with risk of subsequent danger. Dr. Meadows related particulars of a case of pelvic hæmatocele, in a lady whom he had examined on the day preceding the occurrence of the tumour. (The case is narrated in the *Obstetrical Transactions*, vol. iii.) Frequently, in hæmatocele, there is a history of previous uterine or ovarian trouble, resulting in regurgitation of uterine menstrual fluid through the Fallopian tube, or in rupture of an engorged (and, perhaps, varicose) venous plexus, at the monthly period. Rarely, the hæmorrhage occurs during pregnancy, in abortion, or at delivery. Pelvic hæmatocele is liable to be confounded with pelvic peritonitis and pelvic cellulitis; but the following points are diagnostic. The onset of the pain is most rapid and most intense in hæmatocele; most gradual in cellulitis. Faintness occurs

only with hæmatocele. The swelling in hæmatocele forms rapidly and is retro-uterine; in cellulitis, it comes slowly and at the side of the vagina, in the one or the other broad ligament; in peritonitis, it comes still more gradually, is retro-uterine, and never very large. With hæmatocele, the swelling is at first tense, elastic, fluid, and fluctuating; it gradually loses its elasticity and hardens, until it disappears. With cellulitis and peritonitis the swelling, in increasing, becomes softer, more elastic, and perhaps fluctuating; but in cellulitis, it is one-sided; in peritonitis, ante- or post-vaginal. The diagnosis of hæmatocele being accurately settled, the following treatment should be carried out. Absolute rest in bed, and opium in moderate doses, to favour coagulation and encystment of the effused blood. Coagulation appears to begin at the circumference, and limited peritonitis usually assists the encysting process. The mass is removed by absorption, or by rupture *per rectum* or *per vaginam*; and recovery may sometimes be accelerated by tapping, which, however, must not be attempted until the process of circumferential coagulation is complete. Many trivial cases do well if left alone; in severe cases, when a large hæmatocele, by its pressure on the bladder and rectum, interferes with micturition and defecation, tapping is absolutely necessary at an early stage of the disease. In two such cases, where death seemed imminent, Dr. Meadows had afforded immediate relief by tapping. Between the two extremes, come cases in which the visceral displacement is considerable and productive of much distress; but which, with time, end in a cure by natural processes. For these cases, Dr. Meadows advocates more frequent recourse to tapping, and he would lay it down as a principle that "when a hæmatocele is large enough to push the uterus against the symphysis pubis, to flatten the rectum, and to rise above the pelvic brim, the proper treatment is to puncture." By this procedure weeks and even months of convalescence are saved. The operation is easy and safe. Dr. Meadows has performed it in seven instances; all the patients recovered in a remarkably short space of time. He considers the dangers of non-interference very grave, as there is risk of rupture of the sac into the peritoneal cavity; of septicæmia; of suppuration in the cyst; and of exhaustion during the tedious recovery. Bernutz and Goupil record sixty-two cases, of which forty-four died. Of the forty-four, thirty-two terminated too suddenly for treatment; but of the remaining twelve, two were tapped, one burst spontaneously, and nine lived for several months; they were not operated upon, but gradually succumbed. Of the eighteen cases which recovered, nine were tapped, seven burst spontaneously, and only two recovered without escape of fluid to the exterior. The fluid that comes away, whether spontaneously or upon puncture, is always most offensive; an additional reason for its removal. In eight of the thirty cases of Bernutz and Goupil subjected to treatment, the cyst ruptured spontaneously, allowing the fluid to escape, and death resulted in only one instance; so that the escape of the fluid in some way would seem to be nature's method of cure. By tapping, the period of convalescence is shortened, the proportion of recoveries increased, and the cure rendered more complete. The time for tapping depends on the case; it must be soon where the symptoms are urgent, though a few days at least ought to elapse after the occurrence of the hæmorrhage. When the symptoms are less urgent, the surgeon may wait one month for encystment of the effused blood; beyond that time he gains nothing by delay. Dr. Meadows taps *per rectum*, because the cyst is more accessible from the bowel than from the vagina, whilst the fluid, if it escape spontaneously, usually comes *per rectum*. The trocar should be as large as, or of one size larger than, the ordinary silver catheter used for females, as the fluid is often thick and contains coagula, so that a smaller tube is apt to become blocked. The trocar must be thrust in far enough to reach the central liquid part of the cyst; the distance is usually from one to two inches, and varies according to the size of the hæmatocele and the duration of the effusion.—Dr. BANTOCK mentioned two cases which he had seen. In one a swelling, which he considered a thrombus, appeared between the upper part of the vagina and the rectum, and pushed the uterus upwards rather than forwards. The tumour was tapped several times; the fluid, of which two or three ounces generally came away, was not at first offensive. The patient recovered. The second was a case of true pelvic hæmatocele; a trocar was introduced, a very small amount of blood escaped, and death occurred in two days. Upon examination, a clot composed of about two pints of fresh blood was found in the general peritoneal cavity. This blood had apparently passed through a rent in the wall of an old blood cyst occupying Douglas' space. Dr. Bantock was at a loss to understand why a hæmatocele should burst by the rectum or vagina, instead of taking the apparently easier route into the abdomen, as was exemplified in the second of his cases.—Dr. JOHN SCOTT had witnessed the puncture of the swelling in pelvic hæmatocele, and considered it the best treatment. He had also seen the aspirator used at an early stage of the disease, with good results. He thought

the differential diagnosis of the cases was often very difficult. He had seen the cyst injected with solution of carbolic acid (one part in fifty), after tapping, with seemingly much benefit.—Dr. WYNN WILLIAMS would not tap at first, but would do so immediately that constitutional disturbance appears, that is, when nature is found unequal to the task of curing the patient by natural processes. He thought the diagnosis difficult; and instanced the case of a lady in whom, while she was vomiting, a large swelling commenced to form at the side of the vagina. After nine days, the tumour burst *per vaginam*, and half a gallon of offensive pus came away. Was that a hæmatocele? Iodine is the best disinfectant; it will prevent effused blood from decomposing.—Dr. CLEVELAND considered the agonising pain of the rapidly forming blood tumour to be diagnostic of hæmatocele; and cited a case in point. He thought the question of puncture depended greatly upon the amount of suffering of the patient. For small hæmatoceles, "rest" in bed is sufficient for recovery. Tapping is likely to let air into the sac.—Dr. MEADOWS, in reply, stated that cases of encysted hæmatocele can alone be operated upon by tapping; cases in which there is general extravasation into the peritoneum or into the cellular tissue should not be so treated. He does not inject the cysts after puncture; the patient then usually recovers so rapidly that injection is quite unnecessary. He injects in pelvic abscess; but not in hæmatocele. There is not much fear of air entering the cyst during tapping. He thought that a cyst large enough to contain a tumblerful of fluid would produce such serious symptoms as to necessitate an early introduction of the trocar, as it would interfere greatly with defæcation and micturition. Smaller cysts might be left, at any rate, two or three weeks before being punctured; the blood would then be coagulated at the circumference.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE first general meeting of the session 1873-4 was held last month; present, FURNEAUX JORDAN, Esq., President, in the Chair, and forty-four members and visitors.

New Members.—The following members of the Association were elected members of the Branch. Mr. D'Arcy Ellis, Brierly Hill; Rev. Dr. Gregg, Harborne; Mr. A. Dodson, Children's Hospital; Mr. W. S. Batten, Bromsgrove; Dr. Creagh, Royal Artillery; Mr. Ward, General Dispensary; Mr. T. Lowe, Solihull.

1. Mr. WATKIN WILLIAMS described the case of Martha A., aged 14, who came under his notice last July, with a malformation of the clavicle. It was first observed when she was two or three weeks old, but she could not say that it was not there when she was born. She had shown it to a surgeon attending another child, who recommended her to the Orthopædic Hospital. She was told there that it was a congenital deformity, for which nothing could be done, and that it would be of no detriment to her. Most probably it was a fracture of the clavicle, which took place during delivery and was overlooked, and consequently not attended to until the displacement of the fractured end of the bone was observed.

2. Mr. WILDERS exhibited a boy, aged 14, whose right Knee-Joint he had excised.

3. Mr. WILDERS showed a child, aged 20 months, whose Elbow-Joint he had excised six months ago, on account of disease following injury by a fall.

4. Mr. BARTLEET brought before the members a boy whose Upper Jaw he had excised for Myeloid Tumour. Photographs of the case before and after the operation were shown. The jaw was removed by the limited incision through the middle line of the upper lip into the nose.

5. Mr. BARTLEET also showed a case of double Talipes Calcaneus, with a somewhat similar condition existing in the hands. Casts of the feet, previously to treatment, showed the great improvement following operative measures.

6. Dr. FOWLER BODINGTON read a paper on a certain unused but valuable means of Medical Education. The paper was followed by an animated discussion.

Mr. OAKES gave notice of motion for the next meeting:—"That a Committee of this Branch be appointed to consider and report upon the subject of medical education, especially with reference to present Parliamentary legislation."

CORRESPONDENCE.

THE QUEEN'S HOUSEHOLD.

SIR,—The *Gazette* announces certain promotions of physicians "in the Queen's Household". I have not a word to say against the appointments having any personal bearing. If such appointments are to be made, there are obvious and good reasons why these should have been made in the sort of official order in which they have been made. But I think there is a good reason for objecting to the gazetted such appointments on official grounds, as meaningless and invidious. They have a certain meaning in the public eye, which they do not have really; and, distributed as they are on grounds of variously conceived temporary convenience, they carry to the public a special ground for preference, and handicap other professional men. It is quite apparent that they have not a real meaning; for, during the Prince's illness, out of the Prince's large staff of physicians, ordinary and extraordinary, none were in use, but the Physician in Ordinary to the Queen and a physician who was neither ordinarily nor extraordinarily in the household. So we see, with reference to the Queen, that the many physicians who have been attached to the household by honorary titles, have been replaced for working purposes by Dr. Fox, Dr. Marshall, Dr. Hoffman, and others.

Now, I have no doubt there are very good reasons for all these arrangements; but these last unexceptionable appointments do seem to me to raise very strongly the question whether the right names should not be given to the right men, and whether it is altogether fair to men in practice to pick out a capriciously favoured few for the distribution of titles which have no meaning, which carry no responsibility, and therefore do not really imply the confidence expressed in their wording. In one word, I feel sure that most men in the profession will agree with me that the retention of a number of empty titles "To the Queen", distributed amongst men who do not fulfil the offices implied in the title, is a senseless abuse. It is tolerable amongst tradesmen, who, under similar circumstances, sport the royal arms, and label it very freely; but I doubt altogether whether it should be considered so amongst professional men.

I am, etc., LEX ET REX.

* * There is another aspect of the question which our correspondent has not duly considered. The posts of public honour for medical men in this country are few. The Queen is the fountain of honour; and Court offices, although merely nominal, are badges of distinction. Few, if any, we think, will be disposed to dispute the wisdom and good feeling which have during the present reign guided the medical appointments at Court. The only objection which we see to the continuance of the present *régime* is the extremely limited and arbitrary character of the appointments. The appointments of "Physician to the Queen" and "Surgeon to the Queen" might have a special meaning beyond the appointments for actual service. The latter, our correspondent intimates, are made from combined reasons of eminence and convenience, and are duly paid. The honorary appointments are not necessarily so limited, and might be made on the same principle as the appointments of Q.C. are made at the Bar, so as to recognise a certain eminence in all, and not to be limited, as now, by purely arbitrary considerations.

SIR JAMES SIMPSON'S SCHEDULES.

SIR,—In corroboration of what is stated by Dr. Aitken in to-day's *JOURNAL*, I may say that the originals of Sir James Simpson's schedules, and the enormous mass of letters and telegrams relating to them, have been since his death in my possession, and that I have carefully analysed their probabilities. I believe that all but one will stand the test of publication, with the names of the authors attached; and to this test I mean to submit them. That one, which is false, was readily detected; and I was not the first to point out its inaccuracy.

I am, etc., LAWSON TAIT.

Birmingham, November 8th, 1873.

* * We do not perfectly understand the meaning of Mr. Lawson Tait's language, nor what it precisely is which he proposes to do. The words which baffle us are, "I have carefully analysed their probabilities" meaning, apparently, the probabilities of the schedules—from which analysis he deduces the conclusion that all but one schedule will stand the test of publication, with the authors' names attached. This will so far dispose of one objection to Simpson's lists—viz., that no one could tell from what parts of the country they were derived; but it will leave all the other deficiencies uncorrected. And this, as far as we can understand, is all that Mr. Lawson Tait's letter promises. If it be

feasible now to publish the names of the surgeons, we cannot understand why it was not done at the time. Nor can we now understand what Mr. Tait means by the "probabilities" of the schedules. No one hitherto has made any charge of bad faith against Sir James Simpson or his correspondents. We are even surprised now to hear from Mr. Tait that one of the schedules was a deliberate falsification. There seems so little motive for such wickedness, that its detection was hardly anticipated. We hope Mr. Tait will be able to publish this schedule and the name of its author along with the others. But what astonishes us is to hear any talk of "probabilities" in this matter. Sir J. Simpson put forward his lists as a statistical and arithmetical argument—one so definite that he did not hesitate to found on it a charge of "reckless and deliberate sacrificing of life" against those of his professional brethren who were practising as hospital surgeons. Are we now to be told that this terrible charge rested on "probabilities"? If so, Mr. Tait had better leave the matter where it is. But, if he determine to make another attempt to establish the credit of these statistics as such, we would advise him to re-peruse the various objections which have been made against them, only one of which (as far as his note is to us intelligible) does he appear now to deal with, and that a minor one.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

MR. R. S. HALL, Wigan, has received from the Local Government Board an extra grant of £16 for efficient vaccination in his district.

MR. C. QUINTON, Medical Officer of Health and Public Vaccinator for the Eytton District in the Whitby Union, has been awarded a second time during the past four years the extra premium, amounting to £7 : 18, for successful vaccination.

DUTIES OF MEDICAL OFFICERS OF HEALTH.

MR. MICHAEL and Dr. A. P. Stewart, Honorary Secretaries of the State Medicine Committee, request us to state that the answers which we gave as expressing our own views and those of Dr. Rumsey on the interpretation of the scheme of the State Medicine Committee in reply to the weighty and pertinent queries of the Medical Officers of Health, must not be taken as binding on the Committee, or as representing their views on the matter. Our readers will desire to hear further from the Committee on this delicate and important matter.

REPORTS OF MEDICAL OFFICERS OF HEALTH, 1873

ACTON.—*Faults and Fallacies as to Drinking-Water.*—Mr. Pollock reports to the Acton Local Board of Health that his district has, during the summer months, been remarkably free from any epidemic diseases; a result which he mainly attributes to the cleanly habits of the people. It appears, however, that a part of the water-supply of Acton is derived from wells, the contents of which are shown by analysis to be highly charged with ammonia, both free and albuminoid, and other constituents indicating contamination with organic matter. The amount of chlorine which some samples exhibit is very large, and the presence of this ingredient affords an almost positive indication that the pollution is due to sewage of some description, unless, indeed, it be derived from some geological formation through which the water passes. The water from the conduit in the Uxbridge Road is stated to contain 17.92 grains of chlorine per gallon, which is more than four times the amount obtained from a sample of Thames water taken at London Bridge. We cannot too strongly impress upon sanitary authorities that it is utterly wrong in principle to take any part of a domestic water-supply from a soil upon which a population stands, for even with the utmost care the surface strata and deposits must at all times be liable to soakage of filth in numberless ways, as from sewers and drains, and water derived from such a source can hardly be otherwise than fouled. The common argument that such water has been used for a long time without doing any apparent harm is quite worthless; for, setting aside all theory as to the *de novo* origin of specific disease-poisons in water fouled by organic impurities, it should be constantly borne in mind that the specific elements of such diseases as enteric fever or cholera may at any moment be conveyed to a well which is subject to contamination by sewage.

WAKEFIELD.—*The Mortality.*—*The Foulness of the Calder.*—*Its In-*

fluence on Health.—In the half year ending June last, Dr. W. S. Wade reports that the mortality in Wakefield was at the annual rate of 25.19 per 1000 of the population, and that 45 out of a total of 359 deaths were due to zymotic diseases. Wakefield mainly occupies the slopes and summit of ground rising gently above the level of the banks of the Calder, and, in point of site, it has many natural advantages. But the waters flowing through it are fouled with nearly every species of sewage and factory refuse; ill ventilated alleys and yards are numerous; cottages are built back to back, and the existence of a syphon at the sewer outfall seriously detracts from any attempts at efficient sewer ventilation. The Calder, too, which is but little better than a sewer, actually constitutes the main water-supply of the town; and, although it must be admitted that, after the careful filtration to which it is subjected through beds of carbide of iron and sand, its condition is not objectionable either to the eye or the palate, yet it is perfectly impossible that such a water can afford a proper supply for human consumption, and it must be looked upon as one of the elements in producing an unnecessarily high mortality. It is indeed curious why the foul condition of the Calder has not done far more harm than can at present be traced to it; and, by way of explaining this, it was suggested by the Rivers' Pollution Commissioners that the noxiousness of the soluble organic matter contained in the water is probably largely held in check by the antiseptic and depurative action of the waste chemicals which pass into the stream from dye-works—such as sulphate of iron, alum and salts of tin, zinc, and chromium. The medical officer of health also complains of miasms which, being exposed to rainfall, are constantly wet and offensive. He insists that, owing to the want of sinks, the ground around many cottages becomes sodden with slops and liquid filth, and he urges that all beasts should be killed in the public slaughter-house, because the private establishments are a source of nuisance to the public, and give facilities for the preparation and sale of diseased meat. About four years ago the sanitary state of Wakefield was the subject of official investigation by the central authority; and, although some improvements appear to have been initiated since then, it is abundantly evident that Dr. Wade has yet an onerous task to perform, and that much more must be done before the town can have the benefit of those natural advantages with which it has been gifted, but the use of which it has so seriously perverted to its own injury.

OBITUARY.

GWYNNE HARRIES, M.D.

IT is with feelings of deep regret that we have to announce the death, at the early age of 33, of Dr. Gwynne Harries, one of the Inspectors of Public Health under the Local Government Board, who has fallen in the performance of his official duties. He was educated at King's College, and, on the completion of a diligent studentship, which was appropriately rewarded by prizes and college honours, he graduated at the London University in 1865. After a residence of about eight years at Pembroke Dock, where, in addition to his private practice, he held several public appointments, he was elected to the post in which he has died, and in performing the duties of which he has sacrificed his life. Little more than two years have elapsed since he received his appointment at the Local Government Board, but that short time has been full of promise, and those under whom, and with whom, he worked anticipated for him a bright future. On Thursday morning, the 6th instant, in consequence of symptoms which soon turned out to be those of malignant scarlet fever, he returned to town from an inspection he was making in the North of England. He was soon seen by his friend Dr. R. Liveing and by his colleague Mr. Netten Radcliffe, under whose advice he was removed to the excellent private apartments at the London Fever Hospital; but, notwithstanding exertions and attentions, the character of which can only be appreciated by those who witnessed them, he rapidly sank under the influence of the disease, and died on Saturday, the 8th.

We have told his history in brief terms, but the recollection of it will be of lasting duration with those who knew him. Holding a honourable position in the foremost rank of those who seek to hold in check our common enemy, disease, he has fallen; but not before he had done good work in the cause to which his life has been sacrificed, or before he had won the esteem and affectionate regard of his superiors and his colleagues in office. This is the second occasion on which the ravages of infectious disease have thinned the ranks of Mr. Simon's staff, and, though we know how ready all who hold office under him are to fill up the gaps, and with him press on in their work, we trust that it may be long before it is our melancholy duty again to record a similar event.

On Monday, the remains of Dr. Harries were conveyed by rail to his parents' home at Haverfordwest, in South Wales, Mr. Simon, and those of his inspectors who were in town, attending at Paddington Station on the mournful occasion. On the following day, Dr. Buchanan left London, in order to attend the funeral, as an expression on the part of the Department of their sense of the great loss they had sustained, and their deep sympathy with the young widow of their late colleague.

GILBERT LOVE, M.R.C.S., WIMBLEDON.

MR. GILBERT LOVE of Wimbledon, whose death took place on October 29th, was born in Tyrone, Ireland, in 1820. He was educated at Trinity College, Dublin, and was about twenty years of age when he came to England. His first professional engagement was at the St. Marylebone Infirmary, where, according to the testimony of Dr. Robert Boyd, the then resident physician, he was particularly attentive to the sick poor. In 1841, he went to Wimbledon, and assisted Dr. James Bright, then in practice there, for about three years. In 1844, Dr. Bright left Wimbledon; and Mr. Love, having obtained his diploma from the Royal College of Surgeons, set up in general practice for himself, and eventually took Mr. Finch (one of his contemporaries at the Marylebone Infirmary) and Mr. Pocklington into partnership. Wimbledon was the scene of his labours for thirty-three years; and during his long residence there, he had nearly identified himself with the charitable and social institutions of the place. He was one of the originators of the cottage-hospital—if, indeed, it does not owe its existence to his conception. But of the high regard and esteem in which he was held at Wimbledon, no more striking evidence can be required than the following letter addressed to him in his last illness.

"50, Albemarle Street W., Oct. 28th, 1873.
"Dear Mr. Love,—We think it may give you pleasure to know that the project of a testimonial to you from your friends and neighbours has been welcomed with unanimous approbation. No sooner was it known that you, who had been for so many years the alleviator of their pain and the sympathiser in their sufferings, were yourself bowed down by an illness so painful and dangerous as to compel you to resign your profession, than all classes, high and low, pressed forward to testify their sorrow, sympathy, and esteem. The sum which has been collected as an offering to you, and of which, on the part of our friends and neighbours, we have now to beg your acceptance, is of comparatively small value, apart from the evidences—written and spoken—of regard which have been received from all the contributors. It cannot be regarded but as a demonstration of the number of friends you have among us, by whom your constant kindness and consideration will never be forgotten.—We remain, dear Mr. Love, your sincere and grateful friends, John Murray, William Williams, Horace Watson, Alfred Markby, Chas. J. Wynne.—We enclose a cheque for £800."

JAMES STEWART, M.D., OF GLASGOW.

DR. JAMES STEWART, who died on August 11th in the sixty-seventh year of his age, was a native of Glasgow, and was educated at Glasgow University. He became a licentiate of the Faculty of Physicians and Surgeons in 1827, and a member in 1858. In 1852, he took the degree of M.D. at the University of Glasgow. He acted for a long period as district surgeon to the Southern Police Office, and was also one of the surgeons appointed to make *post mortem* examinations in judicial cases. In 1860, he was appointed Medical Inspector of Factories for the Southern district, and afterwards succeeded Dr. Bell in the same capacity in the Northern district. He was a man of warm and genial disposition, and will be deeply regretted by those who were fortunate enough to be his intimates.

ROBERT NICHOL, M.D.

THE death of Dr. Nichol of Denmark Hill, after a few hours' illness, has created profound regret in Camberwell and Peckham, where as a medical man he was much esteemed. The Camberwell Dispensary received a large share of his attention, and other institutions were benefited by his services. The evidence of sorrow in the district where the deceased gentleman lived and laboured was everywhere visible on Saturday, when his remains were interred in Norwood Cemetery in the presence of the principal gentry and clergy. On Sunday, the Rev. Mr. Hinde of St. Matthew's, Denmark Hill, preached a funeral sermon, and reviewed the latter part of his esteemed friend's life, showing that he never omitted if possible to do good, and that often at personal sacrifice. It is intended that a memorial window and tablet shall be placed in St. Matthew's Church, for which purpose a subscription list is to be opened, and the poor, to whom the deceased gentleman was specially attentive, are to be allowed to contribute their mites.

GILBERT LYON, M.D., BRISTOL.

DR. LYON died at his residence (Clifton) on October 5th, aged 70. He had an extensive practice for many years, being much respected as an able and experienced physician, and a man of the strictest honour and integrity. Dr. Lyon had the advantage of a medical education under most favourable circumstances. A private pupil to Dr. Abercrombie, then at the height of his fame in Scotland, he studied and graduated at the University of Edinburgh, when Monro, Gregory, Duncan, and John Thompson were amongst its professors; and also took the licence of the College of Surgeons. After his medical education was finished there, he went to Paris, and gave his attention chiefly to surgery, attending Lisfranc's courses of operations. At that time he thought of practising as a surgeon. On his return, Dr. Lyon came to Bristol comparatively a stranger, and commenced practice as a physician. When the first outbreak of cholera occurred in Bristol, he gave his entire time and attention to the treatment of that malady amongst the poor, and won the favourable opinion of all those who witnessed his energy and devotion in the work he was engaged in. He was soon appointed Physician to the Clifton Dispensary, and next to St. Peter's Hospital; and in 1843 was unanimously elected Physician to the Bristol Royal Infirmary, which appointment he held for fourteen years, when, finding his increasing practice would not allow him faithfully to discharge his duties, he retired. He was then elected Consulting-Physician to that institution. All those who witnessed and could judge, considered his practice most successful at the Infirmary, and his duties there most faithfully performed. He was Visiting Physician to the time of his last illness to the Lunatic Asylum for the county of Gloucester. For a long series of years Dr. Lyon enjoyed the entire confidence of both the public and the profession. A large portion of his medical brethren sought his assistance as a consulting-physician, in cases of doubt and difficulty, and rarely left the consultation without learning something worth remembering in the treatment of the disease. He was remarkable for kindness and marked courtesy to all, even to the youngest in the profession, and for his strict honour and integrity in dealing with them. Dr. Lyon gave his entire time and thoughts to his profession, and very rarely left his work. He read up to the opinions of the day, but never was a convert to the alcoholic treatment. He always considered bleeding necessary in certain cases. He employed it on himself when required, and the good he always experienced from it confirmed him in that opinion.

He enjoyed good health and great activity up to the commencement of his last illness. His death was the result of an unfortunate accident; he swallowed a small nail or "braid tack" in some food; soon afterwards he began to suffer from paroxysms of pain, and was compelled to give up practice in June 1872. From that date until the time of his death he was mostly confined to bed, and his sufferings were at times most severe; he bore them with great fortitude, and when free from pain, was cheerful and at times mirthful. The tack traversed from the stomach to the left kidney, and passed off by the urethra coated with calcareous matter; the injury done to the kidney was the cause of death.

Dr. Lyon was in person tall and erect, and in dress, manner, and deportment looked a gentleman and a physician.

W. T. DALBY, M.D.

WE have to record, with regret, the loss of another highly esteemed member of our profession, Dr. W. T. Dalby, of Kennington Park Road. He was estimable not only for his sound professional knowledge, but for his social qualities as a high-minded gentleman, performing every duty which he undertook, whether in his medical capacity or as a justice of the peace, with a conscientious regard to the well-being of those with whom he was brought in contact. The many members of the profession who enjoyed his intimacy, will feel a gap in their social life not easily to be filled.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 6th, 1873.

O'Brien, James Octavius, Guy's Hospital
Scott, Edward, Stockland, Devon

The following gentleman also on the same day passed his primary professional examination.

Johnson, Chadd Moore, Guy's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

- BEDFORD GENERAL INFIRMARY**—House-Surgeon: £100 per annum, board, etc.
- BEDMINSTER UNION**, Somersetshire—Medical Officer for District No. 8: £40 per annum, and fees. Applications, 17th Nov., to H. O'B. O'Donoghue, Clerk, Long Ashton, Bristol.
- BIRMINGHAM AND MIDLAND EYE HOSPITAL**—House-Surgeon: £80 per annum, apartments, board, and attendance. Applications, 15th inst., to James C. Gell, Secretary.
- BIRMINGHAM**—Surgeon to the Borough Prison: £200 per annum. Applications, 20th instant, to Messrs. Gem and Hebbert.
- BRISTOL ROYAL INFIRMARY**—Physician—House-Surgeon: £130 per annum, apartments, board, and washing. Applications, 20th inst., to W. Treney, Sec.
- BUCKS COUNTY LUNATIC ASYLUM**—Assistant Medical Officer: £100 per annum, with board and furnished apartments. Applications, 15th instant, to Acton Tindal, Esq., Aylesbury.
- BURY ST. EDMUNDS**—Public Analyst: £10:10 per annum; 10s. per analysis for first fifty, and 5s. per analysis beyond. Applications to William Salmon, Town Clerk.
- CHIPPENHAM UNION**—Medical Officer for the Workhouse and the Pewsham District: £50 and £18:3:4 per annum.
- CORK UNION**—Medical Officer to the Workhouse: £150 per annum, apartments, etc. Applications, 20th instant, to P. McGrath, Clerk to the Union.
- DORSET COUNTY HOSPITAL**—House-Surgeon: £70 per annum, and £10 additional as Secretary, with apartments and board. Applications, 26th instant, to C. W. Bingham, Chairman.
- DRAYTON UNION**, Salop—Medical Officer for the Ashley District: £21 p. ann.
- DURLEY UNION**, Gloucestershire—Medical Officer and Public Vaccinator for District No. 2: £90 per annum, and fees. Applications, 19th instant, to George Wenden, Clerk.
- GRAY'S HOSPITAL**, Elgin—House-Surgeon: £50 per annum, board and lodging. Applications, 20th instant, to David Forsyth, Esq.
- GREAT YARMOUTH HOSPITAL**—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 19th inst., to R. K. B. Norman, Hon. Sec.
- HALIFAX INFIRMARY**—House-Surgeon: £50 per annum, with progressive increase, board, lodging, and attendance.
- HOSPITAL FOR INCURABLES**, Dublin—Apothecary.
- HOSPITAL FOR WOMEN**, Soho Square—House-Physician.
- IPSWICH RURAL SANITARY DISTRICT**—Medical Officer of Health.
- KENT AND CANTERBURY HOSPITAL**—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 28th inst., to Thomas Southee, Sec.
- LEITH HOSPITAL**—House-Surgeon.
- LIVERPOOL DISPENSARIES**—Two Honorary Medical Officers to the North Dispensary. Applications, 26th inst., to Wm. Lister, Secretary.
- LOCAL GOVERNMENT BOARD**—Medical Inspector.
- METROPOLITAN DISPENSARY AND CHARITABLE FUND**, Fore Street, Cripple-gate—Physician. Applications, 15th instant, to W. H. Goodchild, Secretary.
- MID-CHESHIRE**—Medical Officer of Health: £800 per annum for two years. Applications, 21st instant, to John Latham, Esq., Sandbach.
- RADCLIFFE INFIRMARY**, Oxford—House-Surgeon.
- ROYAL LONDON OPHTHALMIC HOSPITAL**, Moorfields—Assistant House-Surgeon. Applications to R. J. Newstead, Sec.
- SOUTHAMPTON DISPENSARY AND HUMANE SOCIETY**—Two Acting Medical Officers.
- STROMNESS**, Orkney—Parochial Medical Officer. Applications to Wm. Ross, Chairman.
- SUNDERLAND GENERAL INFIRMARY AND DISPENSARY**—Surgeon.
- SUNDERLAND EYE INFIRMARY**—Surgeon.
- WEST RIDING LUNATIC ASYLUM**, Wakefield—Assistant Medical Officer.
- WORKINGTON PORT SANITARY DISTRICT**—Medical Officer of Health.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- *GRAV, John H., M.B., elected House-Surgeon to the Hospital for Sick Children, Bristol.
- *YELD, Henry John, M.D., elected Medical Officer of Health for the Borough and Port of Sunderland.
- WEBBER, W. L., Esq., appointed House-Surgeon to the West London Hospital, vice A. L. Sobey, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

HEDLEY.—On October 24th, at Yester House, Middlesbrough, the wife of *John Hedley, M.R.C.S., of a son.

MARRIAGE.

JACKSON—STEPHENSON.—On November 5th, at the Parish Church, Market Weighton, by the Rev. Joseph Foxley, M.A., Vicar, Dr. Alfred Jackson, eldest son of the late Matthew Jackson, Surgeon, to Eliza, youngest daughter of the late William Stephenson, of Arras, near Market Weighton.

DEATHS.

COOKE, Augustus, M.D., at Dover Terrace, Camberwell, aged 70, on Nov. 8th.

*HARRIS, Gwynne, M.D., of the Medical Department, Local Government Board, of scarlet fever, aged 33, on November 8th.

ON July 14th, Assistant-Surgeon T. Harvey Hill, 36th Middlesex Rifle Volunteers, passed his examination at the Medical Department of the War Office, and received the certificate of proficiency.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Thomas Bryant, "A Case of Intestinal Obstruction and Gastrostomy"; Mr. Wm. Adams, "On the Growth of Cicatrices from Wounds made in Early Life, and the supposed wearing out of some Cicatrices"; Mr. Spencer Watson, "A Case (with patient) of Cicatrix after Burn treated by Plastic Operation."

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Goodhart: Mediastinal Tumour in Exophthalmic Goitre. Mr. Butlin: Nerve showing the effects of an injury inflicted many years previously. Mr. Kesteven: Specimens of Disease of the Brain and Spinal Cord. Dr. Crisp: Intestinal Obstruction and Oesophagotomy in a Bird. Dr. Crisp: Traumatic Aneurism in a Bird. Mr. Andrew Clark: Lymphoma infiltrating the Trachea in which Tracheotomy was performed twice. Dr. King: Large Abscess of the Liver without Ulceration of Intestine. Dr. Moxon: Two Cases of Osteoid Cancer of the Lung.

THURSDAY.—Harveian Society of London, 8 P.M. Dr. Farquharson, "On a Case of Habitual Constipation"; Mr. Penning Baker, "On a Case of Enlarged Prostate"; Mr. W. F. Teevan, "On Retention of Urine from Diseases of the Prostate."

FRIDAY.—Medical Microscopical Society, 8 P.M. Dr. M. Bruce, "On Inflammation"; Mr. Needham, "An Improvement in Dr. Rutherford's Microtome"; Mr. Chippingdale, "On a Spectroscope"; etc.

SATURDAY, November 15th.—Society of Medical Officers of Health, 7.30 P.M. Dr. G. Ross, "On the Ventilation of Hospitals, Schools, and Public Buildings."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE are greatly obliged to Mr. Hill (Towcester) for his interesting communication.

A CONVERSATION.

MR. LAWSON TAIT (Birmingham) writes that he finds in back numbers of the JOURNAL, during the last few years, lengthy reports of meetings "in every respect similar" to that to which he invited our reporter. We have no such recollection, and have requested references from Mr. Tait in verification of that statement. These he has as yet failed to furnish.

DR. FIRCH (Kidderminster).—The Pocket Filters supplied to the Ashantee expedition are those of the Carbon Filter Company, Cheapside.

DR. WELSH (Knighton).—No enclosure received.

MR. PRIESTLEY SMITH'S request shall be complied with.

WE are obliged to Dr. Haynes (Malvern) for his pleasing letter.

SIR.—In answer to what I presume to have been a protest on the part of your correspondent, Mr. W. Mac Cormac, I beg to inform you that the author of the pamphlet, *A Pure Mind in a Pure Body*, is now an inmate of North Grove House Asylum, Hawkhurst, labouring under delusions which are but exaggerations of those expressed in the pamphlet in question. I am, etc.,
November 6th, 1873.

THE MEDICAL VISITOR.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DIETARY TABLES OF THE NAVY.

A MEDICAL Officer, R.N., writes:—"I have read with great interest the notice of Dr. Hunter's paper on 'Dietaries,' the more so as it is a judicious criticism; but it must be remembered that the changes proposed are probably only those which, as a naval officer, he believes could be readily introduced. As a medical man he would, no doubt, propose a more complete revision. The idea of citric acid and bicarbonate of potash baking powder is excellent; but you can hardly imagine how great is the opposition to change. To Dr. Hunter and yourself the service may yet be greatly indebted."

INSTRUCTION IN HYGIENE.

SIR.—In the report of a lecture delivered by Dr. Corfield at the Birmingham and Midland Institute, on Sanitary Science, published in the columns of last week's JOURNAL, it is stated that Birmingham has been the first town to appreciate the importance of the education of the people in this matter. This statement is not correct. Last winter, at the request of the Committee of the Nottingham Mechanics' Institute, I delivered a course of lectures upon Hygiene, for which over five hundred tickets were sold. I am, etc.,
26, Regent Street, Nottingham, Oct. 28th, 1873.

GEORGE ELDER.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Stroud News; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Nov. 5th; The Anti-Game-Law Circular, Nov. 8th; The Northern Echo, Nov. 7th; The Daily Post, Nov. 10th; The Bedfordshire Mercury, Nov. 8th; The Eastern Daily Press, Nov. 8th; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; The Aberdeen Times; The Dublin Express; The Aberdeen Free Press; The Belfast Evening Telegraph; The Carlisle Journal; The Daily Courier; The Melbourne Age; The Malton Messenger; The Altrincham and Kewden Guardian; The Stafford and Gloucester Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Rumsey, Cheltenham; Dr. George Johnson, London; Dr. Wray, Whetstone; Dr. Edis, London; Mr. Alexander, London; Mr. Brown, Dorchester; Dr. Burchardt, Berlin; Mr. Godfrey, Herne Bay; Dr. Thursfield, Shrewsbury; Dr. Young, Malton; Mr. F. S. Pope, Shirehampton; Mr. Pollock, London; Dr. J. F. Payne, Oxford; The Secretary of the Pathological Society; Dr. Hime, Sheffield; Dr. Jacob, Dublin; Our Glasgow Correspondent; Dr. Joyce, Cranbrook; Dr. Malins, Birmingham; Dr. Stanley L. Haynes, Malvern; Mr. H. Greenway, Plymouth; M.D. Ed.; Mr. Christopher Heath, London; Mr. Callender, London; Mr. Eastes, London; Mr. Priestley Smith, Birmingham; Mr. Reginald Harrison, Liverpool; M.D.; Mr. Lawson Tait, Birmingham; Dr. Marshall, Nottingham; Mr. Head, East Grinstead; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Dr. Ogston, Aberdeen; Mr. Ray Lankester, Oxford; Dr. Heywood Smith, London; Dr. King, Welwyn; Mr. Henry Terry, Northampton; Our Paris Correspondent; Dr. Laidlaw, Tranmere; Dr. Tripe, Hackney; Mr. John W. Walton, London; Mr. Howse, London; Dr. Welsh, Knighton; Mr. T. H. Bartleet, Birmingham; Dr. Cunningham, Campbelltown; Dr. Sandford, Market Drayton; Mr. Greaves, Derby; Dr. Brown, Rochester; Dr. Gardner, Box; An Associate; Messrs. Garman, Wednesbury; Surgeon-Major, London; Dr. Lombe Atthill, Dublin; Mr. T. Harvey Hill, London; Mr. Howard, London; Mr. T. H. Hills, London; Dr. Hunter, R.N., London; Mr. Poole, London; Dr. Horace Dobell, London; Mr. McBride, Cirencester; Dr. Davey, Northwoods; Dr. T. E. Williams, Talgarth; Mr. S. M. Bradley, Manchester; Dr. Dowse, Highgate; Dr. Alford, Taunton; Mr. Berkeley Hill, London; Dr. Barnes, Carlisle; Mr. Hardie, Edinburgh; Mr. Bazalgette, London; Dr. Harris, Worthing; Dr. Bastian, London; Mr. Lattey, Southampton; Dr. Sanders, Edinburgh; Dr. P. H. Watson, Edinburgh; Dr. Seaton, London; Dr. Southey, London; Sir Duncan Gibb, London; Our Birmingham Correspondent; Dr. Attfield, London; The Secretary of the Ventnor Hospital; Mr. Wheelhouse, Leeds; Mr. Francis Mason, London; Mr. Hill, Towcester; Mr. Michael and Dr. Stewart, London; Mr. J. H. Hill, London; etc.

BOOKS, ETC., RECEIVED.

Report of the Resident Medical Officer of the Newcastle Infirmary for 1872-73.
Report of the Dublin Infirmary for Diseases of the Eye and Ear, June 30th, 1873.
Dublin Steam Printing Company: 1873.
On the Value of certain Signs observed in Cases of Death from Suffocation. By David Page, M.D. 1873.
Letters on Typhoid Fever. By S. Harpur. Methyr Tydfil: 1873.
Lectures on Electricity. By Walter G. Smith, M.D. Dublin: 1873.
Thermomètres Physiologiques et Thermomètres Mathématiques leur Application à la Médecine à la Chirurgie, et à l'Éducation. Par Edouard Séguin, D.M.
On the Origin and Metamorphoses of Insects. By Sir John Lubbock, Bart., M.P., F.R.S. London: 1874.
Egypt as a Health Resort. By A. D. Walker, M.D. London: J. and A. Churchill. 1873.
Sketch of Cannes and its Climate. By Th. De Valcourt, M.D. London: J. and A. Churchill. 1873.

CLINICAL LECTURES

ON

THE TREATMENT OF OPERATION WOUNDS.

*Delivered at St. Bartholomew's Hospital, London.*By GEORGE W. CALLENDER, F.R.S.,
Surgeon to the Hospital.

LECTURE III.—On Warmth, Dryness, and Cleanliness.

GENTLEMEN,—In over-action, then, I wish you to recognise that group of symptoms which shows, not that nature is recovering from any shock, but that she is busy over the repair of some injury. It never rises to any material disturbance, irrespective of complications; it is no turmoil, but only a quickening of the system to mend its hurt, for it is during this stage of over-action that a wound is actually healed in a majority of cases. You will notice the qualification, for it occasionally happens, in a small minority of cases, that a patient does recover from an operation without a trace of over-action, and even with such lowering of the pulse, if it be only a few beats, and such depression of the temperature, though rarely beyond a few points, yet so marked as to have induced us to use for this progress the second term which I have mentioned to you, and to call it a convalescence with subaction; one without the ordinary constitutional disturbance; one from which the prognosis is invariably favourable; one which is characterised by a kind of laziness of the system, just as the patient who exhibits it is usually of a phlegmatic temperament, not easily roused or excited, and troubling himself little about his ailments.

You must not suppose, because it is put to you in this way, I would have you imagine that no such thing as shock exists. No doubt it is a condition frequently met with. I only want you distinctly to understand that shock is due to something more than a mere operation, to some emotional condition, or, as before mentioned, to some waste of blood, or to some organic weakness; that, just as a patient is thus weighted, so is he apt to suffer unduly after an operation; and that it is the sign he gives of being thus burdened which constitutes what is commonly called shock. Reflect upon what I have already told you, that none of our patients (all of whom, it should be recollected, have taken chloroform or ether) have given signs of suffering from shock; and, whilst we may have been fortunate in this respect where injuries have been concerned, and where we have had to deal with our cases without power of choice, in the other and far larger series of operations it is not in good fortune, but it is in the selection and in the preparation of patients that we have gained such immunity from shock as to have grown into the belief that after an operation, performed under chloroform, it may be practically disregarded. At least you may be sure of this, that you will fail to find anything which can be recognised as indicating shock through the pulse, the temperature, or the respiration. Let us, then, set aside shock as a factor to be considered after an operation—after one, that is to say, duly prepared for and properly performed.

And now let me ask your attention to the necessity of providing for warmth and for dryness. You will notice that the wounds are thickly covered with cotton-wool. This gives protection. I know not if it have any influence in guarding a wound from infection; and as the wounds are freely exposed at intervals, during redressing, to the air of the wards, which travels whither it pleases, and as the protecting wool is thus for a time withdrawn, we are not in a position to decide this question; but its great use is to maintain warmth. I lay stress on this; without warmth, that is continuous warmth—not the rewarming of a wound which has been allowed to chill, you will have one chance the less of securing primary repair; and, whilst on this question of warmth, let me remind you that you should be sure that the body, generally, is kept warm. There should be no exposure to cold, or risk of exposure; and, indeed, after some operations, as about the abdomen, and about the chest particularly, it is my rule to envelope large tracks with cotton-wool, so soon as the wound is closed and dressed, to guard as far as possible against hurt from cold before the patient is removed to bed, or during subsequent examinations of the wound. And with warmth goes dryness. Troublesome as it may be to guard against, moisture from

dressings or from discharge should never be allowed around a wound; if nothing worse come from it, the patient will be irritated by it, and then it is an occasional cause of erythema, and, if neglected, of actual excoriation. But as a wound, say after an amputation at the thigh, must not be disturbed for at least the first few days, we can render moisture, especially if from discharge, innocuous, by painting the parts which it affects with carbolic oil; and if ever there be any probability that discharge will get underneath a patient so as to hurt or irritate him, you will notice that directions are given, on the sound principle of prevention, for his bed, before he is placed on it, to be covered with oxide of zinc powder, which usually suffices to ensure thorough dryness until the linen can be safely changed.

With warmth and dryness let me name ventilation; free exposure, that is to say, not of the wound, but of the surroundings of the wound, to the air of the ward. After many operations this is easily provided for, but perhaps you will notice the means we take to secure a ventilating shaft from the foot of the bedstead, for operations on the lower extremities. We clamp a vertical plate of perforated iron, about three inches wide, to the foot of the bedstead. At right angles to the top of this, two parallel iron bars, furnished with two outriggers, are attached; these reach half or two-thirds the length of the bed, with a clearance of eighteen inches from the mattress, more or less, according to the requirements of particular cases. This apparatus serves three purposes; it supports the bed-clothes, and, being open at the lower end, and thus allowing free access of air, prevents the air about the dressings from becoming what is popularly called "close;" it enables us to swing a limb if necessary (doing away with the ordinary cradle, the upright supports of which are very inconvenient to a patient), and it allows, in addition to the play of the swing, considerable freedom of movement; this is due to the spring in the iron rods, which thus, speaking from experience, assist in preventing disturbance of the wound, the entire swinging apparatus yielding to and thus breaking the effect of the slightest jar. At the foot of this cradle, to refer once more to warmth, your patient will usually like to find a tin of hot water. This shaft insures what may be termed air-cleanliness, providing for the free access of the air of the ward to the surroundings of the wound, and you will have no hesitation in recognising its usefulness, after you have tested it by removing the bed-clothes from an amputated thigh which has, and from one which has not, been thus ventilated.

It seems well nigh superfluous for me to tell you that cleanliness must be assiduously cared for; but remember that it must be of an active character, not, that is to say, the cleanliness which consists only in the removal of offensive discharges, but that which prevents the possibility of their occurrence. There never ought to be the slightest ill odour about any wound, and my present object is to assure you that a very simple method of wound-dressing meets all practical requirements in this respect. To keep a wound sweet and clean, in other words, to prevent the decomposition of any discharge from interfering with repair, the cut surfaces are washed, before being brought together, with a solution of carbolic acid in water, and are then dressed as in the case of amputation at the forearm, which we have lately been watching, and to which I referred in my last lecture. Not that carbolic acid is the only agent of service in this way, but it is one which is convenient in practice, and is not unpleasant to the patient. You ought to know that it has been used in our wards for many years. It was first sent to us with a request that we would give it a trial, during the winter session of 1862-63; and Mr. Edlin, who was then house-surgeon for Sir James Paget, used it, as we still apply it, as a simple dressing for wounds, and from that time to the present we have continued to employ it. It certainly keeps discharge from decomposing, and favours the repair of wounds by obviating the irritation which might otherwise arise from this cause, but you will observe that we do not use it for the purpose of preventing the access of ordinary air to the wound-surfaces; wounds, whilst being dressed, are freely exposed, and I do not object to thus subjecting them to the influences, whatever they may be, of the air of the ward. It is important that you should remember this, because it is certain that we get all the help worth having from the use of carbolic acid, or other similar agents, without having to resort to any complicated method of wound-dressing—and, in practice, simplicity of treatment is of the first importance.

Much might be said respecting the handling of wounds. We are indebted to several surgeons for their recent advocacy of wound cleanliness; we owe them, I think, greater thanks for showing us, by their practice, how much is gained by personal care and watchfulness. I advise you to look closely after a wound, remove with gentlest handling the various dressings, and, in cleansing it of discharge, employ, as you see us daily using in the wards, these camel-hair brushes. They are easily kept clean in a solution of carbolic acid in spirits of wine, or their cost is so trifling that a new one may be used for each dressing; and

you will find them soft and pliable for use over tender surfaces, and for cleansing deep wounds otherwise difficult of access.

You will expect me to tell you, more definitely than I have as yet, the extent to which you may look for healing of a wound by primary adhesion of its surfaces. You may, I believe, reckon upon obtaining this result whenever you can keep the surfaces which are to be united in accurate apposition; if this be impracticable, the wound must be filled up by a process of granulation. If you consider the difficulty of getting, for example, the flaps of an amputation exactly applied, you will understand that, although the entire margin of an amputation-wound will unite at once, you cannot reasonably anticipate that the deeper parts of the wound, save in rare cases, will be healed, except by the gradual filling up of the interstices, which must here and there exist, by some process which takes time, as by granulation, and during which process you are not unlikely to have some, although it may be but little, discharge of laudable pus. It is the necessity of leaving the parts at rest for the completion of this process which chiefly compels us to keep a patient in bed, after an amputation, for three weeks or longer, for it is not prudent to allow the parts to be in the least disturbed until the repair has become what we may term consolidated. At the end of this rest-period, any sutures which have been used (and I prefer after most operations the use of silver wire, as it is little irritating and holds better than catgut, which is apt to give way under any strain) should be removed, unless for some reason it has been necessary to take them out at an earlier period, and, in so doing, you should be careful, if wire have been employed, after cutting each one, to turn back the end distant from the twist, so that the metal may be withdrawn smoothly and without pain.

During all the progress of wound-healing, carbolised oil dressings may be continued. I have only once had trouble from their use, and that was in a case of excision of the knee, the boy apparently suffering constitutionally from the action of the acid upon the system; at least, we got on much better when the use of the acid was discontinued. But we are not tied to this particular dressing, and we sometimes substitute for it warm water applications, or we employ a solution of sulphate of zinc or some other remedy, if a wound be open, and if its granulations require a change of treatment.

If I seem to you to dwell too much upon these details, let me remind you that it is impossible to be too careful about little things; upon the right management of these it is that the comfort of your patient and the result of an operation largely depend; and, if you are to make the recovery of a patient from a capital operation well-nigh a certainty, you must, as I said at first, leave nothing to chance. And, of course, what holds good of cutting operations is equally true for those practised by help of the *écraseur*, by galvanic cautery, or in other ways; only I do not now refer so much to these, because, from the nature of such procedures, you cannot expect them to be followed by the rapidity of repair which you may get under more favourable conditions, and the measures for obtaining which we are now considering. And it is equally true for injuries; for, although amongst the thirty-five amputations I set out by referring to six were primary, or for injury, there were admitted into the same wards, during the time my amputation cases were under treatment, twenty-eight compound fractures of bones of the leg, arm, or thigh, all of which recovered, and amongst which were fractures involving the elbow, knee, and ankle-joints which would certainly, in years gone by, have added to the list of primary amputations.

What I am telling you is not the story of any new plan of treatment; I am telling you what you may reasonably expect to accomplish by strictly adhering to the well-known principles and practice of surgery. If you are, as you should be, attentive observers of nature, you will see how this practice accords with her processes, and how it has come to us as the result of such observations. Look at any cut of little size—does nature attempt its repair before the bleeding has ceased? Is the wound at rest, is it free from pain, is it sweet and clean? It is all this if it is healing; and this is what you have to help nature to secure for her larger hurts, and you can do so if you will only take the pains. This is a trouble and a great tax upon your time, but it will ensure your obtaining good results after great surgical operations.

FRACTURE OF BOTH PATELLÆ FROM MUSCULAR ACTION.

IN 1870, a publican and builder, well known in this town, from mistaking the lower step in coming down stairs, transversely fractured both patellæ. He was many months in getting the free use of his knees, but he recovered without any limp.

THOMAS GODFREY, F.R.C.S., Herne Bay.

CLINICAL LECTURE

A CASE OF ANEURISM OF THE ARCH OF THE AORTA TREATED BY GALVANO-PUNCTURE.

Delivered at University College Hospital.

By H. CHARLTON BASTIAN, M.D., F.R.S., F.R.C.P.,
Professor of Pathological Anatomy in University College, London; Physician to University College Hospital; and Senior Assistant-Physician to the National Hospital for the Paralysed and Epileptic.

PART I.

GENTLEMEN,—We have recently had in Ward 4 a patient suffering from aneurism of the arch of the aorta, who was treated by galvano-puncture. Seeing that the method of treatment is as yet comparatively novel, and considering the gravity of the affection for the relief of which we have recourse to it, it is especially desirable that such cases, as they occur, should be carefully considered.

R. W. Faraday, aged 53, single, was admitted on September 28th.

Previous History.—He was born in Westmorland, and lived in this country till his twenty-ninth year, when he went to the United States, and continued to live in Virginia till the present year. He had turned his hand to all sorts of employment. He had been accustomed to make great efforts of strength, and had been much exposed to the weather at times. His general health had been very good; he said he had not taken a dose of medicine for forty years. During the last six years, he had occasionally suffered from shooting pains, "like tooth-ache," in different parts of his body, but chiefly in the lower limbs. These pains might last for twenty-four hours, and then vanish for two weeks or more. He never had rheumatic fever. There was no history of syphilis. His habits had been temperate.

Present Illness.—Ten years ago, his pulse was noticed to beat irregularly, "going twice and stopping once," though he never suffered from palpitation. Two years ago, he first noticed a small swelling, of about the circumference of a shilling at the base and very slightly elevated, at the bottom of his neck. It did not throb, and caused no pain; he felt it accidentally. He never experienced any sensation of "something giving" in the chest. The swelling scarcely increased at all during the first twelve months, though about six months ago its circumference at the base had reached the size of a crown-piece. During the last month, it had been enlarging rapidly on the right side of the sternum and below the inner end of the clavicle; and during the same time he had suffered from occasional slight pains in the occipital region. For a shorter time, he had had a sort of aching pain in both shoulders.

State on Admission.—The patient is thin, sparely built, though of fair muscular development, and 5 feet 8½ inches in height. He is rather pale, but has no expression of pain or anxiety. There is no turgescence of the neck, or lividity. He sits up and walks about without any inconvenience. The chest is cylindrical in shape, and fairly well developed. The costal angle is open and well formed. The direction of the ribs is normal. The intercostal spaces are tolerably wide. At the upper part of the sternum, and extending a little to the right under the clavicle, is a somewhat pyriform swelling, rounded at the upper and smaller extremity, where it projects over the supra-sternal notch, and fading away gradually as it passes downwards. Its length is three inches and a quarter, and its greater breadth about two inches. It occupies the part of the sternum above the level of the lower border of the second rib on the right side. The upper part has no osseous structure over it, and the covering appears to be very thin. In this part of the swelling there is a strong expansile pulsation; but the pulsation becomes less marked as we pass downwards, and is scarcely perceptible at the lower part. The skin over the round end is a little injected; it is not tender, and is quite cool.

The upper part of the left front of the *thorax* seems to expand more than the right; and this is confirmed by the measure. The circumference of each side at the level of the axilla is 17½ inches; below the nipple, right 16½, left 15½. The movement of the left at the base is quite as great as that of the right side. On light percussion, the whole part occupied by the swelling is high pitched and resistant; and the percussion-note is deficient also at the inner part of the first left interspace—which does not appear to be occupied by any morbid swelling, although it is rather full, whilst other spaces on this side are a little depressed. The percussion-note over the rest of the front is normal. Liver-dulness begins just below the sixth rib, and extends to the margin of the thorax. Inspiration is less loud and somewhat higher pitched at the right lung apex than at the left. The breathing at the bases is similar in character on the two sides. In the back, the per-

cussion-note is fairly resonant throughout. Slight rubbing is heard over the left apex on inspiration. *Heart.* The cardiac dulness is normal. The apex-beat is seen just below the fifth rib and inside a vertical line through the inner edge of the nipple. The impulse is firm, not diffused. There is no epigastric pulsation, no thrill anywhere. The heart-sounds at the apex are weak. The second sound is distinct at the apex and base. There is no *bruit* at the base or anywhere over the swelling. The pulse varies from 62 to 70 in the minute. In one quarter-minute, there may be eight beats and two intermissions; and the next quarter, fifteen beats and three intermissions. That of the right carotid is full, slow, and occasionally intermittent; of the left carotid almost imperceptible. The pulse in the right carotid and the pulse in both wrists are synchronous, and intermit simultaneously. The pulse at the left wrist is a little fuller and softer than that at the right; and the pulsation of the subclavian beneath the clavicle is also more distinct on the right than on the left side. The pulsation of the brachials is visible at the elbows. No appreciable loss of elasticity or induration of arteries is to be felt. Arcus senilis is slightly marked. The pulse at the wrist immediately precedes the pulse in the tibials.

The tongue is irregular on the surface, broad, rather flabby, and a little furred. The appetite is fair; digestion good. The bowels are slightly confined. He has to strain in micturition; the bladder is not distended. The stream is never forked, but occasionally twisted; the last drops dribble away. The temperature of the patient is normal.

He sometimes feels aching pains in the shoulders, but no pains in the tumour itself; and has an occasional aching, scarcely amounting to pain, below the right clavicle. There is no cedema or distension of the superficial veins of the upper limbs or chest. He has no dysphagia; no dyspnoea; no modification of voice; no cough; but on rare occasions, when he has had a little cough, during the last four months, has noticed that it breaks off in the middle, and assumes a hoarse barking character. The right pupil is more dilated than the left, whilst both are rather sluggish. Examined with the ophthalmoscope, both discs present a natural appearance, the vessels of each being about equal in size. There is no paralysis in any part of the body.

Now, taking all these facts into consideration, it seemed certain that we had to deal with an aneurism; and it seemed highly probable that it was an aneurism connected with the transverse portion of the arch of the aorta. As to whether it was a distinctly sacculated aneurism or not, the evidence did not enable us to decide. It was true, there was no *bruit* of any kind to be heard; though too much importance should not be attached to this merely negative sign. Whether communicating with the aorta by a narrow orifice, or not, it was evident, by the localised nature of the throbbing swelling, that it had become in a measure sacculated; and moreover, judging from its recent rather rapid increase in size, the thinness of the integuments covering it, and the almost total absence of deep-pressure signs, the tendency seemed to be towards death by external rupture—if not immediately, certainly at no very distant date. What, then, was it in our power to do? Two distinct methods of treatment were open to us. On the one hand, we might have recourse to that modification of Valsalva's treatment which has been ably advocated and carried into effect during the last ten years by Mr. Jolliffe Tufnell; or we might resort to galvano-puncture, with the view of building up a strong wall of fibrine in that portion of the sac whose yielding already began to threaten death. It cannot be denied that the disadvantages of Tufnell's method are grave, involving as it does an almost motionless state and a starvation-diet for four, five, or even six months, if the method is to have a fair chance. On the other hand, after looking carefully into the evidence, I had come to the conclusion that galvano-puncture, if it is to be fairly tried, should not be had recourse to, as has been often the case, only in the last stages of the disease. It seemed desirable that we should be able to try it carefully and tentatively, and under conditions in which we had leisure to study the best methods of procedure. For these reasons, and because past experience of this mode of treatment has shown the great rarity or almost complete absence of fatal results attaching to the mode of treatment itself, I thought it desirable to have recourse to it in this case. Dr. Russell Reynolds very kindly examined the patient with me, and he also came to the conclusion that it was a case peculiarly well fitted for the trial of galvano-puncture.

The patient soon gave his consent to the proposed method of treatment. No very appreciable change in the physical signs or symptoms had taken place during his stay in the hospital; and on October 8th I had recourse to the first trial of galvano-puncture, in which I was kindly assisted by Dr. Reynolds and Dr. Wilson Fox.*

* The following note had been made by Mr. Downes on the previous day. "The swelling has not notably increased during his stay in hospital. He says, however, that it is much more prominent than it was three weeks ago, at the upper part."

At 10 A.M., the patient was put under the influence of chloroform. He took it badly, and whilst under its influence was almost choked by two sets of artificial teeth which had become loose in his mouth during the administration. A fit of coughing was brought on at the same time, the cough having a somewhat hoarse brazen character. A small hare-lip needle, insulated except at its upper end, and to within half an inch of its point, was introduced to a depth of three-quarters of an inch into the left side of the upper and most prominent part of the bulging. The end of this needle was then connected with the positive pole of a new Foveaux's battery made by Weiss, five cells of which were in action; whilst the negative pole was brought into contact with the other side of the small rounded swelling by means of a rather large sponge well moistened with salt and water. After eight minutes, Dr. Reynolds heard a slight systolic *bruit* over the aneurism. The chloroform was now discontinued, in order to ascertain whether the mere passage of the current produced any pain. On recovering consciousness, the patient remained quite still, and felt no pain whatever during the remainder of the period in which the current continued to pass. At the expiration of twenty minutes, a slight blush was seen round the needle, and there was some reddish mottling of the skin of the neck immediately above the swelling. The slight *bruit* over the swelling was still audible. After thirty minutes, the current was stopped, and the needle was taken out, but not without a decided sense of resistance in withdrawing it. Not a drop of blood appeared, and the puncture was immediately covered with a small pledget of lint dipped in collodion. The uncovered portion of the needle was discoloured, but not corroded. A slight systolic *bruit*, audible with some beats only, was still to be heard over the aneurism after the withdrawal of the needle; and the pulsation continued strong and expansile. Pulse 76, and tolerably regular.

The patient was ordered middle diet, no stout, weak tea; and to remain as much as possible in the supine position, not getting up even for defecation or micturition.

Subsequent notes of the case, taken principally by the physician's assistant, Mr. Arthur Downes, M.B., run thus.

3 P.M. The skin has returned to its normal colour over the swelling. Pulse 64. He has no pain; occasional cough; pulsation the same.—6 P.M. The pulse in the left carotid has markedly improved, although it is still much weaker than that of the right carotid. No pain, nor any new sensation.—11 P.M. Temperature 98.4; pulse 72; respirations 18. The pulsation in the aneurism is as strong as before the operation.

October 9th. No change. Temperature normal.

October 10th. Pulsation remains stronger in the left carotid than before operation, but is still weaker than in the right. He remains in bed, but gets up to pass his motions, etc. [This permission was given at his own request, because it was thought to be less of an evil than the straining to which he had to resort in the supine position, and the worry which this occasioned him.] There is no change in the aneurism. He has slight cough occasionally; no dyspnoea; no difficulty of swallowing.

October 11th. Breathing is much louder and harsher over the left front of the chest than over the right. The same kind of difference exists in the back. A distant sound, as of slight rubbing, is heard near the spine in the right infrascapular fossa. A slight systolic *bruit* is heard over the aneurism. Slight pain is felt on pressure above the episternal notch. The patient thinks that the pulsation in the tumour is less forcible.

October 12th. No change. Temperature normal.

October 13th, 10 A.M. Distinct *bruit* is still heard over the aneurism. Pulsation is felt in the left carotid.—10.35 A.M. *Second galvano-puncture* by Dr. Bastian. Same battery as before. Eight cells were now employed. The needle (positive) was introduced in the same way and nearly in the same situation as before. The sponge (negative pole) was applied over the other side of the swelling. No chloroform was given. He had no pain nor any other sensation after the introduction of the needle. Pulse 74.—10.40. There is slight drawing in of the skin round the needle, and a blush of the size of a shilling around it. There is red mottling of skin, extending up into the episternal notch (as on last occasion).—10.45. The blush extends to the sponge and around it. Pulse 68. The *bruit* is more distinct.—11.5. The needle was taken out. No blood was seen. The puncture was covered with lint dipped in collodion. There was a patch of minute vesication upon an erythematous base, where the sponge was applied. The *bruit* is quite as loud as when the needle was in the aneurism.

October 14th. Temperature normal; skin natural in colour; no pain. Pulsation seems less at the extreme upper end of the aneurism, but is as marked as before over the anterior part of the rounded end.

October 15th. The tumour is more prominent and superficial at the sternal end of the second right costal cartilage.

October 16th. Pulsation is now distinct in the second right interspace close to the sternum. Temperature 97.2; pulse 80; respirations 16.

October 17th. The lint and collodion were removed from the seat of the last puncture, of which scarcely any trace was to be seen, the skin around being quite natural in appearance.

October 18th, 10 A.M. The aneurism at the upper and left part seems very slightly less full; but lower down the prominence is decidedly more marked, and the pulsation more superficial. A very soft *bruit* is still to be heard over the upper part of the swelling. *Third galvanopuncture* by Dr. Bastian. Two fine harelip needles were introduced into the lower part of the swelling, where pulsation had been increasing of late (just above the outer end of the second costal cartilage). The needles were inserted in a horizontal line, and about one inch apart: the right was zinc-coated, and not insulated; the left, a simple steel needle, was insulated to within half an inch of its tip. The left needle passed through the coat of the artery with some difficulty. No chloroform was taken, and no particular pain was experienced. A slight red blush appeared round the needles before any current was passed; and the patient stated that his skin had always been very sensitive and irritable. Both needles were connected with the positive pole of the same Foveaux's battery, of which eleven cells were now in action; whilst the sponge at the negative pole was placed just above, in the situation of the previous punctures. A pricking sensation was felt on first passing the current, but went off almost immediately. He experienced a slight dull aching pain in the swelling while the current was going, apparently due to the moderately firm pressure of sponge upon the upper rounded end of the swelling. No sensation was felt in the situation of the needles. Soon after the current began to pass, the blush increased in intensity and area, both round the sponge and the needles. The current was stopped at the expiration of half an hour. Beneath the sponge was an erythematous patch and small bullæ, as on the last occasion, though less marked; and around each needle was a deep red tinge for a depth of about one-twelfth of an inch—whilst the part immediately in contact with the right needle was of a dead white colour. There was some difficulty in pulling out the left needle, and still more in taking out the right, though their extraction did not seem to cause much pain. There was no trace of blood at either puncture. Lint and collodion were immediately applied. The right (zinc-coated) needle was very distinctly corroded for half an inch; the tip was eaten away; the surfaces black and roughened. The left needle was slightly corroded at the extreme point; the other parts were merely tarnished.—4 P.M. The redness of skin where the negative pole was placed has entirely disappeared. The *bruit* is not more marked than it was this morning.

October 19th. During the night the patient has had some dull aching pain in the swelling, but thinks it beats less forcibly. No pulsation is now to be felt below the middle of the second rib. Pulsation is still notably less in the right radial than in the left. The pulsation in the left carotid is difficult to feel, but is even *visible* in the right. There is a distinct red blush below and to the inner side of where the negative pole was placed. The lint over both punctures is slightly blood-stained; it was again painted over with collodion. Temperature, 98.4; pulse, 68; respiration, 16.

October 20th. The upper end of the tumour has increased in size perceptibly since yesterday morning; the summit is much more rounded. The redness of skin has increased in extent, but not in intensity. The patient takes his food well. Temperature, 97.2; pulse, 72; respiration, 16.

October 21st. There is no pain in the aneurism. Pulsation is still expansile in the upper part. The redness of skin has diminished. There is a little more redness around the lint covering the right than that covering the left puncture.

October 23rd. The lint and collodion were removed from punctures. Two small patches of discoloured skin are seen around, each one-fourth of an inch in circumference. To be dressed with lotio rubra.

October 24th. The redness round the needle-punctures is not diminished. Pulsation is notably less in the situation indicated in the note of October 19th, and all round the base of the swelling. Temperature, 97.2; pulse, 78; Respiration, 18.

October 26th, 11 A.M. The apex of the aneurism is somewhat larger. He complains of severe shooting pains in both legs, commencing at the hips, and slight pains in the hands. He has passed a sleepless night in consequence. He feels quite as well as usual, except for these pains. He has experienced them often before (see history). He says they are better after a good sweating. Temperature, 100; pulse, 72; respiration, 18. No dyspnoea nor dysphagia.—10 P.M. Temperature, 101.8. The pains are less. He complains of nothing now.

October 27th. At 10 A.M., temperature (taken twice), 97; pulse, 69;

respiration, 18. Soon after this he had a rigor, and the temperature began to rise again.—3 P.M. He has intense pains in the legs; movement brings on pain which darts at intervals. The tongue is furred; the bowels confined. He was ordered some aperient medicine and quinine. The upper part of the swelling is of the same size as it was yesterday. The last punctures still present traces of irritation around them. Pulsation over the whole lower part of the swelling continues much less, and this part is also somewhat less prominent than it was before the last operation.—6 P.M. Temperature, 104.6; pulse, 100; respiration, 20.—10 P.M. His mental condition seems strange. He says the quinine does not agree with him—that it will derange him. He got up when unobserved and walked towards the water-closet; was seen then, and seemed very weak. The expression of his face is more pinched. He would not have a hypodermic injection; said the pains would pass off. There is no pain in the aneurism, nor any notable change.

October 28th, 6 A.M. Temperature, 104.8. He has passed a restless night.—10 A.M. Temperature, 105.2; pulse, 112; respiration, 32. The pains have gone off again. He has a troublesome irritative cough, and has vomited two or three times, bilious matter. The whole of the swelling is much enlarged; but this seems to be chiefly, if not wholly, due to oedema of the integuments covering it and immediately adjacent parts. (Light pressure of the stethoscope caused deep pitting.) There is some oedema also of the neck; the episternal depression is obliterated; the veins on the upper part of the right side of the chest are enlarged. There was slight oozing of blood-stained fluid from the right puncture. No pain anywhere. Pulse regular—not intermitting at all. The breath-sounds are weak over the right front and upper part of the right back. Crackling *râles* (few) are heard over the right scapula. Inspiration is sonorous, and the breath-sounds generally harsh on the left side, and the right base behind. The percussion-note is good, except where the swelling is seen; it is hyperresonant over the lower part of the sternum and towards the cardiac region. There is resonance also over the cardiac region, and breath-sounds are heard in this situation. The heart's apex is in almost the same place as before.—3 P.M. Temperature, 105; pulse, 104; respiration, 36. He has not been sick for the last two hours, previously to which he took five minims of liquor morphiae hydrochloratis.—6 P.M. Temperature, 104; pulse, 124; respiration, 38. He has frequent fits of dyspnoea and muttering delirium. There is slight oozing through both needle-punctures.—10 P.M. Temperature, 105.2; pulse, 120; respiration, 40. Part of the swelling, especially towards the right side, is livid red in colour.—11 P.M. The dyspnoea is much worse; the cough is hoarse and raucous; the bases expand equally; the breath-sounds are sonorous, with harsh inspiration and prolonged expiration at both bases. At the left apex, the breath-sound is more whistling in character; at the right apex (back), the breath-sounds are weak. Over the vertebræ harsh tracheal breathing is heard. There is resonance on percussion at the bases. There is no alteration in the position of the heart's apex. Dyspnoea is less when he is supported, so that his body bends forwards.—12 P.M. He continues in much the same state. The dyspnoea is worse at intervals. The face is pale, the lips a little bluish. The pulse is much smaller than it was this morning, and has more of its old character—intermits and remits. There is no more oozing.

Oct. 29th, 1 A.M. He stiffened himself once or twice; had gasping respiration, and was pulseless. There were spasmodic contractions occasionally of the sterno-mastoids; rigidity; and death.—1.20 A.M. The aneurismal swelling was now seen to have notably collapsed. It certainly was not so half an hour before death.

Necropsy Thirteen Hours after Death.—The swelling in front of the chest had disappeared, with the exception of a small conical eminence about half an inch in diameter, having the right puncture in its centre (this part having been covered by lint and collodion). The skin of this region had a reddish purple discoloration, which extended, though to a notably less degree, downwards to the nipple, and thence outwards to the axilla; a slighter amount of purple discoloration also extended over the sternum into the left subclavicular region. On cutting through the thoracic parietes, a small quantity of blood was found effused into the substance of the pectoralis major, about two inches away from the right puncture, and a smaller amount was found diffused round this part as a centre. On cutting across the sternum just below the third rib, and reflecting it together with the rib cartilages, a considerable quantity of blood was found diffused through the loose tissue of the anterior mediastinum, and over the pericardium. No blood was found in the pleuræ, and only about three drachms of fluid in the pericardium, free from blood. There was no blood in the posterior mediastinum. After the heart, with the great vessels and portion of sternum attached, had been removed and the whole cleaned, an aneurismal sac about the size of a small orange (two inches and a half in diameter) was found

connected with the anterior and upper part of the transverse part of the arch of the aorta, and projecting forwards in front of the innominate artery and the left carotid—the left subclavian apparently coming off immediately to the left of the sac itself. The sac extended forwards so as to be closely adherent to the under surface of the sternum. The anterior and lower walls (immediately adjacent to the sternum) were almost as thin as tissue-paper, extremely soft and infiltrated with blood. (Some blood appeared to have passed through a minute aperture in this very thin tissue into that of the anterior mediastinum, with which it was continuous). The ascending aorta was slightly and uniformly dilated; and the same condition appeared to exist, though to a somewhat less extent, in other parts of the arch. On opening the aorta from the posterior surface, a rounded opening (an inch and a quarter in diameter) was seen in the situation before mentioned leading into the aneurismal dilatation—the left subclavian coming off direct from the aorta just beyond the sac, the innominate arising completely outside the sac, but posterior to it, and the left carotid taking origin just within the sac itself. The descending portion of the arch, as well as the thoracic aorta, seemed to have undergone slight general dilatation; and the coats throughout, from the aortic valves downwards, had quite lost their natural elasticity. The internal surface also was notably irregular from wrinkling, and the presence of numerous opalescent and whitish, more or less flattened, elevations above the surface—interspersed with abundant yellowish areas of superficial fatty degeneration. The diminution of elasticity was more marked in the descending than in the ascending part of the arch. The abdominal aorta gradually became more free from morbid changes, and presented an almost normal elasticity. The iliacs were also healthy. The internal surface of the aorta was also in most of its extent distinctly blood-stained. On opening the posterior part of the aneurismal sac, it was found that about three-fourths of an inch above its line of separation from the aorta its altered arterial walls gradually thinned away, so as to leave nothing but a layer of condensed connective tissue. The aneurism itself was partly filled with a large, somewhat conical, clot, about two inches and a half in length, by an inch and three-quarters in diameter at the base, weighing almost two ounces. This clot was nowhere adherent except very near the junction of the aneurism with the aorta, where the last layer forming the base of the clot was adherent in several places, so as partially to shut off the sac from the lumen of the aorta. The clot was firm, and of a light reddish colour on the surface. On section, it was found to be colourless within, and most distinctly laminated from above downwards. (The microscopical examination of a hardened portion of this clot subsequently showed that it was composed of a dense felt-work of interlacing fibres of fibrine, containing only a few white blood-corpuscles within its meshes. Here and there, however, aggregations of altered white blood-corpuscles were met with more plentifully amongst the fibres.) After removal of the clot, the following additional particulars were made out concerning the sac and its relations to other parts. It was found that the upper part of the sternum and the adjacent portions of the right clavicle and first rib were completely absorbed: two or three pieces of almost detached bone could be felt forming the wall of the sac itself inside the left sterno-clavicular articulation, and in the situation of the eroded end of the right clavicle. The walls of the sac were formed almost wholly of condensed connective tissue, showing only here and there a small patch of thin and degenerated arterial tunic. The portion of the sac corresponding with the last two punctures through the skin, seemed in no way different from other parts, except that immediately inside the puncture of the zinc needle was a small portion of very firm fibrine, about half an inch in diameter and one-fifth of an inch in thickness, adherent to the wall of the aneurism. This portion of fibrine was similar in character to the substance of the clot, and was of the same diameter as the laminae of its apex. One inch to the right of the situation of the right puncture, there was a minute opening through the attenuated wall of the sac in the situation of the eroded inner end of the clavicle, and a needle, passed outwards through this, traversed the pectoral muscle at the site of maximum blood-infiltration. Two inches below the level of the last punctures (just inside the lower border of the second rib), where the sac projects into the anterior mediastinum, there was also a very minute aperture through the much attenuated coats, by which blood had made its way into the anterior mediastinum. The communication between the left carotid and the sac was now found to be quite obliterated by a thin layer of partially decolourised fibrine, which covered the opening and adjacent parts of the sac. From the mode of connection of the artery with the sac, the blood-flow must necessarily have been much diminished, since distension of the aneurism tended to close the commencement of the vessel. On opening the vessel a thrombus was found, extending from the origin of the artery upwards for two inches: the lower inch of the thrombus was quite decolourised, and firmly adherent to the arterial wall next the

aneurismal sac. The upper portion of the clot was altogether softer, slightly reddish, and terminated in a conical point. There was no notable disease of the coats of this vessel: in the left subclavian were two or three small patches of atheroma, whilst the right innominate and its branches seemed healthy. Firmly adherent to the left border of the sac, close to the carotid artery, was the left pneumogastric nerve. In one part of its extent it was lying at the side of a minute pouch projecting from the sac, whose walls were extremely attenuated (so as to be on the eve of rupture). The walls of the sac in this situation were blackened; and on section of the nerve in the same part, it was found that half of its substance next the little pouch was also notably blackened and softened.

The heart was of normal size, the left ventricle not being at all enlarged. The mitral, tricuspid, and aortic valves were healthy, with the exception of a very slight amount of opacity and increased thickness. The right lung was healthy; there were no patches of consolidation, no evidence of pneumonia, and only a very slight increase of redness of the mucous membrane in the main bronchi. The upper lobe of the left lung was notably emphysematous, especially at the apex and along the anterior portion. The lower lobe was very slightly more solid than natural, and more vascular: the main bronchi were rather more hyperæmic than on the right side. The trachea and commencement of the large bronchi were decidedly more hyperæmic than natural. The liver was of medium size, and apparently quite healthy; no increased consistence; no thickening of capsule. It weighed fifty-nine ounces and a half; the gall-bladder was full. The spleen was somewhat small; its consistence was rather above the average; no thickening of capsule. It weighed five ounces and three-quarters. The kidneys each weighed five ounces and three-quarters; they were apparently quite healthy. The stomach and intestines were healthy; the bladder was full. On removing the calvaria, the dura mater seemed healthy; the vessels of the pia mater were notably turgid; the arteries of the base were healthy. The brain-substance was everywhere of natural consistence, and apparently quite healthy.

[To be continued.]

ON THE CAUSES OF UNAVOIDABLE HÆMORRHAGE DURING MISCARRIAGE OR LABOUR WHEN THE PLACENTA IS PRÆVIA.

By J. MATTHEWS DUNCAN, M.D.,

Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the School of Medicine, Edinburgh.

THERE is in obstetrics no subject more important, or which has attracted more attention, than unavoidable hemorrhage. Its causes, sources, and the mechanism of its arrestment, have been variously described; and most authors, especially those of recent times, base their practical recommendations on their theoretical views on these subjects; and, as the theories differ, so of course do the practices enjoined. The treatment, therefore, in this very grave class of cases, is in an unsettled state; and it will probably remain so until the whole theory of the hemorrhage is surely established.

I have in former papers* discussed the separation of the placenta when prævia, and the hæmorrhages which take place during the continuance of pregnancy; but the topic of the present paper is beset with more difficulties, and cannot, I fear, be regarded as so well cleared up as those of the preceding.

The hemorrhage during miscarriage or labour at the full time is the only loss that can be truly called unavoidable; and it is so in two different senses. It is, first, unavoidable, because we have no means of preventing it. It is, second, unavoidable, because labour (and here, as well as in future in this paper, we shall include under the term labour both miscarriage and labour at the full term) cannot go on without inducing it. No doubt many authors† take particular care to describe cases without any hemorrhage; Cazeaux, indeed, says, "without the loss of a drop of blood." But such statements require consideration, and do not disprove the inevitable character of the hemorrhage. The placenta is never separated without loss of blood. It is easily conceivable, that a case of placenta prævia may go on in labour without serious loss of blood or great hemorrhage. The function of parturition is sometimes conducted with so great energy and rapidity, or with so early discharge of the liquor amnii, that such cases, complicated with

* See *Lancet*, Oct. 18, 1873, p. 558; and *Edinburgh Medical Journal*, November 1871, p. 385.

† Mercier, Moreau, Cazeaux, Simpson, Barnes, etc.

placenta prævia, may have very little attendant hæmorrhage. I have repeatedly induced premature labour in placenta prævia without any hæmorrhage occurring worthy of the name of flooding, or without more than is seen in a healthy confinement. Another explanation may account for such cases without flooding; namely, that the part adhering to the area of spontaneous premature detachment, or within the cervical zone of Barnes, may have been separated long before labour. This explanation was long ago given by Jacquemier* and Cazeaux; but it is plain that here the placenta is only nominally prævia. The previous portion of it is no longer attached and useful, but detached, probably atrophied and perfectly useless. Cazeaux† gives the explanation in the following words. "In others, it may be as M. Jacquemier remarks, that the accomplishment of the delivery without accident is due either to the entire separation of the placenta, or to its detachment on one side only to a point just beyond the uterine orifice; so that the dilatation can progress without increasing the detachment, the vessels previously torn having been stopped by coagulated blood."

Still another explanation of absence of flooding is adopted by Jacquemier‡ and Cazeaux,§ who derive it from Moreau; namely, that death of the child some time before the labour, having given rise to coagulation of blood in the placenta, will lead to arrest of the supply of maternal blood to the organ; and that, in consequence, separation may take place without loss. This explanation was adopted by Simpson, but is, I believe justly, contested by Legroux|| and Barnes.¶ I am not at present in possession of knowledge sufficient to enable me to speak exactly regarding it; yet I may make three statements adverse to its acceptance. First, I believe in no mysterious attractive or "sugescant" power in the living fœtus or maternal placental vessels, such as is described by Gendrin** and Simpson.†† Second, cases are not rare where death of the fœtus is found to have no controlling influence over uterine hæmorrhage, whether accidental, or unavoidable, or *post partum*. Third, the circulation in the maternal part of the placenta does occasionally go on long after the fœtus is dead, even after it is decomposed. Although this is contrary to the general opinion of obstetricians, I have been strongly impressed with its truth by a recent case, where, long after the death of the fœtus, the placenta was full of fresh blood and healthy-like.

We have no hesitation, then, in saying that, when the placenta is truly prævia—that is, attached when labour begins, to the area of spontaneous premature detachment—hæmorrhage is unavoidable.

The cause of the hæmorrhage is separation of the placenta produced by expansion of the lower uterine hemispheroid in order to form part of the genital passage.

Wherever, within the spontaneously and prematurely detaching area, the placenta may be inserted, the first part of it separated will be that next to the internal os uteri, and the rest successively, as distance from the os is increased, till the latitudinal limit or distance of the extreme parts of the spontaneously premature detaching area from the os internum, or the vertex of the hemispheroid, is reached. This is both clinically true and a consequence of the laws of separation already elsewhere described.

When the placenta is inserted so as to overlie the internal os, hæmorrhage will commence as soon as the expansion of the part of the uterine body next the internal os is greater than can be met by the slight expansibility of the placenta; and this may be simultaneous with the commencement of active or painful labour. Bleeding, however, frequently begins before painful uterine action begins, when expansion is going on under the influence of silent or painless labour. On this subject, I have elsewhere‡‡ remarked. "Practitioners are not frequently called upon to make a vaginal examination just before the obliteration of the cervix begins; that is, generally some days before active or painful labour supervenes. But to this general statement, cases of placenta prævia form an exception. In them, it is well known that, at about the full time, hæmorrhage commences quite unexpectedly. It, in fact, begins with the commencement of the dilatation of the internal os uteri—that is, with the commencement of the ordinarily painless contractions which precede active labour." I might adduce, in illustration of these remarks, many well observed cases that have occurred in my own experience, or that are recorded by well known and accredited authors.

Braun's* opinion that long delay of dilatation of the internal os, even till the end of pregnancy, is a peculiarity in cases of placenta prævia and transverse presentation of the fœtus, is, I believe, quite unfounded. He accounts for the peculiarity by mechanical uterine conditions existing in these cases; but, as he does not give sufficient evidence of the truth of what he accounts for, I shall not discuss it.

When the placenta does not overlie the internal os, hæmorrhage will be delayed proportionally to the distance of the placental margin from the internal os. Considerable dilatation may, indeed, occur before hæmorrhage commences, when the placental margin is comparatively distant from the internal os. Such considerable dilatation may be the result of active painful labour, or of silent painless labour. Clinical experience often illustrates these statements. In the last case of placenta prævia which I attended (along with Dr. Macfarlane of Polmont), the hæmorrhage began quite unexpectedly, shortly after the completion of the seventh month of pregnancy; yet, although there was no painful uterine action, separation was caused by painless uterine action, producing dilatation of the lower uterine hemispheroid. The internal os uteri was as large as a florin; and it was not till this amount of dilatation of the internal os was reached, that the corresponding amount of dilatation at some distance from the internal os was sufficient to produce detachment. In this case, premature labour was induced, with a successful result to both mother and child. After delivery, the detached marginal segment of placenta was easily recognised by its peculiar ordinary thrombosed condition.

The delay of detachment and bleeding, in cases where the margin of the placenta only approaches the internal os but does not reach it, arises from the circumstance, which I have elsewhere accounted for, that a detaching amount of expansion is first produced at the margin of the internal os. This does not arise from the absence of expansion over the whole spontaneously detaching area; on the contrary, the expansion will simultaneously affect the whole of it. But, at parts remote from the internal os, the whole or final amount of expansion or dilatation is slight, and it is only when it has reached its maximum, or near it, that detachment of the placenta is produced. At the internal os, on the other hand, the detaching amount of expansion is reached at a very early stage of its dilatation and of labour, whether silent or painful; and, of course, long before the whole or final amount of expansion or dilatation is reached.

The same circumstances account for the renewals or aggravations of the hæmorrhage, which observers uniformly describe as occurring while the early part of labour advances, in all cases of extensive attachment over the spontaneously detaching area. As the lower uterine hemispheroid is dilated and opened up, successive zones, arranged concentrically round the internal os, are, according to distance, successively brought to a detaching amount of expansion or dilatation, till the limit of spontaneous premature detachment is reached. This limit will be, of course, reached when the internal os uteri is fully dilated, and probably sooner; but the reaching of this limit has no direct relations, so far as we yet know, with the degree of dilatation of the external os uteri. The limit of spontaneous premature placental detachment may be attained before the external os uteri is much dilated.

The view of the causation and progress of unavoidable hæmorrhage here just given is that which many long ago held, as the following passage from Ingleby† shows:—"Pain (says he) efficacious as it is in the accidental form of hæmorrhage, unless adequate to the expulsion of the child, is neither to be expected nor yet desired, to any material extent, in the unavoidable form, as it only renders the effusion more abundant. For, though a certain degree of relaxation is necessary for delivery, it must be remembered that, in exact ratio as the cervix uteri is successively developed, and the os internum progressively dilated, will an additional mass of placenta be detached from its connecting medium and hæmorrhage necessarily be renewed." Since the time of Ingleby, and of others equally well informed whom I might quote, much progress or knowledge has been made, many erroneous notions dissipated, and some vague ideas reduced to exactness. It was well known that, in ordinary cases, only the part of the placenta adjacent to the os internum was spontaneously detached in early labour, while that attached higher up retained its uterine connection till the child was born. But some authors, not writing with the care of Ingleby, who speaks of detachment as a consequence of development of the cervix and dilatation of the internal os uteri, appear to wish to describe an unlimited progress of detachment during the whole labour. Even Ingleby is inaccurate and inexact; but he correctly limits the bleeding to the time of the progressive dilatation of the os internum, and he does not, like Churchill, put no bound to the spontaneous premature detachment. The latter author says:—

* *Lehrbuch der Geburtshilfe*, s. 625.

† *Uterine Hemorrhage*, p. 140.

‡ *Theory and Practice of Midwifery*, p. 465, 3rd edition, 1855. In subsequent

* *Manuel des Accouchements*, 1846, tome ii, p. 240.

† *Theoretical and Practical Treatise on Midwifery* (Bullock's Translation), 1868, page 757.

‡ *Manuel des Accouchements*, tome ii, p. 243.

§ *Traité Théorique et Pratique de l'Art des Accouchements*, edit. vi, 1858, p. 701.

|| *Archives Gén. de Médecine*, 1855, vol. ii, p. 646.

¶ *Lectures on Obstetric Operations*, 2nd edit., p. 409.

** *Traité Phil. de Médecine Pratique*, tome ii, p. 275.

†† *Selected Obstetrical Works*, pp. 226 and 238.

‡‡ *Researches in Obstetrics*, p. 260.

"The flooding is the necessary consequence of the dilatation of the os uteri, by which the connection between the placenta and uterus is separated, and the more the labour advances the greater the disruption and the more excessive the hæmorrhage." That there is a natural and early limit to separation and bleeding was well known to Jacquemier,* who writes, regarding the separation and consequent bleeding during pregnancy, as follows:—"Elle peut se manifester lorsque le placenta recouvre l'orifice interne, et lorsqu'il en est seulement plus ou moins rapproché par sa circonférence. Dans le dernier cas, et même dans celui où il recouvre l'orifice par son bord seulement, la perte après s'être produite une ou plusieurs fois, peut cesser définitivement, et l'accouchement avoir lieu à terme sans qu'elle se reproduise. En effet, lorsque la portion du placenta qui avoisine l'orifice ou le recouvre a été décollée, et que l'extravasation sanguine a cessé, la tendance à de nouveaux décollements partiels peut disparaître, parce que les progrès de l'augmentation de la partie inférieure de l'utérus éloignent très sensiblement le bord du placenta le plus exposé à de nouveaux décollements du centre du segment inférieur, qui est la partie la plus distendue mécaniquement, et parce que le tiraillement diminue du bord inférieur du placenta au bord supérieur, qui se trouve assez haut dans la cavité de l'utérus." Barnes, however, has distinguished himself by the care with which he has justly insisted on the natural limit of spontaneous premature separation, and has shown that it is not the case, as Churchill says, that the more the labour advances the greater is the separation; the utmost limit of spontaneous premature separation being reached before the first stage of labour is completed. We do not at present enter upon the question, whether or not the hæmorrhage ceases when the limit of spontaneous premature detachment is reached, or artificially hastened, as Barnes believes. This is quite another matter, to which we hope subsequently to direct attention.

[To be continued.]

ON THE IMPORTANCE AND DANGERS OF "REST IN PULMONARY CONSUMPTION."

By HORACE DOBELL, M.D.,

Senior Physician to the Royal Hospital for Diseases of the Chest; etc.

HAD not Mr. Heather Bigg brought forward my name as the originator of "lung-splints" (JOURNAL, November 1st, page 530), I should not have thought it necessary, after all that I wrote on the subject in 1866-7, to join in the discussion on the importance of "rest in pulmonary consumption," just now excited by the interesting paper of my friend Dr. Berkart.

My object in now writing is not to enter into the dispute on the question of priority, but to issue a caution to those experimenting, either with Dr. Berkart's bandages or with my "lung-splints," lest anyone should think he has my authority for running into dangers which I have been most careful to avoid.

It was in November, 1872, that, at my request, Mr. Bigg made the first "lung-splint," and I asked him to call it at once by this name, as conveying an unmistakable explanation of its objects. He arranged it with his usual skill; it answered admirably, and he has made many others since, adapting each to the special requirements of the case. Before this, I had been accustomed to procure rest for portions of lung by other devices, principally by keeping the arm of the affected side flexed upon the walls of the chest, so as to restrain expansion by its weight and by the absence of muscular action, and it was the difficulty of sufficiently localising the pressure by these means to suit special cases that led me to suggest the "lung-splint;" but, whether it be partial rest of the whole of one lung, or more complete rest of a portion of one or both lungs that is desired, the greatest caution is necessary; because whatever local means secure rest to one part of the lungs, throw extra work upon the other parts, and may, therefore, easily do more harm than good.

For this reason, I have always used the greatest circumspection in selecting cases for this kind of treatment, and I trust that, if anyone is led to follow my example in one part of this treatment, he will most scrupulously do so in the other. With this precaution, nothing can be more satisfactory or more common sense, in the treatment of lung-disease, than the use of lung-splints, bandages, and the like; whereas without it nothing can be more foolish.

The "importance of rest in pulmonary consumption" was a necessary corollary upon my well-known hypothesis as to the nature and cause of

tuberculosis, viz., that tuberculation is peroxidation of albuminoid tissue; and, in my work on that subject published in 1866, and in my "Lectures on the True First Stage of Consumption," published in 1867, I brought this prominently forward. In enumerating the means of carrying out the "second principle of treatment in advanced tuberculosis, viz., to save the albuminoid tissues from disintegration to the greatest possible extent," I said, "By reducing respiratory action to the lowest point consistent with maintaining what remains of appetite and digestive power" (*Tuberculosis*, 2nd edit., page 45); and again (page 47), "Until this point is arrived at—until the balance is turned in favour of the albuminoid tissues—everything which favours the reception of oxygen into the blood, everything which increases the wear and tear of the body, everything which calls for the generation of animal heat, directly favours tuberculation, and precipitates the patient into the very catastrophe we wish to avert."

When discussing the views of Dr. Pollock and of Dr. Edward Smith (*True First Stage*, pp. 70, 71), I said, "It will be seen how entirely I disagree with Dr. Pollock in his interpretation of the phenomena which he has so carefully observed. While fully admitting and appreciating the conservative action of the organism in disease, I fail to see an example of it in the wasting of consumption, which appears to me to be the unavoidable effect of an arrest of the supply of an essential material for combustion and for histogenesis—an arrest in the supply of that for which it is impossible to stop the demand while life continues. On the other hand, I can see an example of conservative action in the attempt instinctively made by the patient to stop this demand by lessening respiration, abstaining from exertion, and seeking artificial heat—phenomena which Dr. Edward Smith interprets so differently. While fully admitting with Dr. Smith that, in early phthisis, respiration is diminished, I believe that he is totally wrong in his interpretation of its meaning. It is a law of animal nature to save a tender part, and I see, in the attempt at lessened respiration in early phthisis, an example of the operation of this law. The blood in the pulmonary circulation is deficient in the materials which the inhaled air seeks, the delicate tissue of the lungs is exposed to injury by the air, through deficiency in its usual protection of fatty blood, and nature comes to the rescue by attempting to diminish the quantity of air that is brought into the unprotected lungs, just as she shuts off the access of light from an inflamed retina by closing the iris or the eyelid." In referring to climatic treatment, I said (*True First Stage*, page 50), "The second object of climatic treatment—economy of fat and carbon in the organism, and protection of the lungs from undue oxidation, i.e., provisional protection against tuberculation—is of the greatest importance. . . . We must look for an atmosphere sufficiently warm to save some of the demand for carbon to supply animal heat, and we must look for a place where this warm diluted air can be breathed with as little exercise as possible." I recapitulate these statements, because it has been under the dictation of the principles to which they refer that I have been accustomed to prescribe rest in pulmonary consumption, whenever tuberculation has commenced or is already imminent. First, rest of the whole body; secondly, rest of the whole of both lungs; thirdly, rest of one lung; fourthly, localised rest of diseased portions of lung.

Those who enter into my views as to the importance of avoiding peroxidation of lung-tissue in consumption, will at once see how dangerous may be the effect of throwing exaggerated action upon one portion of lung by the attempt to control the action of another portion. If the disease by which the one portion was damaged had been purely local, there would be no danger worth considering in taxing the sound parts to save the unsound; but, when we consider consumption as "an abnormal physiological state" of the constitution, exposing all parts of the lungs to destructive changes, we at once see how much caution is required in determining that it is safe to throw exaggerated action on parts which may be only needing this excitement to subject them to the same destructive changes as those taking place in the portion of lung we wish to save by localised rest.

The rules for the cautious application of localised rest in lung-disease which I recommend, as dictated by a consideration of the nature of tuberculosis, and justified by the results of my own practice, are as follows.

1. If one lung, or a portion of one lung, or a portion of each lung, has become diseased, under circumstances which make it certain that there is no constitutional cause of lung-disease, then it is safe to secure localised rest for the diseased part, and to throw the extra work upon the sound parts; but even then it is necessary to be cautious that the extent of lung so rested is not too large in proportion to the extent of sound lung upon which the extra work is thrown. If there is any question about this, rest of the whole body must be secured in addition to the localised rest of lung, so as to save the sound lung from as much work as possible.

editions, Churchill has, by the addition of the words "until the head passes through the os uteri," corrected his former error and made a good statement, which for practical purposes is as near the truth and as useful as any other.

* *Manuel des Accouchés*, 1846, tome ii, p. 233.

2. If there is a constitutional cause of lung-disease, but only a small area of lung at present suffering, and that in the upper lobes, while there is a capacious chest with large areas of lung in the lower portions quite sound and insufficiently used, then it is safe to secure localised rest for both upper lobes, and to make the lower portions do a fairer proportion of the work; but, even under these circumstances, the respiration should be kept at as low a point as practicable. A case illustrative of this rule has just occurred to me. A fine young man, with a very capacious thorax, who has practised all sorts of gymnastic exercises with his arms while restricting the lower parts of the chest by dress, has thus acquired a habit of breathing almost entirely with the upper portions of lung. He has a tuberculous family history; and, after foolish over-training, by which he reduced his flesh considerably, he overtaxed his lungs in a race, and he has since become the subject of partial consolidation of the apices and recurrent hæmoptysis. Finding that he has large tracts of scarcely utilised lung at the lower parts of the chest, I have not hesitated to get Mr. Bigg to apply mechanical restraint, by means of lung-splints, to both upper lobes; but I have, at the same time, secured rest for the whole lungs by sending the patient on a long sea-voyage to a warm climate, under careful watching against over-exercise.

3. If a portion of lung has become disintegrated, under the influence of constitutional causes, and remains obstinately unhealed after all constitutional symptoms have been arrested, and, for some time past, no other portions of lung have shown a tendency to yield, then I think it is quite safe to secure localised rest for the disintegrated portion, so as to give it a fairer chance of healing; while an amount of air and exercise may be allowed to the patient, for the purpose of improving his reparative powers, which could not be permitted while the damaged lung was exposed to the same amount of action as the sound parts. But even here the utmost caution is required not to carry the exercise beyond a very limited amount.

4. If the constitutional tendency to lung-disease—"the abnormal physiological state"—is strong, and signs of impending mischief in the lungs are scattered, no localised rest should be attempted, but every means should be brought to bear upon the important object of maintaining respiration at its lowest point, consistent with life and nutrition, until the constitutional tendency has become passive and the local symptoms have been removed.

In conclusion, to prevent misapprehension on so vital a point, let me remind my readers that, in urging "the importance of rest in consumption," I am referring to cases in which the lungs are already damaged, or in which the constitutional disease has declared itself in sufficient force to render tuberculisation imminent. "If the symptoms are only what is commonly called premonitory, that is, if they are those of commencing tuberculosis, and no reason or sign is discoverable which justifies the suspicion that tuberculisation has commenced; if a sufficiency of fat remains without calling upon the albuminoid tissues, the principles of treatment are quite opposite to those above detailed." (*Tuberculosis*, 2nd ed., page 47). "It must be admitted that the proper regulation of this matter is one of the greatest trials of the astuteness of the physician, and it is almost impossible, unless he can make the patient and his friends comprehend its meaning and importance. But not less does it test the skill and judgment of the physician to decide upon the moment when restrictions upon fresh air and exercise ought to be removed. The argument so often used when a patient appears to be 'doing well,' that 'it is best to let well alone,' may be fatal if applied to this case. The very fact that he is 'doing well' may be the sign that he must not be 'let alone'; that he is now in a state in which it is safe to make a call upon his mechanical force, to accelerate histogenesis, to supply fresh oxygen—in a word, to set about the restoration of active nutrition. And then, again, how scrupulously these new tasks should be set; how carefully watched in their effects, lest even now they cannot be continued with safety! On the first sign of their being badly borne, they should be moderated or promptly stopped." (*True First Stage*, page 46.)

ON BRONCHIAL ASTHMA.

By JOHN C. THOROWGOOD, M.D.,

Physician to Victoria Park Hospital for Diseases of the Chest, etc.

I SHOULD like to offer a few remarks on Dr. Berkart's ingenious and interesting paper on the nature of so-called bronchial asthma, in the *JOURNAL* of November 8th.

Dr. Berkart admits that experimental physiology shows that the bronchial muscles may contract; but, as to *how* and *when*, nothing is known. It is well known how Dr. Williams, years ago, proved the contractility of the bronchial muscle, and subsequent observers have confirmed his

conclusions. Recently, Paul Bert has been experimenting on the contractility of the lungs, and Dr. Berkart tells us how this observer failed to demonstrate the contractility of the lungs in cases where insufflation of these organs was carried to an extreme degree. This is a point of great interest in connection with those cases of very protracted asthma, complicated with emphysema, which we meet with in old persons, and where the difficulty is, as I have more than once been told by the patients themselves, *to get the air out of the chest*. The bronchial muscle is exhausted and paralysed, and cannot contract to expel the air, and the chest is always over-filled with air.

There are, however, some experiments of Paul Bert's that point in another direction. He, as well as Traube, Bernard, and Schiff, has proved that the respiration may be arrested by strong irritation of the pneumogastric or laryngeal nerves, or those distributed to the Schneiderian membrane. This arrest is much more easily produced during expiration than during inspiration, and it is observed that actual contraction of the lung occurs under the influence of the vagi. (*Sydenham Society's Biennial Retrospect*, 1869-70, page 26.)

Now, when we consider the phenomena of a fit of spasmodic asthma, we find it is very apt to come on after complete expiration, as by a fit of coughing or laughing. The lungs are emptied of air, and, under faulty innervation, they will not expand, but remain contracted, and a paroxysm of dyspnoea results.

This may come on quite suddenly without any antecedent catarrh or premonitory symptoms. The case is analogous to a colic in the muscular coat of the bowel, and pure spasmodic asthma has no more to do with inflammation or catarrh than colic has to do with dysentery. Regarding, again, the effects of treatment. Nitre paper, when burned, almost surely relieves pure sudden spasmodic asthma. If, however, bronchitis coexists, the nitre paper fumes act as irritants, and, instead of giving relief, make the patient worse. Stramonium and belladonna, proved relaxors of bronchial stricture (Williams), are very efficacious in relieving the true spasmodic form of asthma.

The experiments of Paul Bert, quoted by Dr. Berkart, and those to which I have myself referred, appear to me of much value in distinguishing between the real spasmodic asthma, with contracted lungs, common to all ages of existence, and that form of asthma which is more common in old people, where the contractility of the lung has been exhausted, and where over-distension of chest, difficult expiration, and degenerative change of tissue are the most evident symptoms, with probably more or less chronic bronchitis due to a relaxed and badly nourished mucous membrane.

ANTICIPATION AND TREATMENT OF POST PARTUM HÆMORRHAGE.

By JOHN BASSETT, M.D., Professor of Midwifery to Queen's College, Birmingham.

THE various communications which are now appearing in the *JOURNAL* on this subject point to the place which it occupies in the minds of the members of our Association. This is not to be wondered at when we consider the number of lives which are sacrificed annually by this cause. After an active experience extending over five-and-twenty years, and a very careful examination of all the circumstances surrounding *post partum* hæmorrhage, I have arrived at the conclusion that the best method of anticipating it is to prepare the patient for her confinement by a course of medical treatment extending over a period of from four to six weeks, the basis of such treatment being the administration of iron. Of course, this can only be done in those who are subject to flooding, and in those who are so out of health that they seek medical relief. I have found no difficulty in carrying out this plan, for those who are liable to flood are very glad to carry out any method which will prevent it. It is to this that I attribute the fact, that I have never had a fatal case of *post partum* hæmorrhage amongst my private patients, although I have unfortunately seen several in the practice of others.

As regards the treatment of hæmorrhage, the remedies are of two kinds—those which are immediately available, and those which require time and circumstances for their development. Ergot has been put prominently forward, and I have seen it answer admirably sometimes; but it is always somewhat uncertain in its action, and it may throw the uterus into a state of spasm. It has appeared to me on several occasions that, where the uterus has been shy and lethargic, it would have been better to leave it alone rather than to hurry it by the hand and ergot; but I do not think any positive rule can be laid down on this subject. Every accoucheur carries about with him nature's *tourniquet*: the human hand applied to the uterus is not only the most available, but the most efficacious of agents; and, if this do not answer, it is not

difficult to transfer the pressure to the aorta, a proceeding which I have often seen of great service; then cold may be added as an excellent assistant to pressure; in certain cases, opium is a valuable remedy. The precise position which a solution of the perchloride of iron will occupy in the future I cannot tell; it has not, in my hands, appeared to be so innocent an agent as, from what has been written about it, I had supposed; but, as my experience has been limited, I give no decided opinion.

I have written briefly, because I send herewith a paper on this subject, which I had the pleasure of reading at the last meeting of our Branch; in this, I have stated the result of my experience on this very important subject.

ON THE ANTICIPATION OF *POST PARTUM* HÆMORRHAGE.

By EWING WHITTLE, M.D.,

Member of the Royal Irish Academy; Lecturer on Medical Jurisprudence to the Liverpool Royal Infirmary School of Medicine.

IF the short paper which I read before the Obstetric Section of the British Medical Association should have no other result, it has at least given the profession the benefit of an excellent paper by Dr. Atthill. In his very judicious advice, in every respect, I fully concur, and I thank him for his strong condemnation of what, I fear, is rather a common, though a very dangerous, practice, viz., the emptying the uterus too rapidly. I would also endorse his recommendation of a carefully applied binder; and I refer to this, because I know that some modern obstetricians discard the use of the binder altogether. However, Dr. Atthill has rather misunderstood the point of my brief paper. It was not a paper on *post partum* hæmorrhage generally, but only proposed an additional means of reducing such cases to a minimum. I did not mean to describe cases in which the uterus became exhausted by prolonged labour as suitable for the treatment which I recommended; in these cases, as the pains flag, they become irregular, feeble, and jerking; an altered condition, evidently due to exhaustion, and for which the proper remedy is the timely application of the forceps, as recommended by Dr. Atthill; in the cases to which I referred, labour may go on rapidly and steadily, and may not last more than one, two, or three hours, there being no apparent exhaustion of either patient or uterus. In these cases, the pains are strong, though of short duration, and the intervals proportionately are too long. These are very different from cases of exhaustion, but they are the cases in which the danger of hæmorrhage is of the most grave character; and I have found, during an experience of more than twenty years in this practice, that the timely administration of a full dose of ergot will always correct the pains, making them longer and the intervals shorter, and so obviating the morbid tendency to hæmorrhage; but I do not pretend for a moment that the having administered ergot would excuse the rash practice of emptying the uterus too rapidly, in using the forceps, or removing the placenta immediately after the delivery of the child.

THE ANTICIPATION AND TREATMENT OF *POST PARTUM* HÆMORRHAGE.

By D. DE BERDT HOVELL, F.R.C.S.E.

IN addition to other remedies and modes of treatment, I beg leave to call Mr. Moorman's attention to my uterine truss, of which he will find a description in the *Medical Times and Gazette* for February 1853.

It was invented to lessen the fatigue and anxiety of one of a class of obstetric patients called "flooders;" that is to say, patients liable to *post partum* hæmorrhage, usually occurring an hour or more after delivery, just when the practitioner is congratulating himself that it is all safely over.

It is simply a 7 lbs. spring bandage, with one pad for the sacrum, the other to go over the uterus. It differs from other bandages in being elastic, and so stimulating the uterus to contract, instead of compressing. It is simple in construction and adaptation; a great comfort to patients, who, having once used, frequently ask for it. It is a great safeguard, as, under its use, the uterus cannot much dilate. I have used it extensively, and never known dangerous or fatal hæmorrhage to occur. It has often enabled me to leave a patient half an hour earlier than I otherwise should, as, with it on, I always leave with comfort and confidence. It may be had of Messrs. Weiss, Strand, London; or Messrs. Krohne, Whitechapel. It was exhibited at the Plymouth meeting of the Association.

ANTICIPATION AND TREATMENT OF *POST PARTUM* HÆMORRHAGE.

By W. BOYD MUSHET, M.B., M.R.C.P.

I HAVE watched with interest the remarks and opinions of leading men as to the use and efficacy of perchloride of iron and other means in the control of uterine hæmorrhage. I am induced to describe the remedy adopted by myself, as I have not seen it definitely mentioned. I therefore deem it novel. I employ an ordinary stomach-pump or enema apparatus, and inject cold water freely into the uterus, passing the long tube well up for the purpose. I throw in the water again and again, having previously introduced my hand to ascertain that the uterus is free from retained fragments of placenta. The fundus should, of course, be grasped externally as firmly as possible.

Where there is a suspicion of the occurrence of hæmorrhage, I have the apparatus prepared, water ready in a basin, and a dose of ergot on the mantel-piece; the last given as the head passes the perinæum. In one patient, on two occasions, where the flow, without hyperbole, was appallingly like a cataract, I succeeded in arresting the discharge instantly. In this case, against my wish, chloroform was each time inhaled for some hours, which, I believe, increases the proclivity to hæmorrhage.

The virtues of the perchloride of iron are mainly, I think, to be ascribed to its vehicle, cold water, when used with the latter. I have no dread of cold water injections; no compunctious fears of pyæmia or metritis from caustic or irritant influence on the uterine tissues or sinuses, as I have never witnessed any injurious effect from their employment, which cannot be affirmed of the perchloride, if we trust the evidence adduced at a former meeting of the Obstetrical Society.

Whilst, on this subject, I would add that, in a protracted case of scirrhus of the uterus, in which periodical attacks of severe bleeding occurred, attended with great anxiety on the part of the patient, I always found injection of cold water more promptly valuable than ergot and less distressing than the plug—so markedly, that the poor emaciated sufferer, to whom an euthanasic dose would have been an act of grace, invariably begged for the injection, in which, after experience of the several remedies, she reposed utter confidence, though it produced very severe temporary shock on her attenuated system.

BRIGHT'S DISEASE: SUPPRESSION OF URINE FOR TWELVE DAYS: RETURN OF DIURESIS: DEATH FROM CONVULSIONS.

By ALBERT KISCH, M.R.C.S.

ON August 15th, I was requested to visit Mrs. P., aged 47, multipara, who was said to have passed no urine for eleven days. The statement of the previous medical attendant and the surrounding circumstances seemed to negative the natural supposition of deception; the evacuations had always been seen by the doctor, and the catheter was passed several times without drawing off a drop of urine. On one occasion about half a teaspoonful of turbid urine was passed; it was seen by the doctor, but was not examined.

There was nothing in the countenance or general aspect of the patient to arrest attention, but the tongue was exceedingly anæmic and slightly coated at the back, and there was a continual sense of nausea, and she had vomited once on the previous day. There were no other prominent symptoms. The catamenia were regular. For some years she had been subject to diarrhoea, but less frequently during the past two years; for about four years she had been liable to continual drowsiness at all times, often passing into sleep with heavy snoring; she would frequently complain of aching in the back; the urine, which was never very copious, was observed to be rather reduced in quantity during the past two months; and a little puffiness about the lower eyelids had been occasionally noticed. She was not of hysterical temperament, and had never had fits; was in the habit of taking brandy rather freely, but was never known to be intoxicated.

Having made a careful examination of the abdomen, externally and *per vaginam*, without detecting anything abnormal, I passed a catheter, but not a drop of urine escaped. The bowels having been freely relieved by saline cathartics, I treated her by dry cupping in the loins, fomentations of digitalis over the abdomen, and infusion of digitalis internally. The diet was ordered to consist of water and skimmed milk *ad libitum*, with a little bread and beef tea.

August 16th.—At 11 A.M. to-day (the twelfth day), she passed three drachms of very turbid urine, albuminous, crowded with blood-

discs and epithelial cells from the genito-urinary tract (mostly from the vagina), and exhibiting a few epithelial tube-casts. Two hours later, she passed urine freely; it was pale, clear, of specific gravity 1009, feebly albuminous, with a few casts, but free from blood-discs. She was more cheerful, but the general condition was unchanged. I ordered that the diet be continued, and substituted iron for the digitalis.

August 17th.—I was fetched hastily at 5 A.M., and found that she had just recovered from what appeared to have been a severe convulsive seizure; the tongue had been much bitten. The bowels not having acted for some hours, I gave a drachm of compound jalap powder. On visiting her at 11 A.M., I found that the bowels had been freely relieved, and urine again passed as before. There had been a fit at 7 A.M. resembling the first; and while I was with her a very severe attack came on, during which there was a temporary absence of pulse at the wrist. After remaining comatose for about two hours, she gradually rallied and recovered consciousness. Venesection to eight ounces and free purging were afterwards resorted to, but were of no avail in preventing the convulsions, which recurred with varying frequency and severity till her death on August 20th at 11 A.M. Unfortunately, a *post mortem* examination was not permitted.

REMARKS.—The long duration of suppression of urine practically absolute, without anasarca or other prominent symptoms, renders this case peculiarly interesting, and probably unique. In the absence of a necropsy, the pathology of the case is, of course, to some extent, a matter for speculation. Probably, the kidneys were small and granular, and diseased to such a degree that the whole of the cortical and the greater part of the medullary portion had ceased to act. The extent to which the system will tolerate chronic uræmic poisoning is strikingly illustrated. That urine should have flowed at all, after so long an interval as twelve days, is not the least strange incident of the case, but it was clearly nothing more than the *urina potius* due to the copious liquid diet. That it was the product of the excreting, not the secreting, part of the kidney, is amply proved by its chemical and histological characters, and by the subsequent occurrence of convulsions. Venesection was tried at the suggestion of my friend Dr. Bathurst Woodman, who kindly examined the specimens of urine with me. The only available vein, the right median basilic, was opened freely; but, in consequence of its small size, only eight ounces escaped, and no further favourable opportunity was presented for blood-letting by other means. Possibly the marked anemia generally present in cases of bright's disease would be likely to cause the results of such treatment (supposing it generally adopted) to compare very unfavourably with the results of the same treatment in cases of puerperal eclampsia, in which the condition of system is, as a rule, plethoric. And, though cases are on record which seem to have been benefited by blood-letting, it would seem that the true indication for treatment is to improve the quality rather than to reduce the quantity of the circulating fluid; to take, but also to give. This indication might be promptly fulfilled by coupling venesection with the transfusion of healthy blood; and, as it is said that the latter operation may be effected with safety and ease by Dr. Aveling's apparatus, the experiment may be worth a trial.

OBSTETRIC MEMORANDA.

CASE OF TRIPLETS: MALE LIVING CHILDREN.

ON Thursday, November 13th, at 7 A.M., I was sent for by our district midwife (Mrs. Jones, certified), who required my assistance to turn a third child, she having safely delivered the patient of two living male children. The history of the case up to this point was, that she was sent for at 7 P.M. on the 12th inst., and found the woman in pain, but very slight dilatation. She was sent for again at 9 P.M., when the os uteri was dilated to the size of a florin. At 5 A.M. on the 13th, the first child was born, the anterior fontanelle presenting. At 6.30, the second child was born, the presentation having been altered; the arm originally presented, but the midwife brought down the legs and delivered. On making an examination, I found a thick bag of membrane high up in the uterus, through which, with some amount of difficulty, the hand and shoulder could be felt presenting. The difficulty arose from the fact, that a large portion of placenta had become detached, and thus covered over the presenting parts. The great thickness of the membrane, the high position, and the large quantity of clots, etc., rendered it necessary to administer chloroform in order to turn and deliver, which was done at 7.45 A.M. The third child was somewhat smaller than the other two, and required several minutes of the "Marshall Hall method" before signs of life were visible. The placenta was removed

after a few minutes, being one continuous body, but partially divided into lobes. The cords were unusually thick. In outward appearance the mother was not more than usually large. The children are all of fair size, and at this date (November 16th) likely to live. The mother has milk, and, with feeding, will be able to give each some natural nourishment.

EDWD. SANDWELL, L.R.C.P., M.R.C.S. Eng.,
Senior Medical Officer, Westminster Union.

CLINICAL MEMORANDA.

RUPTURE OF THE STOMACH: IMPACTED GALL-STONES.

LAST week, I was hurriedly summoned to my surgery, where I found a man staggering about, unable to speak, but groaning with acute pain, both his fists being firmly pressed into his stomach. Before I could reach him, he fell down in a state of collapse, and died in a few minutes.

At the *post mortem* examination, I found two enormous clots on each side of the spine; and on the anterior surface of the pyloric pouch was an irregular aperture with edges infiltrated with black blood, and presenting appearances of ulceration. The upper portion of the duodenum was distended with clots. The liver was quite healthy; but a roundish gall-stone, about the size of a nut, was firmly impacted in the neck of the gall-bladder. The remaining viscera were quite healthy. I have concluded that the rupture was induced by the violent efforts made to relieve the pain of the gall-stone by violent pressure to the epigastrium; and that the coats of the stomach being preternaturally weakened by ulceration, gave way, and the patient died from the shock.

H. KIRWAN KING, M.B., Welwyn, Herts.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

ANALYSIS OF CASES OF ENTERIC FEVER ADMITTED INTO THE MIDDLESEX HOSPITAL DURING THE THREE MONTHS, JULY TO OCTOBER, 1873.

FROM the 1st January to the 30th June, 1873, there were admitted 16 cases (9 males, 7 females), of which number 8 were discharged convalescent, 6 died, and 2 remained under treatment on July 1st. The death-rate for the first six months of the year was therefore 37.5 per cent. on the admissions, or 42.8 per cent. on the total number discharged.

From July 1st to September 30th, there were admitted 39 cases (21 males, 18 females), of which number 14 have been discharged convalescent, 1 was removed by the friends against advice, 2 died, and 22 remained in the hospital on October 1st. The death-rate during this, the third quarter of the year, was thus 5.1 per cent. on the admissions, or 11.8 per cent. on the total number discharged. Of these 39 cases, 5 were admitted in the month of July, 18 during the month of August, and 16 during September. By taking the numbers admitted during each successive period of ten days, it will be seen that 4 out of the 5 cases admitted in July occurred on the last ten days of that month; that of the remainder, 15 were admitted in the first three weeks of August, and 15 in the last three weeks of September, the intervening period of three weeks showing only 4 cases admitted (of which one was a re-admission). Thus there were admitted—from July 1st to 10th, 1 case; 11th to 20th, no cases; 21st to 31st, 4 cases; August 1st to 10th, 8 cases; 11th to 20th, 7 cases; 21st to 31st, 3 cases; September 1st to 10th, 1 case (a re-admission); 11th to 20th, 6 cases; 21st to 30th, 9 cases. These cases have been furnished by nine different parishes, in the following numbers:—St. Marylebone, 14; St. Pancras, 8; St. James's, 4; St. Ann's, Westminster, 4; St. Giles-in-the-Fields, 4; St. George's, Hanover Square, 2; Holborn Union, 1; Paddington, 1; St. Mary, Lambeth, 1.

Authentic information as to milk having been supplied to the patients from the Dairy Reform Company was obtained in 13 cases—viz., 5 from St. Marylebone, 3 from St. Ann's, 3 from St. James's, and 2 from St. George's. These, from the parishes of St. Ann's and St. James's, all obtained their milk from the branch of that company in St. Ann's Court, Wardour Street. The first case traceable to milk-

infection was admitted on July 27th, and the last on September 13th, the total number admitted during that interval being 22. Five out of the thirteen cases remained in the hospital on October 1st. Lastly, of the two fatal cases, one was traceable to milk-infection, the other not.

The majority of the cases were below 20 years of age, the numbers in each period of ten years being—from 1 to 10 years, 8; from 11 to 20, 19; from 21 to 30, 9; from 31 to 40, 1; and from 41 to 50, 2—the last being a re-admission.

TABLE A.

Period.	No. of cases.	Discharged.	Died.	In Hosp.	Oct. 1.
I. July 21st to 31st ...	4	3	1	0	0
II. August 1st to 10th ...	8	5	0	0	3
III. " 11th to 20th ...	7	4	0	0	3
IV. " 21st to 31st ...	3	1	0	0	2
V. September 1st to 10th...	1	0	0	1	0
VI. " 11th to 20th.	6	0	0	0	6
VII. " 21st to 30th..	9	1*	0	0	8
	38	14	2	22	

* Taken away by friends on day after admission.

TABLE B.

	I.	II.	III.	IV.	V.	VI.	VII.	Total.
St. Marylebone	1	5 ³	2*	0	0	1	5	14
St. Pancras	1	1	1	0	0	3	1	8
St. James.....	1	0	0	3*	0	0	0	4
St. George's, Hanover Square.....	1*	0	1*	0	0	0	0	2
St. Giles-in-the-Fields..	0	1	1	0	0	1	0	3
St. Ann's, Westminster.	0	0	2 ¹	0	0	2*	0	4
Other Parishes (Paddington, Holborn Union, St. Mary, Lambeth)...	0	1	0	0	0	0	2	3
	4	8	7	3	1	6	9	38

* Milk cases.

NOTTINGHAM GENERAL HOSPITAL.

RUPTURE OF COMMON FEMORAL ARTERY BY A BLOW.

(Under the care of Mr. BEDDARD.)

Reported by LEWIS W. MARSHALL, M.B., Resident Surgeon.

JAS. H., aged 23, a robust, healthy man, working as an iron-planer, was admitted on October 15th, with an abrasion in the right groin, and a corresponding swelling extending upwards beyond Poupart's ligament to within two or three inches of the umbilicus, and downwards to the lower third of the thigh. The injury was caused, about half-an-hour before his admission, by his being driven by a plane (which struck him on the buttock whilst reversing) over the "cheek-piece". When he arrived at the hospital, he was evidently suffering from extreme loss of blood, his general circulation being so feeble that the pulse in his radial artery was imperceptible. On examining the limb, no pulsation could be felt either in the tumour or the tibial arteries. A consultation was called, when it was thought the man's condition would not justify any operative procedure. He died early the following morning.

Necropsy, Thirty Hours after Death.—On Scarpa's triangle being laid open and the abdominal parietes reflected, an extensive clot was found lying beneath the fascia, and spreading in the thigh through the intermuscular spaces to the back of the limb. The abductor longus and pectineus muscles were both torn across. The saphena vein was not discoverable, although from the appearance of the femoral vein at its usual point of entrance, it was believed to have been injured. The common femoral artery had been completely severed at a point immediately below Poupart's ligament. The sheath of the vessel up to the common iliac artery, and downwards to Hunter's canal, contained clot. The proximal end of the vessel was filled with a conical clot, and at the distal, complete torsion had been effected, the external coat being tightly twisted beyond the retracted internal and middle coats. The femoral vein contained clot at the seat of injury.

REMARKS.—The difficulty of diagnosing the exact nature of the injury in this case was obviously great—i.e., as to whether the vein or artery was injured. In support of the view that the artery was injured, was the rapidity of formation of the tumour and absence of pulsation in the tibials; but, as an argument against that opinion, was the non-pulsation of the tumour, which, however, may perhaps be explained by the depressed state of the general circulation.

SELECTIONS FROM JOURNALS.

MEDICINE.

CARBONIC ACID IN FEBRILE URINE.—Dr. Anton Errad relates some experiments (*Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin*) on this subject. Till now, those who have investigated the quantity of carbonic acid gas given off from the organism have occupied themselves with that exhaled by the mouth and skin, without taking into consideration the gas contained in the secretions. In the experiments of Dr. Errad, the urine was placed in very clean flasks in which a vacuum was created. The result of experiments by weight was to show that in the same individual and *ceteris paribus*, the quantity of carbonic acid contained in the urine was much more considerable in the state of fever than in the state of health; and besides, that the variations of this quantity of carbonic acid followed exactly those of the urea. This relation must be expected; for, though a part of the carbonic acid proceeds from albuminous aliments, another part derives its origin from carbonised aliments and fatty bodies; and this last source is the most important in the state of health. These results show an augmentation of the decomposition of the tissues during fever; and, since the carbonic acid derives its origin from the tissues and not from the blood, it follows that the excess of carbonic acid observed in the febrile state proceeds, not from the blood, but from the tissues.

TYPHUS-RELAPOSES AND TYPHUS INFECTION.—Dr. Lindwurm describes in the *Bayerisches Aerztliches Intelligenz-Blatt* fifteen cases of recurrent typhus observed by him in the Munich hospital. Some of them were relapses occurring during or immediately after an attack of the disease: in most instances, however, a period of ten years or more had elapsed since the first attack. In these latter cases, there was without doubt a fresh infection with the typhus poison—an event of very rare occurrence. In the cases where relapse was immediate, death repeatedly took place suddenly, but no cause for this could be discovered on *post mortem* examination. It was probably the result of the weakening of the system by the first attack. In the above named hospital, from 1869 to 1872, there were 2881 cases of typhus: they were treated by the cold water method, and the mortality was 304, or 10.5 per cent. In 1868, when expectant treatment was used, there were 321 cases, with 55 deaths, or more than 17 per cent. Along with cold water, Dr. Lindwurm used hydrochlorate of quinine with good result. Two grammes (about half a drachm) were taken in two doses with an interval of two hours. The effect was a reduction of the temperature by 1.5 to 2.5 degrees (2.7 to 4.5 degrees Fahr.), and of the pulse by 20, 30, or even 40 beats. The action of the medicine usually lasted twenty-four hours; sometimes a second, and even a third, dose of similar strength was given. This treatment was usually attended with noises in the ears, muscæ volitantes, headache, and in many cases vomiting. As a stimulant, Dr. Lindwurm recommends the subcutaneous injection of camphorated oil into different parts of the body three or four times daily—one or two grammes being thus used in the day. The result of this treatment was very favourable in the collapse of typhus, and also of other diseases.

SERO-ALBUMINOUS EPISTAXIS.—In the recent discussion on Albuminous Expectoration at the Société Médicale des Hôpitaux (*vide* BRITISH MEDICAL JOURNAL, October 4th and 11th), analogous cases of epistaxis were cited. The following is a new case in point (*Gazzetta Medica Italiana and Le Mouvement Medical*). A man aged 50, well made, suffering from hæmorrhoids, without any previous weakness or malady, is taken from time to time, suddenly and without appreciable cause, with an abundant nasal flux. The liquid is sero-albuminous, limpid, insipid, inodorous. The flux is preceded and accompanied by pruritus of the nasal mucous membrane; it takes place from the nostrils, and occurs several times in the day. Injections and inhalations of salt water suffice to arrest the flux, which has been several times cured by the same method.

NEURALGIA OF THE ABDOMINAL PLEXUS OF THE SYMPATHETIC.—Dr. A. Seeligmüller, in a collection of observations on the pathology of the nervous system (Halle, 1873), states that a man aged 33, who had been long exposed to cold and wet while employed in some water-works, and had afterwards worked in a white lead manufactory, suffered from the following symptoms, which returned regularly every four weeks. His face became red, and he had pain in one or other of the lower limbs. While these symptoms were present, he had a violent paroxysm of cough, ending in vomiting of mucus; this was followed by

an urgent desire for defecation, attended with spasmodic pain in the rectum and in the whole of the hypochondriac region. The first discharges were normal; afterwards they presented thready masses of the size of a goose-quill. After the stools, the pain extended to the back; and, when it had reached the neck, the feeling of strangulation, vomiting, and spasmodic deglutition, were relieved. The patient then had a rigor; and the paroxysm ceased at the end of twelve hours with an attack of vomiting, to be repeated on the third day. After this, there was an interval of four weeks, during which the man became rapidly convalescent, and presented nothing abnormal on examination. Various plans of treatment only alleviated this condition for a short time. The patient found most relief from a prolonged course of treatment as for trismus and faradisation of the large intestine, and at a later date from injection of morphia. The disorder remained essentially unchanged. Dr. Seeligmüller believes that the symptoms were due to neuralgia of the solar plexus, or to a visceral neuralgia affecting some one or other of the abdominal plexus. He does not think that the case was one of lead-colic, because the patient had no symptoms while employed in the manufactory, and there was no lead-line on the gums.

PARALYSIS OF THE THREE BRANCHES OF THE TRIFACIAL NERVE.—The same author (*ibid.*) refers to the case of a woman aged 26, in whom neuro-paralytic inflammation of the eye set in after nearly three years of anaesthesia of the left side of the face (this was at first limited to the left corner of the mouth, from which it afterwards spread upwards). The right half of the tongue was thickly coated with a white fur; the right was of a bright red colour; taste was lost in the anterior two-thirds of the left side of the tongue. A two months' course of treatment with the constant electric current (the positive pole being applied behind the left ear, and the negative to the face), produced marked improvement in all the symptoms.

SCIATICA FOLLOWING THE CONTINUED USE OF A SEWING-MACHINE.—Dr. Seeligmüller relates (*ibid.*) the case of a woman aged 50, who, after having worked with a sewing-machine for four years, had tearing pains in the leg with which she worked, extending from the ankle to the tuber ischii. The pain was not felt when she rested, but was brought on by walking or standing. The patient had also a sensation of cold and formication in the affected foot. Continued labour with the sewing-machine produced, besides the pain, loss of muscular power in the legs, wasting of the muscular substance, and a state of great general weakness. As a prophylactic measure, she was ordered to take longer intervals of rest between the periods of work.

TYPICAL NEUROSIS OF THE VAGUS NERVE.—A girl aged 15, says Dr. Seeligmüller (*ibid.*), had suppression of the menses after being violently angry. At the same time, severe pharyngitis set in; and this recurred regularly for two and a half years whenever she had a paroxysm of anger. In the first half-year, she had loss of consciousness, tonic cramps in the hands and feet, and frequent dyspnoea, generally lasting four hours. The cramps and loss of consciousness afterwards disappeared; but she had recurrent paroxysms of enormously increased frequency of respiration—200 in a minute. Numerous plans of treatment were employed without effect. Dr. Seeligmüller, having ascertained that pressure produced pain at points along the left side of the seventh, eighth, ninth, and tenth dorsal vertebrae, and in the corresponding intercostal spaces, used the constant current, applying the positive pole over the painful parts of the spinal column, while with the negative pole the points where pain was produced were brought into contact until the pain had ceased. Each point was treated from two to four minutes, thirty or forty large Remak's elements being used. After two months of this treatment, the paroxysms almost disappeared. At a later date, the patient had other nervous disturbances, especially severe pains in various parts of the body. Dr. Seeligmüller believes the case to have been one of neurosis of the vagus nerve, the central end of which was abnormally irritated by inflammation proceeding from the throat. A search for painful points, and the application of treatment to them, is an essential indication in the treatment of all reflex neuroses.

CHOLERA AND INTERMITTENT FEVER.—According to Dr. Joseph Hilf of Pesth (*La France Médicale*, November 12th), all who have observed cholera in countries where intermittent fever is endemic have been able to observe a certain resemblance between the two maladies: in the one and in the other is found a period of shivering, then one of heat, and finally a period of sweating; in pernicious fever, cramps and vomiting are constant, as in cholera. When we compare, he says, the causes of the two maladies, we find in them a new resemblance, for intermittent fever is due to marsh-miasms; and, on the other hand,

the hypothesis that cholera is derived from the marshes of the Ganges is the most probable one. In 1856, finding himself in marshy parts of Hungary, he had occasion to observe cases of cholera during the epidemic of that year, and he was led by the resemblance of the symptoms to employ against cholera the treatment of "intermittent fever"—that is to say—quinine. At that period, his wife, six months' pregnant, was attacked by the epidemic. All treatment having failed, Dr. Hilf, with the object of maintaining her strength, administered from hour to hour ten centigrammes of sulphate of quinine. To his great joy he remarked, after the third dose, an elevation of temperature and an improvement in the pulse. During the six weeks that the epidemic lasted, he treated 112 cases by tannin and opium, and, when those medicines failed, by sulphate of quinine, and he only lost thirteen patients. Last year he treated two cases at Pesth in the same manner, with success in both cases; and this summer many patients have been treated by Dr. Hilf himself, or by other physicians to whom he had recommended the use of sulphate of quinine, and the result has always been favourable.

NEUROPATHIC ORIGIN OF SIMPLE DIABETES.—Mosler (Virchow's *Archiv*, vol. lxviii, part 1) describes three cases in which diabetes insipidus was traceable to lesion of the nervous system. The first case was that of a boy aged 7, who in the first year of his life had an attack of epidemic cerebro-spinal meningitis, and, during a very long convalescence, had simple diabetes. This continued for years, and resisted all remedies that were used in the hospital. Another case was that of a lad aged 17, in whom the diabetes had been present since the age of three years, when he fell on his head. In this case, as in the preceding one, there were no other symptoms of nervous lesion. The disorder was greatly relieved in hospital by the use of large doses of acetate of lead and opium. In the third case, the cause was syphilitic disease of the brain, which also produced convulsions and hemiplegia. The necropsy showed extensive softening of the left cerebral hemisphere, and of the medulla oblongata and pons Varolii.—*Berliner Klinische Wochenschrift*, October 6th.

SECONDARY DISEASE OF BOTH PNEUMOGASTRIC NERVES IN THE COURSE OF TYPHOID FEVER.—Dr. Zurhelle relates in the *Berliner Klinische Wochenschrift* (No. 29, 1873) the case of a man who, in the second week of an attack of fever, was seized with severe pain at the level of the cornu of the thyroid cartilage on the left side (and later also on the right), which seriously impeded deglutition. The voice was clear, and remained so. Nothing abnormal could be detected by examination with the laryngoscope or externally; but the pain was much increased by pressure in the direction of the spine. In the further progress of the disease, attacks of vertigo and palpitation set in, while the pulse became irregular and sank to 36 in the minute. Later on, there were frequent attacks of syncope, with clonic convulsions and profuse vomiting. The fainting fits were diminished by morphia injections; but, while the temperature was still high, the pulse remained irregular, less than 40 in the minute. Pneumonia of the left side now set in, and with it paresis of the recurrent nerve on both sides, as ascertained by the laryngoscope, and hoarseness. Under the use of iodide of potassium, the violent pain on both sides of the neck at once disappeared; the heart-beats became more regular and frequent; but hoarseness, due to paresis of the left recurrent nerve, remained.

SURGERY.

ON THE OPERATION OF "PEELING" THE NOSE IN CASES OF ELEPHANTIASIS OF THAT ORGAN.—M. Poncet, interne of the Lyons hospitals, gives, in the *Gazette Hebdomadaire* for September 20th, an account of a method which M. Ollier has recently adopted in cases (such as are occasionally met with in drunkards) of hypertrophy of the nose. The operation is severe, and by no means free from danger; but it certainly seems as efficacious as can be desired. M. Poncet appears to recommend the operation only in the most formidable cases, of which he says that the lobular masses of tissue may by their size obstruct to a variable degree respiration, speech, and the reception of food. Occasionally they impede binocular vision, and thus cause strabismus. M. Ollier's treatment is thus described. The patient being narcotised, M. Ollier cuts through the skin and thickened tissues on the dorsum of the nose; then dissects them carefully upon each side, taking the greatest care not to touch the cartilages, and to preserve the fibrous tissue which holds them together. He thus entirely spares the fibro-cartilaginous framework of the nose, so as not to interfere with its form or functions; performing on that organ (if the comparison may be allowed), with the forceps and bistoury, what one does on an unripe

walnut when one peels off the husk without breaking its shell. The introduction of a finger into the nasal cavity allows the surgeon to judge of the thickness of the tissue which he is leaving, and to be certain of the integrity of the essential parts of the nose. The main dangers (and they appear from the account to be grave) seem to be from secondary hæmorrhage and from erysipelas. There is usually abundant hæmorrhage from a large number of small vessels at the time of the operation. This is not, perhaps, formidable at the time; but it is very liable to recur, as the nature of the tissue seems to prevent the vessels from closing, as in a more natural state of parts they would do. And the habits of these patients make them, of course, very liable to the secondary complications of operation. M. Poncet speaks as if M. Ollier had performed several such "decorations"; but he quotes only two cases, in one of which the patient survived, but after repeated attacks of secondary hæmorrhage, which put him in great jeopardy; while in the other death ensued from erysipelas of the face. This is hardly an encouraging account, and leads us to suspect that the ordinary procedures, by which skin and soft tissue is left sufficient to attempt, at any rate, union by first intention, may be preferable to this new operation; for, after such "peeling off" of the soft parts, the wound is necessarily left exposed. M. Ollier leaves it dressed with charpie, and does not remove that dressing until it is loosened by supuration, and of course is more or less putrefied. English surgeons would no doubt attempt something more "autoplastic" than this; but in any case the operation must be a very severe one. Fortunately, we have not much experience of the affection in this country.

FOREIGN BODY IN THE OESOPHAGUS.—Dr. D. E. Smith (*New York Medical Review*, September 1873) relates the case of a young married woman who, during an attack of puerperal convulsion, swallowed a partial set of false teeth, four in number, and fastened with a gold clasp. They remained for three days in the pharynx, which was not examined by the attending physician, who declared it to be impossible that the teeth could have been swallowed. At the end of this time, her ingesta having in the meanwhile been completely fluid, she ate a small piece of beef-steak, in company with which the teeth passed down the oesophagus to a point near the cardiac orifice, where they were arrested by the hook of the clasp penetrating the oesophageal wall. The patient remained in this condition for three months, gradually growing weaker, and undergoing treatment for indigestion, general debility, incipient phthisis, etc.; her physician persistently denying the presence of the teeth. A *post mortem* examination disclosed the facts to be as above related.

CURE OF STRANGULATED HERNIA.—M. Dubreuil read at the Société de Chirurgie, November 8th, a report on a memoir by M. Dieulafoy on the Treatment of Strangulated Hernia by Aspiratory Puncture. It appears to have been a chapter from his work on *Pneumatic Aspiration, a New Medico-Chirurgical Method of Treating Strangulated Hernia, Emphysema, etc.*, recently published in this country. M. Dubreuil reported very favourably. The method succeeded in 71 per cent. of the cases, and never did any harm. When it did not effect the cure, it in no way impeded the success of the subsequent operation. M. Verneuil recounted, in the subsequent discussion, several successful cases, and agreed with M. Dubreuil that this method realises a decided surgical improvement. [We noticed briefly some of the leading points of this admirable treatise of M. Dieulafoy on its first appearance, but we have not yet found space to publish a more detailed and critical review, which it well deserves. We may, however, meantime strongly recommend it to the perusal of every practitioner, as a work full of valuable original information, and realising undoubtedly, as M. Dubreuil says, a veritable advance in surgical practice. It is probable that, if an aspirator were always at hand, and used according to Dieulafoy's directions, 50 per cent. of the cutting operations for strangulated hernia would be avoided, so largely does it facilitate the taxis by removing the fluid and gaseous contents of the tumour.]

TRACHOMA TREATED BY GONORRHOEAL INOCULATION.—Dr. Léon Brière reports in the *Bulletin Général de Thérapeutique*, September 15th, 1873 (*The Clinic*, Oct. 25th), four hundred and four cases, from various sources, of pannus treated by the inoculation of blennorrhagic virus derived either from the ophthalmia of the new-born or from urethral vaginal blennorrhagia. To these he adds five cases in his own practice. Having quoted, with approval, the conclusion of Roosbroeck, who has never seen any grave accident follow this seemingly so frightful plan of treatment, and who observes, "I regard these results as so complete, so marvellous, and so extraordinary, that I do not believe anything more beautiful exists in all ophthalmology," the author sums up in the following indications and contraindications. 1.

Inoculation gives results satisfactory in proportion as the pannus has arrived at a very high degree of development (without incurable complication on the ocular surface). 2. In pannus, which is generalised over the whole surface of both corneæ, accidents are most rare. 3. Inoculation must never be practised in cases of unilateral pannus, as the most religious care of the sound eye will not save it from contagion. 4. Inoculation is equally contraindicated when the pannus is partial, and when the cornea presents points. 5. In cases of double pannus, it is preferable to inoculate both eyes at the same time. It is a matter of indifference whether the inoculating matter be taken from an ocular, vaginal, or urethral blennorrhagia. An individual refractory to the influence of one kind may be affected by another virus seemingly less active. The pus of acute urethral blennorrhagia is more active than that of the chronic disease. The material of inoculation should be picked up by a pair of forceps and deposited upon the palpebral conjunctiva. If its escape be feared, the conjunctiva may be punctured with a lancet or needle. The course of purulent ophthalmia of artificial induction is the same as that of the accidental disease. Should the cornea not ulcerate, frequent applications of warm water should be made. Van Roosbroeck lets the affection take its own course. Should the cornea exfoliate (intense pains), Warlomont recommends the application of the nitrate of silver, stick or solution.

PATHOLOGY.

TUBERCLE OF THE RIGHT OPTIC THALAMUS.—In an interesting collection of observations on the pathology of the nervous system, published at Halle, A. Seeligmüller describes the case of a boy aged 5, who was admitted into hospital with paralysis of the left side, which had existed one year. He presented the symptoms of severe meningitis; and Dr. Seeligmüller believed that the palsy belonged to the class of infantile paralysis, especially as it was said to have come on after convulsions. After death, a firm tubercle as large as a nut was found in the right optic thalamus.

CENTRAL SOFTENING OF THE CEREBELLUM.—The same author (*ibid.*) relates the case of a labouring man aged 25, who, without any apparent cause of disease, began to complain of giddiness in all positions (even when at rest); it was least when he lay on the right side. He had also vomiting, and, at least in the last days of his illness, suffered from very severe pain just below the middle of the squama occipitis. He had also formication from the soles of the feet to the knees, but no further disturbances of sensation and motion either in the limbs, in the organs of sense, or in the parts supplied by the cerebral nerves. The generative functions were nearly unaffected. Remissions took place twice in an illness of fourteen weeks' duration; and at the end of this time the man died. At the necropsy, the cerebellum was found to contain in the centre of the white substance a softened spot about as large as half a walnut, containing white flocks. The softening extended into the pons Varolii.

MATERIA MEDICA.

NEUTRAL CHLORAL HYDRATE.—The new German *Pharmacopœia* requires chloral hydrate to be neutral. That is a demand, writes the *Chemist and Druggist*, October 1st, 1873, which even the manufactory patronised by Liebreich, the discoverer of chloral hydrate, could not maintain; all chloral hydrate produced in those works had an acid reaction. It has been proved by repeated trials, and practically, that chloral hydrate, uncrystallised, by whatever process prepared, or by whatever solvents dissolved, and again crystallised, even after adding alkali to the solution, cannot be neutral, but must have an acid reaction. Notwithstanding this, a so-called neutral chloral hydrate, which professed to be not only not acid, but actually of an alkaline reaction, made latterly its appearance with great pretensions, from a factory in Ludwigshafen, near Mannheim. After a minute examination in the works of Schering, in Berlin, where principally, and at present almost exclusively, so far as Berlin is concerned, chloral hydrate is manufactured, it was found immediately that carbonate of soda had been mechanically mixed with this chloral hydrate, in order to produce the otherwise impossible reaction. Effervescence could be distinctly observed on saturating it with acid; by heating a residue was left, and by a partial solution, first when the carbonate of soda was acted upon, an alkaline, and when the chloral hydrate did dissolve, an acid reaction was obtained. The crystals soon became discoloured on exposure to air. That by such admixture no service is done to the public is evident, and it is only to be regretted that the German *Pharmacopœia* should require this reaction.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 22ND, 1873.

A DYING FAITH.

WE had occasion lately to point out that homœopathy, which had begun as a delusion, is now ending as a fraud. This also appears to be the verdict of the Clinical Society of London, delivered on the occasion of an interesting paper by Dr. George Johnson. Dr. George Johnson has the art of provoking interesting debates; both the Clinical and the Medical and Chirurgical Societies owe to him some of their "best nights". The clinical lectures and the papers of this accomplished physician have always the quality of novelty and sterling thought. It is always either a new fact or a new thought which Dr. Johnson contributes. His paper on Homœopathic Poisoning by Camphor was one of the least elaborate of his contributions to medicine; but he rightly judged that it had considerable collateral interest, and it made the Society the scene of an interesting debate. It has long been known to practitioners in London that persons practising pseudo-homœopathy, and catching the sunshine of whatever fashionable notoriety attaches to that as to other delusive innovations, have in fact long since abandoned all scientific claim to be considered as the apostles of a theory, and have been in the habit of administering the time-honoured medicines in time-honoured doses, and on the ordinary common-sense principles embodied in the maxims, *Contraria contrariis curantur*, and *sublatâ causâ tollitur effectus*. We have all of us heard of, and most of us have seen, patients who, under "homœopathic treatment", have been leeches, poulticed, fomented, and even blistered; who have had opiates administered to relieve pain, purgatives to remove constipation, iron to remedy anæmia, strychnia and phosphorus to cure nervous paresis or neuralgia, and so on through the whole pharmacopœia and through the whole range of disease. It is less generally known, but it is still known to a great many, that homœopathic pharmacy has undergone a corresponding transition. No doubt there are staunch homœopaths to be found, of the old deluded sugar-plum school; and there are amateur homœopaths, deluded unprofessional persons, to whom nothing stronger than sugar-plums can be entrusted for their zealous and misguided ministrations. But these are the neophytes. Ministrants behind the veil practise other mysteries. Harmless sugar-plums, of absolutely neutral character, and chemically innocent of anything but starch, sugar, and dextrine, are the pellets with which the public are encouraged to play. The enlightened homœopathist of the present day takes the drugs of rational medicine and concentrates them to the furthest extent to which modern chemical skill can furnish the means, and administers them in single drops, apparently in order to maintain the appearance of practising the old delusion after the old seeming method. Great precautions are taken to prevent neophytes from cutting their fingers with these sharp weapons. Persons now asking for the "strong tinctures" and the mother tinctures, of nuxvomica and belladonna, are politely told that they cannot be furnished without a doctor's order. Reason enough there is for this precaution. Dr. Stewart mentioned at the Society, in the course of the discussion last Friday, that he had occasion to order "tincture of strychnia" for a lady who mentioned that she had some in the house. He suggested, accordingly, that she should take ten drops at stated hours. She mentioned, however, that it was "homœopathic tincture", and so strong

that three drops was a dose. Cases in which severe twitchings have followed the domestic use of one-drop doses of a homœopathic tincture of strychnia, in which belladonna-poisoning, with mania lasting for several days, followed the use of a homœopathic tincture of belladonna, and in which dysentery followed the use of a homœopathic aperient drop (probably croton-oil), are within our own knowledge. The epoch of dynamisation, of cure by the imperceptible action of inappreciable doses, has merged into a period of concentration and of return in secret to the ancient paths of medicine, trodden over under the disguise of the old war-paint and with the old outcry.

There is no question that the homœopathist is a much more dangerous person under his new than in his old disguise. Alkaloids are more dangerous weapons than sugar-pellets. The most strenuous efforts will not very long suffice to keep the amateur homœopathist in the dark, and induce him or her to rely for mild domestic ailments on starch and dextrine in globules, put up in variously labeled bottles. The course of nature will do much for anxious relatives. The study of the natural history of disease, and of the tendency of disease towards spontaneous cure, has been largely aided by the earlier homœopathic efforts; and for this, as for their earnest though overstrained and delusive protests against anything like polypharmacy, we owe them thanks. But this is a vein which may be worked too freely. It cannot, as they and their patients have found to their cost, be followed with invariable success. Mothers will sigh for the mother tincture; for the tincture of aconite, of which a drop every hour allayed fever; for the nuxvomica, the belladonna, and the jalapine; and, confounding the plaything with the poison, accidents will happen and the fraud will appear. Mr. Brudenell Carter told at the Society an amusing story of the customary practice of a wholesale homœopathic purveyor of globules and his ways, which were dark. The story not long since appeared in print, without authority, and we are glad to have his authority for a statement which is of great value when so authenticated. We are favoured by Dr. Alfred Swaine Taylor with a further communication to the like effect, and of an extremely decisive and weighty character. He has many times examined homœopathic globules, and in general has found them to be composed of sugar and starch only—the sugar, sometimes cane or sucrose, and sometimes sugar of milk or lactose.

In Dr. Smethurst's case, Drs. Taylor and Odling examined sixty-four small tubes of homœopathic globules averaging fifty-two globules to a grain, and including, as would appear from the attached labels, every variety of mineral and organic poisons and medicines—arsenic, antimony, charcoal, sulphur, arnica, strychnia, morphia, etc. They satisfied themselves of the absence of any trace in the globules of the substances mentioned; for all the most delicate tests gave negative results. They then mixed up some thousands of the globules with distilled water, and drank off the mixture between them. No effects followed. They used hundreds of the globules in testing, and could easily have found in them the 1-4000th part of a grain of arsenic or mercury. As their tests gave no indication, it was quite obvious that if labels dropped off, or bottles were jumbled together, or the manufacturer put, by mistake, the arsenic label on the strychnine bottle or *vice versa*, no one could find out the mistake. In those days, no homœopathist, unless he himself prepared the globules or powders, could be sure of what he really was giving to a patient; and we have yet to learn that there is greater security for the community at the present time. Perhaps, the public analysts will look to the matter. There is here an obvious source of public danger which needs to be guarded against. Homœopathists have, in the words of Dr. George Johnson, "passed from the irrational and ludicrous extreme of infinitesimal dilutions to the dangerous extreme of the greatest possible concentration of active and poisonous drugs." Hampered by their partiality for infinitesimal doses, they usually prescribe none but powerful medicines. As Dr. Stewart expressed it, "being identified in the mind of the public with their own absurdity of infinitesimal doses, and being unwilling publicly to renounce it, they have recourse to concentrated tinctures, in order to produce an appreciable effect by very minute doses." Evidence was adduced

before the Clinical Society, of this concentration of strength in modern homœopathic tinctures, solutions, powders, and globules—but especially in the tinctures. The public are kept ignorant of this change, and are using the potent poisons as though they were the original trillions, which might be either charcoal or arsenic, and might be taken with equal impunity, in doses varying from a globule to a malt-shovelful. Already serious results, even death itself, have arisen from this ignorance of the changed conditions of the case. It were a charity to warn the deluded disciples of this fraud of the dangers they run. Homœopathic medicines, made according to the old plan, can be of no use; when manufactured after the modern fashion, they are the most dangerous (because the most concentrated) medicines which can be handled. The one is a fool's bauble; and the other is a doubled-edged sword.

It will, of course, be urged by the advocates of homœopathy, that these charges were advanced at the Clinical Society by practitioners interested in the overthrow of the system. We reply, that they were made by men who have the discovery of truth for their object, and who would practise any mode of cure, could they ascertain that its principles are based upon sterling facts, capable of standing the test of experiment. They fulfil their duty now in denouncing the fraud, as they fulfilled their duty before, in condemning the delusion which is known as homœopathy.

MIDDLE-CLASS ASYLUMS.

A COMMENDABLE effort is now being made in the West Riding of Yorkshire to establish a separate asylum for the insane of the middle and educated classes of society, whose means are too limited to secure their admission into private asylums. It appears that in the pauper asylums in that district, side by side with the sedentary deposits of the large towns, and with nothing but uncouth operatives and labourers, are to be found professional men, officers, merchants, and tradesmen of some cultivation and refinement, who have broken down before they had accumulated wealth enough to enable them to obtain, when incapacitated, anything better than the coarse fare, ill-fashioned garments, and strange company of the county asylum. And, sadder still, it seems that in these pauper establishments the wives and daughters of professional men, governesses, and delicate and sensitive women who have been accustomed to the purity and partial elegance of an English middle-class home are associated with prostitutes, criminals, and trollops. There is no separate provision made for those who, being afflicted by mental disease, can only afford to pay a moderate rate of board. On the one hand, there is the county asylum, where the charge is about ten shillings a week; and, on the other hand, there is the private asylum, where the lowest charge is two guineas a week, to say nothing of extras—a very indefinite quantity. With such a choice, it is not to be wondered at that a considerable proportion of the insane of the middle classes find their way into the pauper institutions; for how few professional men are there, or how few of the middle classes, who can afford to pay from £100 to £150 a year for an altogether unproductive member of the family circle, at a time, too, when increased expenses have to be incurred in other directions. Insanity, in relation to money, increases the demand and diminishes the supply. If it attack the head of a household, income is cut off, just when it is most wanted. If it attack a subsidiary member of the domestic colony, novel expenditure has probably to be incurred in providing for the discharge of those duties which the disabled relative undertook. Thus it is that to most middle-class families visited by madness, a good private asylum is unattainable; so that the county asylum is the only available refuge. There is, at present, no help for this. The raving maniac, the desperate suicide, the victim of morbid impulses, must be placed in security. The private asylum is barred with gold, and opens only to a golden key; so the county asylum must be had recourse to, even should the prospects of recovery be endangered by the hardships and asperities that must there be endured. Boards of guardians, with humanity and

common sense, make arrangements in such cases; and so patients, in no sense paupers, are received into pauper asylums. There, no doubt, they are judiciously and scientifically treated, as far as circumstances will permit; but in such asylums all classification is based upon the character of the mental disease, and not upon the position or education of the patient, and so the melancholic clergyman is seated next to the melancholic clodhopper.

This system is obviously very cruel and very unjust. It adds severe and unnecessary suffering to the terrible anguish of mental disease. It punishes by degradation and deprivation those whose only fault is that they are grievously afflicted, and it adds shame to the solicitude of their distressed relatives. And there are also grave practical drawbacks connected with this system. As we have already hinted, recovery may be retarded, if not rendered hopeless, by the painful impressions which must assail a polished and susceptible mind amidst pauper environments, and by the postponement of treatment which often results, from the natural disinclination of relatives to send some loved one visited by madness to the common lazaretto. Besides, these middle-class patients, who are paid for by their relatives, occupy the space in the public asylum which was intended for genuine paupers; and it sometimes happens, when the public asylum is full, that the genuine pauper is excluded from participation in the benefits of his own institution, because of their presence there.

We are not surprised that the sagacity and benevolence of Yorkshire should have revolted against this system, and should pave the way, in providing by subscription a public asylum in which the insane of the middle classes can be accommodated at a moderate rate, and can enjoy a few of the inexpensive comforts and amenities of life while they are spared uncongenial companionship. Charity could take no better direction than this. As Dr. Clifford Allbutt, who has advocated the middle-class asylum scheme, with force and feeling says, "Instead of lavishing funds upon that which directly encourages pauperism and improvidence, we ask that such funds may be diverted to the help of those who will help themselves. Make frugality fruitful. Make cheerful effort hopeful. Let the family upon whom the terrible distress of insanity has fallen know that the small means which they will still strive after and still spare from a slender purse shall be spent economically for them and turned to the best possible advantage."

The wealth of the West Riding is now as proverbial as its shrewdness. We trust that the latter will draw upon the former in removing indigent lunacy from the sphere of private speculation, in sparing it the pain and indignity of pauper associations, and in providing for it a middle-class asylum, which will do honour to the district. A manufacturing prince who desires to perpetuate his memory, could not attain his object more certainly or nobly than by connecting his name with such an institution. Like the tree planted, it will grow when he is asleep, and bud forth broadly, affording shelter and retirement and refreshment to many wayworn travellers.

The movement for a middle-class asylum in the West Riding, like many other useful and philanthropic works, has originated with the medical profession. Members of that profession are doubly interested in such an undertaking. In their daily duty, they are constantly encountering cases in which the necessity for a middle-class asylum is brought prominently before them; and when insanity unhappily visits their own firesides, they even more keenly appreciate the want of it. It behoves them, therefore, to aid strenuously in the foundation of such an establishment; we rejoice to learn that, in the present instance, they have done so, and that their efforts are likely to be crowned with speedy and complete success.

We might add, as a suggestion to those interested, that a nursing institution ought to be founded in connexion with the proposed asylum. In no class of diseases are the services of trained and skilled nurses more important and efficacious than in mental maladies. If, in many cases of incipient insanity, the quiet firmness and tact of an experienced nurse could be substituted for the fussy attentions and agitating interference of relatives and friends, rapid recovery might be hoped for in

stead of protracted attacks. It is no exaggeration to say that removal to an asylum might be rendered altogether unnecessary, and the ban connected therewith might be spared, in many acute mental ailments, could the physician in attendance only command efficient and trustworthy assistance in his home-treatment. At present such assistance is not to be procured; but a supply of it might be readily organised in connexion with such an hospital as that which is about to be founded in the West Riding, and which would derive an additional claim upon public support from the benefits which its auxiliary nursing institution would confer.

THE REGISTRATION OF MIDWIVES.

THE following suggestions for the instruction, examination, licensing, registration, and supervision of midwives have been submitted by the Council of the Obstetrical Society of London to Mr. Stansfeld, in pursuance of the object of obtaining efficient education and registration of midwives, urged upon that minister by a late deputation of the Parliamentary Bills Committee of this Association.

Definition of a Midwife.—A healthy, sensible, respectable woman, able to read, write, and calculate, understanding the management of natural labour, and the ordinary care of the mother and child after labour, and capable of recognising any conditions requiring medical aid during the parturient and puerperal states.

Instruction of Midwives.—This might be done by utilising the present lying-in charities and unions. Theoretical instruction might also be given by qualified medical men, and practical instruction at the bedside, and preferably at the patients' homes, since experience has shown that it is neither necessary nor desirable to congregate a large number of lying-in women under the same roof.

Examination and Licensing of Midwives.—As no one can treat obstetric emergencies and diseases successfully until he or she has first fulfilled a complete medical curriculum, such as qualified medical men are compelled to undergo, and as it is not proposed that such knowledge should be required of midwives, it can scarcely be expected that the universities, colleges, and corporations that license medical men would undertake the examination of midwives. The Obstetrical Society of London, having had repeatedly and urgently brought before its notice the sacrifice of human life and health occasioned by the practice of ignorant midwives, has already instituted an Examining Board for testing the knowledge of women desiring to follow the calling of a midwife, and has granted certificates to those who have satisfied its examiners. The Society is, therefore, able and is willing to undertake the examination, licensing, and registration of midwives, if the Privy Council think it desirable. It would be necessary for the Society to have the power of instituting Branch Examining Boards in the provinces. A similar method of examination and licensing might be carried out by Examining Boards appointed by the Obstetrical Societies of Edinburgh and Dublin.

Registration of Midwives.—It is believed that nothing short of compulsory registration of midwives will afford safe attendance during labour to those who are unable to distinguish between a good and a bad midwife. In future, every woman undertaking the duties of a midwife in England and Wales should be required to pass the Society's examination prior to registration, and no public appointment should hereafter be given to any midwife who is not registered. It is also thought desirable that all midwives at present in practice should, on the production of satisfactory evidence of fitness for the calling, be eligible to be placed on the register.

Supervision of Midwives.—Seeing that great injury might accrue to the public from the midwives thus registered neglecting or exceeding their duties, the Council deem it highly desirable that some mode of supervision should be adopted. This would, perhaps, be most easily effected by the renewal of annual licences upon the production of a certificate of good character signed by a minister of religion, a magistrate, or a qualified medical man. It is also considered necessary that power should be given to the Examining Board, after due investigation, to erase from the register the name of any midwife who has grossly misconducted herself.

It will be remembered that Mr. Stansfeld gave a very favourable reply to the Parliamentary Bills Committee, and promised to communicate with the other departments of the Government. He has since addressed to the Chairman of the above named Committee a request that a more detailed scheme might be laid before him; but, as the Pre-

sident, Secretary, and other members of the Obstetrical Society of London had, on the first occasion when the subject was mooted, accompanied the deputation of the Committee, and as it was known to our Committee that the Council of the Society were engaged in preparing the basis of a scheme (as now presented), it was thought desirable to wait until that Society, which possesses special information, and has a particular interest in the question, had matured its views. We shall next week be in possession of public information of what passes to-day between them and the President of the Local Government Board; and our Parliamentary Bills Committee will no doubt endeavour to give assistance in promoting the common object. The subject is one on which we should be glad to learn the experience and opinions of provincial associates. It is in the large towns and rural districts that midwives are most employed, and that the necessity is most felt for improving their education, and more especially regulating their competency and mode of practice.

NAVAL SURGEONS.

SOME amount of attention has recently been directed to the fact that, within the last year or two, a number of young surgeons who have passed through the course of instruction at Netley and entered the navy have, after spending a few months in the service, sent in their resignations; and that these resignations have not been accepted by the Admiralty. As every other officer, when not serving abroad, can resign, and has the certainty of his resignation being accepted, the very different position in which young surgeons are placed by this recent Admiralty decision, and the feeling of bondage which this compulsory servitude engenders, have caused a great deal of serious dissatisfaction amongst those on whom the yoke presses. Its effects extend also to those from whom the medical service of the navy is recruited, as shown by the small numbers who entered for last examination; the fear of taking a perhaps irrevocable step in life, evidently having deterred many who otherwise might have competed.

But, as there are generally two sides to every question, so in this case it must be confessed that the Admiralty have some show of right, not to refuse to allow an officer to resign, but to put some check on conduct that may arise from a desire to enter by means of the navy some other seemingly better paid branch of the public service. In justice to those who are now students, it would hardly be fair to allow the Netley training for the navy to be used as a stepping-stone to taking a high place in the Indian or army medical services. To forbid those resigning ever to enter these services would also be unfair; and if such a rule had been in force thirty years ago, the Indian medical service would have been deprived of at least two of its most distinguished members, and Calcutta University of two of its greatest teachers. Urgent domestic affairs may compel one or two to resign, while to some men the restraints of ship-life are really insupportable, and it is better that they should leave a service which they find distasteful, than remain in it, spreading discontent, and making themselves disagreeable to all who are forced to live with them in that closeness of association which a sea-life compels. There are other men in whom the love of travel, the desire to see foreign lands, are so strong, that discomforts sink into insignificance before the gratification of their cherished wishes. Some of these, now high up in the navy list, might have earned a distinguished position had they remained on shore; but they followed their instincts, and appear to have really enjoyed their ever-changing life from the day of their first entry into the service.

The Admiralty urge as a reason for their course of procedure, the expense that the State has incurred in training these reluctant surgeons at Netley. The Admiralty share of the expense cannot be large, and it would be much better for them to sustain the loss than to lower the character of the naval medical branch of the profession by insisting on compulsory servitude. At the same time, it might be only just to others, to refuse to allow those who resign to go up for the Indian or army medical services till the expiration of twelve months after leaving

the navy. The loss of the money sunk in uniform would of itself be a sufficient pecuniary fine, and might be put down as a set off against the money loss sustained by the Admiralty.

Why this desire to leave the service so soon after joining should show itself more amongst those gentlemen who have been to Netley than amongst those who entered under the old system, is not so easy of explanation; but possibly the association with the Indian candidates, who are about to receive a much higher rate of pay, and with the army candidates, who have before them a more settled kind of life, may have something to do with it. It is only the very recent naval candidates who have seen surgeon-majors of the army studying at Netley, and receiving full-pay, while the staff-surgeons of the navy, going through the same course of study, received only half-pay. Perhaps, also, the care used in acclimatising the Netley candidates to the sea may not have produced its intended effects; and six months in a naval hospital, and six months in a harbour-ship, may not answer so well as when the sea-going vessel came first, and the harbour-ship afterwards.

There is another resource in the hands of the Admiralty. They can have their own "Netley" at Greenwich, a change which many who wish well to the naval medical service would deplore, as breaking up the good fellowship between the three services, which Netley does so much to foster.

THE presentation portrait of Sir William Fergusson will be painted by Mr. Lehmann.

THE health of his Royal Highness Prince Leopold has again suffered. The Prince has been suffering from one of those occasional hæmorrhagic attacks to which he is liable.

HIS Excellency the Governor of New South Wales, with the advice of the Executive Council, has been pleased to appoint Dr. John James Hill, of Lambton, as one of the magistrates of the territory.

THE memorial bust and tablet of the late Dr. John Murray is being executed by Mr. Joseph Durham, R.A. The bust is a striking likeness; it will be placed in Middlesex Hospital, with the cordial assent of the weekly Board.

THE Newington Vestry have secured for their new mortuary coffins which are perfectly air-tight and with plate-glass lids. They are specially adapted to enable jurymen or other persons, in cases of identification, to view a body without inhaling noxious gases. The coffins were designed by Dr. Iliff, the medical officer of health of the parish.

THE LATE DR. MURRAY.

THE following has been signed by sixty students of the Middlesex Hospital.

"We, the undersigning students of the Middlesex Hospital, London, desire to express our sincere and heartfelt sympathy with the parents and relatives of the late Dr. John Murray, at the sad loss sustained by them in the sudden and untimely death of one so much beloved, highly gifted and esteemed; but feel assured that the influence of his bright example, and the remembrance of his genial and kindly heart will long be cherished by those who now mourn his loss."

THE ASHANTEE WAR.

IT is announced that Surgeon Joseph Fleming, at present stationed at Netley, has been ordered to the West Coast of Africa as Pathologist to the expedition. Surgeon-Major Mackinnon has started, we hear, this week for Madeira, to report on its fitness as a sanatorium for Africa, and to establish a convalescent hospital there. Forty medical officers are under orders to sail in the *Tamar* and *Himalaya*. Among them are the following officers of the Army Medical Department: Surgeons-Major Finemore, Reed, Fraser; Surgeons Catherwood, Croker, Hannigan, Hughes, Heather, O'Brien, Samuels, Smith, Supple, Weir, Ward, Wilson. There is already, we understand, a staff of twenty medical officers on the Gold Coast. We have no fear that there

will be a break down in this department. The following is an abstract of a letter from a medical officer within fifteen miles inland from Cape Coast, on the 25th October.

"I was brought here, where there is a small detachment of West Indian troops guarding the highway from Coomassie, in a hammock carried by twelve bearers. As this mode of conveyance was quite novel, I enjoyed the journey. The water here is certainly very bad; it is more like strong tea than water. It is obtained from a neighbouring stagnant pool, which is covered over with the leaves of trees. Even when filtered, it still retains its dark colour and strong taste. My rations are similar to those issued to the troops, and consist of salt pork and Australian beef. I always feel so hungry, that even coarse fare of this kind is very acceptable in a country where no other food of any kind can be procured. Fowls are lean, stringy, and innutritious; milk is a luxury which is nowhere obtained, so I find the Liebig's essence positively invaluable. The vegetation everywhere is tremendous: while in a bush-path, you are unable to see three yards at either side. The bush is absolutely impassable. Life here is really a rough one; and this is all the better, as one has but little time to think of getting ill of fever or dysentery. The natives are a most contemptible race: although their country is invaded by an implacable enemy, whose great delight is to plunder, ravage, and knock off Fantees' heads, yet they will not even lift a rifle in their own defence unless they are well paid for doing so. They scheme in every possible manner, and can only, like children, be kept to their work from a sense of fear. We are daily expecting to have a tiff with the Ashantees. As yet I have seen none alive, and only one dead head in one of the villages suspended from a pole."

ST. HELENA: A SANATORIUM FOR THE ASHANTEE EXPEDITION.

WHEN an European, stationed on the west coast of Africa, is attacked with fever or dysentery, the great importance of his early removal from the pestiferous influences of the climate is a point strongly insisted upon by every medical officer who has had African experience. The hot and humid "coast" atmosphere, with all its depressing results, extends seawards for a distance of one hundred and fifty to two hundred miles. Consequently, though hill sanatoria, near the base of operations, will be useful as temporary resting stations, the chief place for the restoration of our African invalids must be situated beyond this region of combined heat, moisture, and malaria. The length of the voyage to England, and more especially the rigours of an English winter, would have a most prejudicial effect on invalids suffering from severe forms of tropical disease. Madeira, which is nearer and milder, belongs to a foreign power, the people speak a foreign language, and difficulties concerning discipline and administration would be certain to arise if a hospital were to be established there. Ascension is merely a bare, barren, volcanic heap of brown lava and scorise, with a single green spot on it, the summit of Green Mountain. Its powers will be already sorely overtaxed to provide accommodation and comfort for the naval invalids for whose benefit the establishment of Ascension is designed. The Cape of Good Hope is distant; the latter part of the voyage there is often very stormy, and the heat of Cape Town, at this time of the year, is considerable. St. Helena is free from all these objections. It is less than sixteen hundred miles from Cape Coast Castle, and it lies in the track of the south-west trade-winds, which, pure as travelling a thousand miles of sea can make it, steadily pours its refreshing currents over every hill, and down every valley, in this picturesque little island. The temperature is scarcely ever over eighty degrees in the shade; even in the valley, in which its one town and capital, James Town, is built, and on the higher plains it usually ranges from sixty to seventy degrees. The climate is genial, equable and healthy; and there is room on the cool plains of Longwood for many hundreds of wooden huts and tents. When Napoleon was a captive in St. Helena, no fewer than four regiments were quartered in the island. Most of the cattle are imported from the Cape of Good Hope, which is about two thousand miles distant; but the grazing land is extensive enough to feed a large stock of animals, and allow them to recover from the effects of a sea-voyage, before being slaughtered. Vegetables, water-cresses, and fish can be obtained in abundance. The population, about seven thousand in all, consists of English, half-castes, and negroes. Labour

is plentiful and cheap; the island is about twenty days by mail steamer from England, and it has been used for many years as a place to which our African cruisers were sent once a year to recruit the health of their crews.

ARMY MEDICAL GRIEVANCES.

WE understand that much dissatisfaction continues to exist at Aldershot concerning the way in which the medical duties are now arranged there. Senior surgeons-major are placed in charge of large bodies of men without any assistance whatever; and when occasion requires them to accompany their regiments on parade, they are compelled to leave important professional work, or slur it over in a hasty and unsatisfactory manner. In fact, between their hospital visits, the treatment of women and children, vaccination, health and sanitary inspections, and medical boards on the one hand, combined with the more occasional necessities of field-days and rifle practice on the other, the regimental surgeon at any of our large stations is a now busy and sometimes an overworked man. But supposing that, after much persuasion and difficulty, aid is at last afforded him, it is too often unsatisfactory in its nature. We have heard of a young surgeon who had never mounted a horse being placed in charge of a cavalry regiment; of one man being detailed for daily duty at two separate hospitals; of changes so frequent that the sick have been treated by two or three different doctors even within one week. Unsatisfactory as this must be to the seniors, it must be doubly so to the unfortunate junior surgeon, who is thus buffeted about from place to place, without a settled home or occupation, and utterly unable to take any interest in cases which so very temporarily come under his care. It may be, however, that his zeal rises superior to all these discouragements, and that he is sincerely anxious to take advantage of the great opportunities which army practice affords for the study of disease. Let us see what his prospects really are. We have already pointed out that, if he wish an extra day's leave for professional study, it must be at his own risk or expense. We also learn that, if he desire to render his observations more exact by the use of modern instruments, his application will probably be refused; and that thermometers even are furnished very grudgingly, if at all, to those inconvenient men whose scientific enthusiasm thus outruns their discretion. But at Aldershot there is a still more discouraging arrangement. It is well known that a special officer is there entrusted with the duties of pathologist; and, as he is an able man and fond of his profession, there can be no doubt that such an appointment is for the good of the service. In addition to this, however, we understand that the same gentleman also assumes the office of "camp operator", and that when any accident occurs he is at once sent for to assume charge of the case. It is of course requisite that, before proceeding to use the knife on such occasions, the young surgeon should be fortified in his decision by the judgment of his seniors; but we are decidedly of opinion that the consultation should invariably be with the principal medical officer of the district. Surgeons and deputy surgeons-general ought to be encouraged to leave their office-desks from time to time, and show their sympathy with purely professional work by giving their assistance in difficult or doubtful cases; and what extra dignity will not their position acquire when they are thus looked up to and trusted as consultants? But when due sanction has been given, the case should invariably be left in the hands of the officer actually in charge; for we cannot conceive anything more calculated to shake his own confidence, or that of others in himself, than the knowledge that, if any operation be required, he will not be called upon to do it. One word in conclusion on the operation of the new regulation for hospital stoppages at Aldershot. Venereal admissions have fallen greatly in number, but the druggists' shops are crowded with soldiers applying for treatment, whilst the cases taken into hospital are too frequently far advanced. The medical inspections of the present day are no longer directed to the detection of enthetic disease, so that it is evident we can no longer place any faith either in statistics regarding the amount of syphilis in the army, or in reports on the working of the Contagious Diseases Acts in our military stations.

THE METROPOLITAN FREE HOSPITAL.

TWO sets of statements have recently appeared in the *Pall Mall Gazette*, concerning the dismissal of Dr. John Chapman, the well-known medical writer on neuralgia and on the efficacy of ice-bags in the treatment of disease, from the staff of the Metropolitan Free Hospital, on which he was not long since elected. The one, signed by T. J. Phillips Jodrell, sets forth, in clear and forcible language, a gross case of oppression; the other, signed by Mr. Croxton, the secretary, categorically denies those statements, without, however, giving any explanations. Possibly the publication of the minutes and resolutions of the meetings, at which it was resolved to adopt the extreme steps mentioned, might throw some light on the facts in dispute.

COMPARATIVE MORTALITY OF INDIA AND ENGLAND.

WE have received some documents from the Positive Assurance Company, relating to the practice recently introduced by them of assuring European lives in India, "at the same rates as are charged by them for English risks." This practical adhesion to the declaration that the chances of duration of life are as good in India as in England, has caused a good deal of emotion in the documents forwarded to us. Dr. Mouat, on behalf of the company, defends this surprising but agreeable thesis. He makes, however, some rather dubious statements; among them, that the predominance of disease of the abdominal organs in India counterbalances the excess of chest-diseases, which are more fatal and less under control, in England; that severe fevers, inflammatory affections of the great organs (liver and alimentary canal excluded) and hereditary, constitutional and similar affections, are more tractable and less injurious in India; and that the endemic diseases, "fevers, liver and spleen affections, dysentery and some forms of diarrhoea," are not due to elevation of temperature alone. Their exciting causes are tolerably well-known, and may be easily avoided. These statements and many others are directly traversed by Dr. Ewart (*Indian Medical Gazette*, October 1); and it really does not seem probable that the most ingenious optimist can demonstrate that residence in India has at present no excess of danger to life for Europeans over residence in Europe. A few years ago such a statement would assuredly have been treated with deserved ridicule; and we cannot readily believe that an assurance company is now wise in accepting it as a basis of calculation of its financial responsibilities. The *Indian Economist* states that, taking the period of life between twenty and fifty years of age as the ordinary term of residence in India, the following is found to be the number of deaths in each year at the ages stated, as compared with the number at home out of 10,000 living at the beginning of the year:—

Age.	English Assured Lives.	Indian Military Officers.	Indian Civilians.
20	63	235	169
30	77	277	167
40	103	281	206
50	159	282	212

CARRIERS OF ENTERIC FEVER.

DR. ROBINSON, the Medical Officer of Health for East Kent, read at the late East Kent District Meeting a very interesting paper on this subject, which we shall shortly publish at length. After alluding to the researches of Drs. Sanderson and Chauveau on the indiffusibility and particulate character of contagium in general, he proceeded to describe three recognised vehicles of enteric fever poison, viz., air, water, and milk. He quoted from Dr. Murchison's work, and cited his own experience in Leeds, in proof of the poison being often conveyed through the air, and that independently of any possible water agency. He then referred to cases clearly traced to the influence of water as an intermediate vehicle, and lastly to those epidemics connected with milk as a carrier of the virus, quoting the Islington and Marylebone outbreaks as instances where water was believed to be the intermediate carrier, and the Penrith and Leeds explosions as epidemics where air was considered to be the medium of conveyance. He concluded with the suggestion that, if contagion could be conveyed as air-borne particles, and could

accompany the volatile emanations from sewers, etc., there need be no difficulty in conceiving that milk would form an attractive pabulum for the floating poison, especially as milk was an article most susceptible of atmospheric perturbation like electricity, and influenced also by the characteristic taints of surrounding substances. He then added that, if communication by air was admitted, water, as an intermediate vehicle, need not always be considered such an essential element in the connecting chain of propagation as some appear to imagine; and the question may fairly be raised, which of the two media acts most frequently the part of a carrier between enteric fever evacuations and milk—air or water?

HEALTH OF THE EMPEROR OF GERMANY.

A TELEGRAM to a daily contemporary says that the latest news concerning the health of the Emperor of Germany has been received with much satisfaction. There is a decided general improvement; while the sleeplessness and the want of appetite are gradually but surely yielding to the treatment pursued. The Emperor's medical advisers strongly urge upon their illustrious patient the necessity of spending at least part of the winter in a southern climate, suggesting Florence as a locality to be preferred to any other; but in Court circles it is believed that any persuasion will be useless, and, consequently, that the journey will not be undertaken.

NOXIOUS VAPOURS.

A LARGE and influential deputation representing the counties of Northumberland, Durham, Lancashire, and Cheshire, has waited on the Right Hon. James Stansfeld, M.P., to urge upon him the necessity of an amendment in the Alkali Act of 1863 and 1868. Sir Hedworth Williamson, M.P., in introducing the deputation, said they came to ask him, as President of the Poor-law Board, to recommend the Government to extend to other works besides alkali works the Alkali Act of 1863 and 1868. As Mr. Stansfeld was aware, legislation did take place on the subject in 1863 and 1868, but practice had proved it to be almost a dead letter. Whether it was the fault of the Legislature or the fault of those who put it in action he did not know, but the fact was, that the existing legislation had no effect in suppressing these vapours. No one present had any interest in or was desirous of limiting trade in any sort of way. It was perfectly possible for the trade to be carried on without becoming a nuisance to those who lived in the vicinity of such trade. Mr. Ralph Carr Ellison, Sir W. C. James, Lieutenant-Colonel Potter (Mayor of Newcastle-on-Tyne), and other speakers followed at some length, all pointing out the injury done to health and property by gases emitted from works other than those that came under the jurisdiction of the Alkali Act, 1863 and 1868. Mr. Stansfeld, in reply, said that he thought it quite impossible and undesirable that the expansion of trade should be absolutely prohibited as suggested, because in a certain neighbourhood there happened to be a certain amount of damage done to property. Whatever remedy could be found must be found in other directions. The deputation, as a whole, came to him, as he understood first of all, to say that the existing local Acts were imperfectly operative, for two reasons, at this moment. First of all, because they extended only to certain works which emit certain gases, and secondly, they allow too great a percentage of gas. He was not equal to saying at this moment what legislation would be possible during the next session, because that was a question which the Government had to decide, and not he. He thought they had made out a case which called for an alteration in the law very much in the direction they advocated. He thought it was important that those engaged in trade should understand what the deputation wished, and the reasonable limits it professed to make. He understood the deputation to say that the only improvements sought would be such as could be shown not to seriously damage or injure trade. He thought they must assent to the limit, because it was not supposed that Parliament would consent to any legislation which would permanently injure or damage trade. They were of opinion, and he thought reasonably of that opinion, that a great deal could be done to remedy or ameliorate the present state of things, and that he thought was the question which

he had to consider and the problem which they must endeavour to solve. It was clear they ought to seek some amendment of the law, and he would at least prepare a Bill with that object in view during the coming year.

THE INCOMES OF METROPOLITAN HOSPITALS.

A DAILY contemporary, in reviewing the incomes of London Hospitals, divides them into three classes: general hospitals, where every kind of disease is treated; those devoted to special diseases; and the dispensaries. To the first belong those old and grand foundations due to mediæval piety, such as that great Maison Dieu in Smithfield. Among the second are some established to bring special religious training to bear upon the sick; some for special districts; some even started by individual physicians to carry out their own theories. The numerous dispensaries are chiefly local or parochial. The most wealthy hospitals are the oldest. Bartholomew's, Guy's, and St. Thomas's head the list, with an annual income each of £40,000. Then comes the London Hospital, Whitechapel Road, with its income of £26,000 and vested funds of £200,000. St. George's and St. Mary's have each £15,000 a year. King's College, University College, and the Royal Free are in the receipt of £12,000 a year; the Charing Cross, of £10,000; and the Westminster, of £7,000. Out of sixteen general hospitals, the returns of fourteen show, in the aggregate, an annual income of £220,000. The incomes of the "special" hospitals depend mostly on voluntary contributions. It is thus curious to observe that the diseases which attract the most sympathy are those which cause the most suffering. Foremost among all stand the hospitals for consumption and diseases of the chest; six of these giving a return, as a whole, of £40,947 as the receipts of the year 1870. The institutions for diseases of children show an income of £21,000. Five lying-in hospitals, out of a list of nine, have together £7,500; and the Fever Hospital is able to spend £12,500 a year. Cancer, perhaps the most dreadful malady that afflicts us, receives alone £7,600 a year; and, after the hospitals for eyes, ears, legs, feet, and every part of the body, come the melancholy homes of the incurables, three of which together receive £34,000 a year. The united incomes of thirty-eight special hospitals are £137,000, making, with the general hospitals, a grand total of £357,000 a year; without counting those institutions whose incomes are not returned, those, like the *crèches*, which partake of the hospital character, or the dispensaries where the poor can get medicine and advice for nothing. At least one-third of this enormous sum is raised yearly by voluntary contributions. If, it is observed, the giving of money is a proof of charity, then the Londoners are a charitable people.

PAYMENTS IN HOSPITALS.

APROPPOS of our notice of "very small payments" at the East London Hospital, Dr. Davey forwards us a copy of a letter which he addressed to the *Bristol Daily Post*, April 5th, 1870. It is very much to the point of the matter under discussion, and will therefore bear reproduction here at this date. He wrote:—

"Your leader of March 31st should command the best attention of all those interested in the well-doing of the Bristol Royal Infirmary. As you well observe, 'the fact of so large an excess of outlay over receipt is a very awkward one, and one, too, which is calculated to cause anxiety in the minds of all real friends of the institution; and to lead them to inquire in what way it is best to proceed to relieve the Infirmary of its present difficulties, and guard against a recurrence of them.' Now, sir, it appears to me that there is a way, and a simple one too, whereby the Infirmary may be relieved of its money difficulties, and what is more, be guarded 'as far as possible against a recurrence of them.'

"You are aware that the subject of 'Medical Reform' (progress) is fast gaining ground, and that the profession is about to realise many important changes which will affect, to a large extent, not only itself but the public. Among such changes is included one which has an especial reference to our hospitals, infirmaries, and dispensaries—their management, maintenance, etc.

"I would preface the suggestion to be unfolded in this letter by telling you that in this neighbourhood we have two medical charities, viz.,

the Hambrook Village Hospital and the Stapleton General Dispensary, and that both of these are to a considerable extent self-supporting. Each patient admitted into the first named contributes, as the rule, from one to seven shillings weekly, to the funds of the institution, so long as he or she is under treatment. The Village Hospital has just now completed the third year of its existence, and the admissions to the end of last year have been 129, and the average payments per week have exceeded three shillings each patient. In the management of the Stapleton General Dispensary the same principle (a provident principle) is in operation. On receiving a dispensary ticket each patient pays a shilling or a sixpence; for the former sum he has what is called 'a house-ticket,' and for the latter an 'out-patient's ticket.' Moreover, the tickets of either kind are frequently renewed by patients on a further payment of a shilling or sixpence, as the case may be.

"Permit me now to demonstrate what the result would be if this same 'provident principle' were adopted at the Bristol Royal Infirmary. The report of the Infirmary for 1868 is before me, and from it I gather that the number of in-patients during that year was 2,615, and that the average time in the house of each of these was four weeks, about. It follows, then, if the same kind of management as that which obtains at our village hospital had been in operation at the Bristol Royal Infirmary in 1868, the sum received from 'in-patients' would have exceeded £1,500. Further, in regard to the 'out-patients,' I learn from the same report that these amounted (in 1868) to 23,121. Had each 'out-patient' then contributed but a single shilling to the income of the Infirmary, it is seen that a second sum of £1,156 would have been realised. You will, perhaps, permit me to add that in the interests of the 'medical reform' now pending, I took the opportunity afforded me at a public meeting of my profession, held in 1867, at the Athenæum, Bristol, to explain and advocate the very desirable distinction to be drawn between the 'Poor-law' or 'Free Hospital and Dispensary' and the 'Provident Hospital and Dispensary.' The completion of Mr. Hardy's scheme of 'Poor-law medical relief' will, ere long, cover all the difficulties in the way of the former, and then it will have become imperative on Bristol and the other large towns to inaugurate and carry to a successful issue the conversion of the present hospitals, infirmaries, and dispensaries into establishments whereat the provident principle in its entirety is alone accepted or recognised.

"The wrong done to the donors to the funds of many of our medical charities your article of Thursday last well and eloquently insists on. Doubtless there are many persons applicants for medical relief at the Infirmary who can as well afford to pay a medical man as many a subscriber; but the evil results of this wrong end not here. The system it is which adds to the number of paupers. The creation of the 'provident' hospital or infirmary would prove a real aid to thousands in the lower phases of middle life, with their self-respect unimpaired by the acceptance of gratuitous medical relief. This, in its operation at the Bristol Royal Infirmary, as elsewhere, saps the moral nature of our being, and strikes at the very root of that really sound 'charity universal' which it should ever be our duty to discover and encourage."

THE ASHANTEE WAR.

SIR GARNET WOLSELEY, in his official report on the recent engagement with the Ashantes, speaks highly of the medical arrangements. He says: "The medical arrangements, personally superintended by Deputy Surgeon-General Home, V.C., C.B., and the control arrangements, were all that I could desire." The following is from a despatch of Captain Fremantle, C.B., R.N. "Dr. Hamilton Moore, Staff-Surgeon, took medical charge of the naval forces landed, carrying out the requisite arrangements with zeal and ability; and, owing to Surgeon Archibald Adams, of Her Majesty's ship *Simoom*, being well up with the skirmishers, he was enabled to lend his professional skill to Colonel M'Neil at the moment it was most urgently needed."

THE PUBLIC HEALTH.

DR. FARR reports that, under the influence of the recent cold weather, the deaths registered in London during the past three weeks have exceeded by 30 per cent. those recorded in the three preceding weeks of moderate temperature. Last week, 2,377 births and 1,636 deaths were registered; the rate per 1,000 per annum having declined from 28 to 26. The figures given for the other large towns were as follows: Portsmouth, 15; Nottingham, 16; Hull, 20; Sunderland, 22; Norwich, 22; Bristol, 23; Birmingham, 24; Sheffield, 24; Liverpool, 25; Wolverhampton, 25; Bradford, 25; Oldham, 26; Manchester, 28; Leeds, 28; Salford, 30; Newcastle, 36; and Leicester, 36. Measles

was again fatally prevalent in the metropolis; and the deaths from scarlet fever were excessive in Newcastle-upon-Tyne, Leeds, and Wolverhampton.

TYPHOID FEVER AND MILK.

THE following document has been signed for presentation to Dr. Murchison:—"To Charles Murchison, M.D., F.R.S., LL.D. We, the undersigned, late customers of the Dairy Reform Company, and others interested in public health and pure milk-supply, desire publicly to express to you our sense of the skill and perseverance with which you traced and established the cause of the late alarming and fatal epidemic of typhoid fever. We owe to you the vigorous proceedings which forced an inquiry and arrested the epidemic. We wish to express our sympathy with you for the serious illness of several members of your family, and our indignation at the manner in which you have been publicly attacked by the manager and secretary of the Dairy Reform Company." It is signed by the Hon. Colonel W. Stuart Knox, M.P.; John Wood, F.R.S.; Lord Alfred Paget; Sir Thomas Watson, Bart.; Sir William Jenner, Bart.; A. P. Stewart, M.D.; J. Burdon Sanderson, M.D.; Elizabeth Garrett Anderson, M.D.; George Lawson; Lieutenant-General C. Stuart; Campbell De Morgan, F.R.S.; Ernest Hart; E. Liveing, M.D.; C. F. Maunder; W. D. Christie, C.B.; W. R. Gowers, M.D.; Robert Clutterbuck; W. O. Priestley, M.D.; W. Spencer Watson; Henry W. Fuller, M.D.; Charles Hallé; Sir Charles Nicholson, Bart.; W. H. Walshe, M.D.; W. S. Playfair, M.D.; Ferdinand Schiller; C. D. F. Phillips, M.D.; Harry Emanuel; Lieutenant-General T. A. Duke; Lieutenant-General J. E. Landers; W. Fairlie Clarke; W. Harvey; Samuel Sandars; G. Fielding Blandford, M.D.; C. A. Prescott; Julian Marshall; T. H. Hills; J. Andrew, M.D.; A. Cleared, M.D.; M. Eleanor Laurie; Rev. George Sandby; N. S. Kerr, M.D.; William Sedgwick. Those desirous of adding their signatures are to communicate with Mr. W. D. Christie, C.B., 32, Dorset Square, W.

NON-RESTRAINT IN LUNACY.

IN the opinion of the *Edinburgh Medical Journal*, although England may justly claim the merit of having done much to introduce a more humane treatment of the insane, there is no chance of our insular notion about totally dispensing with restraint being adopted either on the continent of Europe or in America, while, of late years, in Great Britain there has been a steady and powerful reaction against the extreme views of the non-restraint men. Superintendents, like Dr. Lauder Lindsay of the Perth, Dr. Yellowlees of the Glamorgan, and Dr. Murray Lindsay of the Derby Asylums, have gained the distinction of boldly stating views which were getting every year more general and more decided, that the utter abrogation of mechanical restraint in all cases of mania was a notion only fit for *doctrinaires* who do not understand the real exigencies of asylum superintendence. In a notice in the *Allgemeine Zeitschrift für Psychiatrie* (1871, p. 604) of Dr. Kellogg's Report on English Asylums, the writer remarks:—"As for no restraint, he holds the strict carrying out of it as a sentimental humbug (a true word) (*für einen Sentimentalitätshumbug*. Ein wahres Wort). From private accounts and the most important journals of England, there is preparing a powerful opposition against the extravagances of no restraint." In like manner, the superintendent of an asylum of eight hundred lunatics in France, gives his views on the subject in the *Annales Médico-Psychologiques* (1871, pp. 375-376): "Whatever the English doctors may say, these means (*camisole, manchettes*) are better than confinement in a cell and the manual force of keepers. Almost constant imprisonment in dark and padded cells cannot but become hurtful to the patients in all points of view. As for the oversight and repression of keepers, this measure often gives rise to frequent struggles and scenes of disorder and tumult in the wards, for the other patients become excited in their turn. It may be retorted in defence of the system generally employed in France, that the no restraint of the English (surveillance and repression by the keepers, and constant isolation

in cells) is only physical restraint in disguise." There is one evil which it is important to look upon in considering the question; and that is, the frequent use of narcotic drugs, such as chloral, opium, hyoscyamus, cannabis, conium, bromide of potassium, which, we are convinced, are employed in many cases to act as most hurtful substitutes for the mechanical restraint the superintendents have not the courage to use.

CLINICAL THERMOMETRY.

DR. LAWRIE, who has recently conducted a rather extensive series of clinical thermometric observations in India, which are published in the *Indian Medical Gazette*, has arrived at the conclusion that, if accuracy of observation is aimed at in clinical thermometry, the unloaded rectum is the only place in which this can be attained satisfactorily and with certainty. To obtain an accurate observation in the axilla, necessitates keeping the thermometer in position, with numerous precautions, for fully fifteen minutes; and this is no less irksome to the patient than to the physician. In the rectum, five minutes are amply sufficient. Taking the temperature under the tongue, means, as a rule, taking the temperature of the cavity of the mouth; as patients, especially if very sick, cannot be depended on to keep the thermometer in the proper place. Moreover, unless people like to submit to sucking a thermometer, which has shortly before been in another person's mouth or armpit, a separate one must be kept for each patient. No objection can be made to placing an oiled thermometer for a few minutes in the rectum, except that it is indecent; but with regard to females, to whom alone this objection can apply, the indecency vanishes if the operation be entrusted to the nurse—the medical man taking the reading. Dr. Lawrie has never yet, in hospital or private practice, found any patient to object to it.

A FEVER-STRICKEN CITY.

On the 28th ultimo, the reports from the fever-stricken city of Memphis, Tennessee, were more encouraging than previously; but, judging from a despatch of the 27th, the city is in a fearful state of desolation. The famine in Ireland, the plague of Marseilles, the burning of Atlanta, and the history of Richmond after its fall, are literally nothing to the scenes that have occurred in this stricken city for the past five weeks. The situation to-day is more favourable than for weeks past, and yet, out of a population of 55,000, 12,000 of which is a large estimate for those remaining, 1,500 have died, 1,200 are now sick, over 2,000 families are drawing rations from the Citizens' Relief Committee Commissary, and 1,200 orphans are in the different asylums. Had not our brethren abroad assisted us so liberally, God only knows what might have been the end. The average of the families who are now objects of charity is three souls each, and the numbers daily supplied with food and fuel are nearly equivalent to one-ninth of our entire population. At the present time, over half the entire families have been swept away, and it is a common occurrence to hear of but one member of a large family left to let the world know what our history of 1873 may fail to chronicle. Hundreds of business houses and residences are closed, and from Adams and Central to Auction Streets, in the northern portion of the city.

IRELAND.

At a late meeting of the Corporation of Limerick, Dr. Charles A. Cameron was appointed analyst for that town, at a salary of £25 per annum.

DR. M. S. KENNEDY, Medical Officer of Golden Dispensary District, County Tipperary, has had his salary increased from £100 to £120 per annum. Dr. Stephenson, of Tramore District, County Waterford, has had an increase of £20 yearly, and the salary of the medical officer of the Rockcorry District, Cootehill Union, has been raised from £90 to £100 a year.

DR. HENRY KENNEDY has been appointed Vice-President of the King and Queen's College of Physicians in Ireland.

QUEEN'S UNIVERSITY IN IRELAND.

At a meeting of the Senate of this University, held in Dublin Castle on the 14th instant, the following examiners were appointed for 1874-75. In *Medicine*, Henry Kennedy, M.B.; in *Surgery*, Professor Browne, M.D.; in *Midwifery*, J. Rutherford Kirkpatrick, M.D.; in *Materia Medica*, Walter G. Smith, M.D.; in *Medical Jurisprudence*, J. Emerson Reynolds.

CASE OF INTUSSUSCEPTION.

In an example of this affection, which lately was under the care of Dr. M'Dowel, of the Whitworth Hospital, Dublin, it was found after death that the ascending colon, with part of the great omentum, was included in the transverse colon. The cæcum lay in front and to the inner side of the right kidney; it was in contact with the gall-bladder, and stained with bile. This abnormal position of the cæcum is remarkable, as usually it is one of the most fixed portions of the intestine.

FLOATING CHOLERA HOSPITAL FOR DUBLIN.

MESSRS. BEWLEY and Webb having finished the floating cholera-ship which was ordered by the guardians of the South Dublin Union, it was intended that it should have been launched on Saturday, the 8th instant; but, owing to a tug-boat having sunk the previous night in front of the slip, that part of the ceremony had to be adjourned. The vessel, which has been named *The Prudence*, possesses a large amount of space for the purpose for which it was constructed. The surgery, surgeon's room, and the watchman's quarters are separate from the patients' ward. In the centre of the vessel is the ward, divided into three portions, either of which can be isolated from the rest. Accommodation can be provided for the reception of twenty patients; but, in case of emergency, upwards of forty could be taken care of. The ventilation is all that can be wished, a most desirable consideration in a receptacle intended for cholera or fever cases. The four medical officers are Drs. Cameron, Mapother, Byrne, and Minchin.

LECTURES ON SANITARY SCIENCE.

The twelfth and last lecture was given by Dr. Cameron in the Dublin Exhibition on Friday, the 14th instant, before a large and fashionable assemblage. The subject was Unsound and Adulterated Food, and it was treated in a most instructive manner by the lecturer. The various diseases occurring in animals whose flesh was used for food were adverted to, and how these different affections lessened the quality of the food was pointed out. The only way to ensure the destruction of parasites was to thoroughly cook the food. Every year, about half a million pounds of meat were condemned in Dublin as being unfit for food. Dr. Cameron next referred to various articles which were commonly adulterated, and after a few appropriate remarks concluded.

IMPURE WATER.

The majority of towns in Ireland are very badly supplied with water, and the supply invariably is not of the best description. Waterford, however, has had the unenviable opportunity of demonstrating a water which we believe to be unequalled in the annals of sanitary science. A specimen taken from a public pump in that town was lately analysed by Dr. Cameron, who found in every imperial gallon solid matters to the amount of 70.100 grains, chlorine 13 grains, organic nitrogen 0.4 grains, and ammonia 4.0 grains. Anything approaching to the enormous quantity of ammonia present in this sample has never been experienced by Dr. Cameron. In another specimen which was obtained from a pump in the militia barracks at Ennis, it was found to contain 152 grains of solids and 1.080 grains of ammonia in each gallon. A similar quantity of the Vartry water exhibited 4.25 grains of solid matters, and the faintest trace of ammonia, showing that Dublin is provided with an extremely pure water-supply.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC
INSTRUMENTS, AND RECENT IMPROVE-
MENTS IN THEIR APPLICATION:WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE
MEDICAL PRACTITIONER.

VI.

Electricity as a Means of Diagnosis.

THE different forms of electricity may be utilised for diagnosis—

1. In paralytic affections ;
2. For detecting malingerers ;
3. For the discovery of projectiles which have been lodged in the body ; and

4. For deciding between real and apparent death.

1. *Paralysis*.—The most important things to be looked for, in testing the excitability of the motor nerves and muscles in the various forms of paralysis are, whether the muscles respond by contraction to the electric influence or not ; what force is necessary to make them contract ; and whether they respond only to the continuous, or also to the induced current. It may be broadly stated that, *where faradic and galvanic excitability are absolutely lost, the case is probably one of peripheral paralysis due to injury of a motor nerve or plexus of nerves ; and that where the faradic as well as galvanic excitability is preserved, the case is most likely one of disease of the nervous centres*. Certain exceptions, however, must be made to this rule. In old cases of cerebral paralysis, both the faradic and galvanic excitability may be diminished, and that it may be completely lost, where the antero-lateral columns of the cord are affected. We have, however, never seen a case of cerebral paralysis in which the muscular excitability was entirely gone ; and where the posterior columns of the cord are affected, as in progressive locomotor ataxy or tabes dorsalis, there may be great helplessness as far as locomotion is concerned, and yet the excitability of the muscles may be completely preserved, and in exceptional cases even be increased.

In certain forms of peripheral paralysis, it is found that galvanomuscular excitability may exist or even be exalted, while faradomuscular excitability may be entirely lost. In these alterations of excitability, nerves and muscles obey entirely different laws. There is no increased galvanic excitability of the nerves, but, where an increase of galvanic response is found, it is only the muscles which answer in this manner. After an injury to a nerve, producing paralysis, whether the injury may have been caused by rheumatic or syphilitic effusions, or by contusion and division of the nerve, the faradic and galvanic excitability of the nerve begins at once to diminish ; and towards the end of the second week has completely disappeared. The case of the muscles, however, is entirely different. During the first week there is no change, but, at the commencement of the second week, faradic excitability begins to diminish and at last disappears, while galvanic excitability commences to rise, and becomes within a few days exalted considerably beyond the normal standard ; so that a much weaker current than is necessary for causing contractions in healthy muscles will produce decided effects on the paralysed ones. At the same time, the excitability is also altered in quality. When healthy muscles are acted upon by the continuous current, the cathode has more effect than the anode, and the closing contraction is stronger than the opening ; while in the paralysed muscles the effect of the anode increases, so that it soon equals that of the cathode, and sometimes even preponderates over it ; while, at the same time, the effect on closing the circuit becomes less than on opening. About three months after the receipt of the injury, these phenomena begin to vanish, and become as it were inverted, so that galvanic excitability sinks below the normal standard, and faradic excitability will to some extent return. These phenomena show us with certainty that the paralytic lesion has interrupted the conductivity of the nerve, and that the latter is in a process of degeneration. The seat of the paralytic lesion is at the same time made known to the intelligent observer, inasmuch as these phenomena occur only in peripheral, and never in central paralysis.

In cases of paralysis from disease of the antero-lateral columns of the spinal cord, the electro-muscular contractility is either diminished or gone, according to the degree of severity of the affection. This constitutes in certain cases a good test for distinguishing between disease of the antero-lateral and posterior columns of the cord. In progressive locomotor ataxy which affects chiefly the posterior columns, the mus-

cular response is generally quite normal, although the bulk of the muscles may have notably decreased, and they may refuse to obey the order of volition.

In hysterical paralysis the response is normal when the case is recent, and impaired when it is of long standing. In lead-palsy, there is always great diminution, and sometimes total loss, of faradic excitability in the affected muscles. Where this exists chiefly in the extensor muscles of the forearm, we may be almost certain that there is lead in the system. Meyer has recorded a very instructive case, in which he recognised, by faradisation, that the patient suffered from lead-poisoning, which had not before been suspected. On search being made for any sources of lead, after the peculiar faradic response of the muscles had drawn attention to the circumstance, it was discovered that the patient had for many years past used snuff packed in lead-foil, which was, on being analysed, shown to contain a considerable quantity of lead. The source of the poisoning was then cut off, and the patient subjected to eliminative and electrical treatment, under which he recovered.

2. *Malingering* for the purpose of extortion, or for procuring the means of subsistence without work, or merely for exciting compassion and interest, is much more frequent than is generally supposed. Where the physician's suspicions are aroused, faradisation of the skin with the wire brush and a powerful current, may be an excellent means of settling such questions. This proceeding is extremely painful, and yet never does any harm, except in cases of cerebral disease, where it should be avoided. We need, therefore, not be reluctant to employ it in suspicious cases, as it is far more humane than the actual cautery which has often been called into requisition, and yet sufficiently disagreeable to make a repetition of the procedure dreaded by such persons. The Welsh fasting-girl might still be alive, and in the enjoyment of a hearty appetite, if her case had been looked upon in a proper light, and if faradisation of the skin had been a few times employed as a diagnostic and curative measure. Faradisation may also be usefully employed where certain forms of paralysis are assumed by the malingerers. We have by this means succeeded in unmasking a person who intended to extort money from a working-men's benefit society, on pretence of having suffered paralysis from an accident. As in peripheral paralysis the muscles always lose their faradic excitability, the presence of the faradic response in the muscles of the arm enabled us in that case to state decisively that the man was shamming.

3. *The Electric Probe* is a means which will not always be required for the diagnosis of gunshot injuries, but will, in certain obscure cases, give far more decided answers to the inquiring surgeon than any other means at his disposal. The principle of the probe rests on the fact that lead conducts several million times better than muscular tissue or bone ; and the galvanic current will, therefore, without difficulty, indicate the presence of a piece of lead, which may be imbedded in the soft parts or bones, by a deflection of the magnetic needle on closing the circuit ; while the needle will remain motionless if bone or muscle be placed in the circuit instead of lead. Professor Favre, of Marseilles, first suggested the use of the electric probe, and the German army surgeons employed it on several occasions during the Franco-Prussian war, with excellent results. Professor Liebreich, of Berlin, has constructed the simplest arrangement of this kind, in which the galvanic pair consists of a plate of copper and zinc, and is charged by putting a piece of blotting-paper, moistened with salt water, on it. Mr. de Wilde, a civil engineer, was the first who proposed using the electric bell for the same purpose ; and Kovács and Neudörfer have afterwards constructed similar arrangements. The statement which is often made, that the bullet in Garibaldi's ankle was discovered by means of the electric probe, is erroneous, as the presence of that famous piece of lead was detected by the use of Nélaton's porcelain probe, and not by electricity.

4. *Electro-Bioscopy* is a term proposed for a proceeding showing that death has occurred by the absence of the usual farado-muscular contractions. None of the usual signs of death, viz., cessation of the heart's action, decrease of temperature, muscular rigidity, dilated pupil, non-transparency of the fingers by candle-light, and decomposition, are as ready a test for death as faradisation, which indicates it, with absolute certainty, within two or three hours after its occurrence. Electro-muscular contractility continues in lethargy, apoplexy, syncope, and all kinds of asphyxia or poisoning, as long as life is extant ; and when it is gone, we may say with certainty that death has taken place. It is not at once extinguished after death, but perceptibly and gradually diminishes from that instant, and disappears entirely in from one to three hours after life is extinct. Electro-bioscopy may, therefore, not only prevent the misfortune of burying a person who is still alive, but it may also encourage us to persevere with our efforts for restoring life in people who are apparently dead from lethargy, apoplexy, syncope, drowning, freezing, the inhalation of chloroform, charcoal fumes, laughing gas,

etc., while it finally constitutes of itself one of the most effective means of restoration from apparent death, more especially if faradism be applied to the phrenic nerve, for the purpose of producing artificial respiration. Where there are several victims, as from shipwreck, railway accidents, etc., it would have the additional advantage of enabling the attendants to distinguish at once the dead from the living. The doctors, would, therefore, be in a position not to lose precious time with the dead, but might concentrate their attention on those who could still be benefited by it. After great battles, the faradic test would probably prevent many a premature burial. In newly born infants, who do not give signs of life, electro-bioscopy would be of the greatest value. It may also allow the authorities to accelerate the burial of the dead, or any operations to be performed with deceased persons, such as embalming, *post mortem* examination, etc., in case it should be inconvenient to wait for the ordinary delay. During epidemics, and amongst the poor, an earlier interment than is now prescribed by law would often be most advisable.

Professor Rosenthal, of Vienna, has recorded an interesting case of trance detected by faradisation in a hysterical woman whose death had already been certified by a country practitioner. It had been found that a looking-glass held to the mouth of the woman did not show any moisture, and that melted sealing-wax dropped on the skin caused no reflex movements. Rosenthal, who was accidentally present, found the skin pale and cold, the pupils contracted and insensible to light, the upper and lower extremities relaxed, the heart's impulse and the radial pulse imperceptible. Auscultation, however, showed a feeble, dull, and intermittent sound in the cardiac region. No respiratory murmurs were audible. All the muscles of the face and the extremities responded well to the faradic current. Although the patient had been apparently dead for thirty-two hours, he thereupon informed the relations that she was only in a trance, and recommended that attempts at resuscitation should be perseveringly followed. On the following day he received a telegram, saying that the woman awoke spontaneously twelve hours after his visit, and gradually recovered her speech and movements. Four months afterwards the patient called upon him, and informed him that she knew nothing of the commencement of the attack of lethargy in which she had been; that she had afterwards heard the people about her talk of her death, but had been utterly unable to give the slightest sign of life. Two years afterwards, she was still alive and tolerably well.

ANÆSTHETICS.

XXIV.—ETHER v. CHLOROFORM.

WE extract the following from a leader in the *Philadelphia Medical Times*.

As the death-roll of chloroform (shall we say murders?) grows day by day; as even English coroners and English magistrates are becoming restive under the slaughter of the people; as doctor after doctor, having claimed that his method of using chloroform was safe, is forced to own by bitter experience that he is not, after all, so much more skilful than his fellows; as these things are so, it seems to us (*Philadelphia Medical Times*) strange that any one should still come forward and practically say, "I hold the giant powers of chloroform for evil, as it were, in the hollow of my hand; its fatal spirit is bound at my bidding; no death should occur when I direct." In view of the various events in the history of chloroform, which must be in the memory of all our readers, it seems to us nonsense to assert that deaths from it can be avoided by any precautions or by any skill. The great difference between the two anæsthetics lies in the circumstance that chloroform kills suddenly, unexpectedly, and unpreventably; whilst the ether death is a slow one, and can be avoided, unless in the very rarest of instances. The unrecorded, unnumbered dead from chloroform, our experience leads us to think, are a much greater multitude than is commonly believed. So far as we know, no case of death from chloroform occurring in this city has been recorded; yet we have known of the occurrence of several within a comparatively short time.

CITY OF DUBLIN HOSPITAL.—The vacancy in this institution, occasioned by Mr. Stokes's promotion to the Richmond Hospital, will shortly be filled up. There are but few candidates looking for the appointment, as the hospital is not a first-class one; and the gentleman appointed must give the sum of £500 for the privilege of being elected, an amount which is always paid to the outgoing surgeon. There are two names mentioned as candidates, Messrs. Edward Collins and Josiah Smyly, the former of whom will in all probability be selected.

THE ASHANTEE WAR.

THE DRESS OF OUR TROOPS.

[BY A CORRESPONDENT.]

FROM what we have seen of the intended uniform for the Gold Coast campaign, we think it is admirably suited for the climate as well as for the season of the year during which our troops are expected to serve there, viz., from December to March. The only fault we noticed, which may, perhaps, be fanciful, is, that the material is not well shrunken before being made up; and, as all articles of dress will, for the sake of putting on the soldier-like aspect, require to be frequently washed, the clothes, which now seem to fit well and with ease, may not, after a few weeks' wear, suit at all. For our own part, we believe that not only was the blue serge which was worn in the expedition of 1864 suitable, but it appears to us to be a more lasting uniform than this Elcho grey now issued.

The helmet is quite sufficient for the protection of the temples and back of the head, especially if a puggree be worn. In this climate "sun-stroke" is of rare occurrence; why it should be so, we are unable to say. If the helmet were made of harder felt, it would last longer, and, after being worn for a while, it would more readily take pipe-clay, which would have the effect of reflecting the heat and rays of the sun. The Norfolk jacket, from the room it affords to the neck and upper part of the chest, is a great improvement on the tight-fitting tunic and stiff leather stock, which, we think, must have been the cause of producing much disease amongst soldiers—but more especially amongst recruits—subject to severe and constant training. We welcome this amelioration in the soldier's dress. From the protection it affords to the stomach and abdomen, it will, no doubt, have the effect of lessening the prevalence of bowel affections. In consequence of the malarious and porous nature of the soil, covered as it is with large cotton-trees, some of which are 100 feet in height, it will be advisable to wear flannel shirts or under vests, as they will protect the body against being suddenly chilled, and also be a preservative against attacks of prickly heat, boils, and malaria.

The knickerbockers worn by the West Indian troops looked handsome, and, from the great ease they afforded to the hips and knees, answered their purpose very well. We never heard that they produced that irritation of the thighs which usually results from long marches. Shoes, with good strong and wide soles, such as will not readily bend under the foot when walking over rough ground or the roots of trees, and with wide toes, will be found far more comfortable than boots; they can be put on with greater readiness. Shoes made of canvas will be found the coolest; they can be pipe-clayed, and will not harden as quickly as leather. It may be said that they will take in sand; but the only places where this objection could be urged against their use will be found to exist in certain parts only of the sea-board. In the interior of the Fantee territory, there is no sand. Dr. Parkes says the objects of clothing are to protect against cold and warmth; all other uses will be found to resolve themselves into one or other of these. In page 347 of his work on hygiene, he states:—"Looking not only to the comfort of the soldier, but to the work and force required of him, it is a great mistake to have the tunic otherwise than exceedingly loose." A war of this kind will tax all the ingenuity of the most experienced commander. In this climate, the soldier's life will be one of *ennui*; here he will have little or no occupation other than his drill, which can only be practised morning and evening; his duties will be of so uninteresting a nature, that they cannot be increased without wearying him. No doubt, there will be some civilian-like labour, such as drawing water and the erection of temporary huts, stockades, etc.; but, while he is occupied as a soldier, he will have to pay attention to his duties, and at all times be prepared to show clean accoutrements and clean arms. We desire to see our soldiers with good wind and good muscular development, but we desire to see such a result produced by a slow and steady growth, and not at the expense of permanent ill-health. Let such be the product of such measures as will have the effect of improving rather than weakening the functions of the heart, brain, and lungs.

Whatever may be the result, this war will either confirm or disprove the remarks made by an astute observer in the *Saturday Review*, 20th March, 1869, who says:—"If the English army is bad at marching, it may be owing to the want of training, or the absurd system of dressing and weighting the private soldier, or, if these causes are not sufficient, to some radical incapacity in the class from which the army is recruited."

We hear that the *physique* of both the regiments under orders for the Gold Coast is excellent. We say this more advisedly of the 23rd (Welsh) Fusiliers; from the character of the men, from the climate

in which they served previously to their arrival in this country, we should suppose that, if the word "fit" was ever applicable to the condition of any regiment, it is so in this instance.

ASSOCIATION INTELLIGENCE.

GLOUCESTERSHIRE BRANCH.

A MEETING of this Branch will be held at the County Infirmary, Gloucester, on November 25th, at 6 P.M.

The following subjects will be discussed—Water and its Impurities; Disinfectants and their Uses; The Medical Inspection of Dairies.

Dinner at the Bell Hotel, at 8.30 P.M.

Gloucester, November 1873.

R. W. BATTEN.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE second meeting of the Session will be held at the Birmingham Midland Institute on Friday, November 28th.

VINCENT JACKSON, } *Honorary Secretaries.*
ROBERT JOLLY, }

November 18th, 1873.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE second meeting of the Session will be held at the General Hospital, Maidstone, on Friday, December 5th, at 5 P.M.; GEORGE HENRY FURBER, Esq., in the Chair.

Dinner will be provided at the Mitre Hotel, at 7 P.M.

Papers have been promised by John M. Burton, Esq., on Aneurism and on Empyema; by Matthew A. Adams, Esq., on Dewar's and McKendrick's Experiments Demonstrating the Correlation of the Function of the Retina and Galvanic Electricity; by Dr. Monckton, Cases and Commentaries; by William Hoar, Esq., Cases and Commentaries.

A proposition will be made to hold an united meeting of the West Kent and East Sussex Districts, annually, at Tunbridge Wells.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary.*

Rochester, November 17th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEETINGS.

THE second meeting of the year was held at the Half-Moon Hotel, Petworth, on October 7th. The Chair was taken by H. BOXALL, Esq., of Wisborough Green, and fourteen members were present.

Owing to a variety of unforeseen circumstances, and the unavoidable absence of the Honorary Secretary, no papers were submitted to the meeting, and it was unanimously resolved that on this occasion it should partake of a social character.

By the kindness of Lord Leconfield, the members were allowed to inspect the magnificent collection of paintings and statuary at Petworth House, as also the large range of stabling and the dog-kennels. The County Gaol was also visited and inspected by some of the members.

On the proposition of Mr. HODGSON (Brighton), seconded by Dr. WITHERS MOORE (Brighton), Worthing was selected as the place of meeting for the spring of 1874, and it was unanimously resolved that Mr. W. J. Harris be requested to take the chair on that occasion.

New Members.—Seven new members were added to the Association and the South-Eastern Branch.

The Dinner was held at the Swan Hotel, where twenty-nine members and their friends assembled, under the presidency of Mr. Boxall.

CUMBERLAND AND WESTMORLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of the above Branch was held at the George Hotel, Penrith, on Wednesday, October 29th. The President, Dr. ROBERT TIFFEN, of Wigton, took the Chair, and there were present eighteen members and visitors.

New Members.—The following members of the Association were elected members of the Branch: 1. Robert Buntine, Esq., Brough, Westmorland; 2. Percy Butler Stoney, Esq., Holborn Hill; 3. Thomas Allan Wotherspoon, M.D., Brampton; 4. Thomas Garret Horder, Esq., Nenthead, Alston; 5. Reginald Dudley, Esq., Kirkoswald. The following gentlemen were elected members of the Association and Branch: A. Lindsay, M.B., Shap; W. Watson, Esq., Temple Sowerby.

Extension of Branch.—The Secretary, Dr. BARNES, brought forward a proposal to extend the limits of the Branch, so as to include members of the profession residing in the adjoining border counties, and moved that a Committee be appointed to make preliminary inquiries, and report to next meeting on the feasibility of the plan. The proposal, if carried out, would necessitate an alteration in the rules, and a change in the name of the Society. In place of its present designation, the title of "Border Counties Branch" was suggested. The motion was seconded by Dr. MACLAREN; and, after some discussion, was carried unanimously, the following gentlemen being nominated a Committee, viz.—The President, Dr. MacLaren, Dr. Campbell, and the Secretary.

Public Health Section.—Dr. PAGE proposed the formation of a Public Health Section in connection with the Branch. The motion was seconded by Dr. BARNES, and, after considerable discussion, was carried by the casting vote of the Chairman.

Papers.—The following papers were read.

1. A case of Catalepsy treated with the Bromide of Potassium. By J. S. Leland, L.R.C.C.P. & S.E., Kirkby-Stephen.
2. On some Tumours successfully removed in private practice. By D. M'Gregor, L.R.C.C.P. & S.E., Penrith.
3. On the working of the Public Health Act, especially in Rural Districts. By David Page, M.D., Kirkby-Lonsdale.
4. On a Case of Elephantiasis Arabum. By Thomas Sayer, M.D., Kirkby-Stephen.
5. Notes of a Case of Hyperpyrexia in Acute Rheumatism successfully treated with the Cold Pack. By Stewart Lockie, M.D., Carlisle.
6. On the Effects of Guarana on Headache. By the President.

Discussions followed the reading of all the papers.

Dinner.—After the termination of the business, the members and their friends to the number of eighteen dined together under the presidency of Dr. Tiffen; Mr. Greaves of Penrith occupying the vice-chair.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE annual meeting of the above Section was held on Friday, October 31st, 1873; present, FURNEAUX JORDAN, Esq., in the Chair, and forty-six members.

Report.—The following report of the Secretaries was read and adopted. The Secretaries present with much pleasure the fourth report of the Pathological and Clinical Section. The session which has just passed has in every way been most successful, for it has alike fulfilled the hopes of its promoters, the good wishes of its friends, and the sanguine expectations of its officers and members. The meetings have been well attended, some of them even crowded, and the exhibitors of specimens and living cases have been most active. A feature of the session has been the reading of short papers, either upon pathological subjects or cases of clinical interest. The Society has always been pleased to receive these notes, and they have generally called forth much discussion, and great practical utility as well as enjoyment has resulted from them. The Section now numbers 133 members. At the October meeting, Dr. Jolly was unanimously elected one of the secretaries, to fill the vacancy occasioned by Dr. Foster's resignation. Early in the session, the Secretaries were instructed to draw up a series of laws for the guidance and conduct of the monthly meetings; these were submitted to the consideration of a special meeting, which finally, after a few slight alterations, accepted and passed them. In conclusion, the Secretaries trust that the future of the Section will be as useful and bright as the present is and the past has been, and they feel sure that to accomplish this no effort will be wanting either on the part of its friends, members, or past and present officers.

The Treasurer's Report, showing a balance of £24 : 5 : 1, was read, audited, and adopted.

Officers.—On the motion of Mr. FURNEAUX JORDAN, seconded by Mr. WATKIN WILLIAMS, and supported by Mr. OLIVER PEMBERTON, Mr. Manley (West Bromwich) was elected President for the ensuing year. Dr. Russell was re-elected Treasurer, and Mr. Vincent Jackson and Dr. Jolly were re-elected Secretaries.

Communications.—1. Mr. Hugh R. Kerr exhibited a man, aged 43, upon whom Excision of the Ankle-Joint for injury had been successfully performed.

2. In the absence of Dr. Bell Fletcher, Dr. RICKARDS brought forward a case of Aortic Aneurism, probably of the transverse part of the arch. The patient, a painter, aged 28, had enjoyed uninterrupted good health until the middle of the past summer, when he had a severe fall backwards, in which he felt a twist of the body. This accident

made him an invalid for five weeks. A month subsequently, he suffered from pain in the back, and in another month's time his voice became husky. On applying at the hospital, the following symptoms were present. A circumscribed area of dulness over the left chest extended upwards to the second left costal cartilage, and downwards to the cardiac dulness. Over the dull area was pulsation, and two sounds were heard; the heart's apex beat in its normal position. The left lung was much pressed upon anteriorly; paralysis of the left recurrent laryngeal nerve was evidenced by the husky voice and by the laryngoscope; the pupils and the fundus of the eyes were unaffected, and the finger detected no difference either in the radial or the carotid pulse. Exertion caused distress. Dr. Rickards thought that one of the two sounds, which was synchronous with the ventricular diastole, was a conducted sound; he also was of opinion, from the sequence of symptoms on the fall, that the condition present could not altogether be disconnected from the accident.

3. Mr. C. J. Bracey narrated the notes of a case where the head had been tapped eight times for Hydrocephalus.

4. Dr. Mackey showed and commented upon a new form of Portable Continuous Current Battery of thirty cells (made by Mayer and Meltzer).

5. Dr. Sawyer made some remarks on the employment of Gelseminum Sempervirens, and exhibited specimens of the root and tincture. He had found the remedy to be of great value in the relief of odontalgia and neuralgic pains, and he felt sure that more extended investigation of the drug would prove it to be a valuable addition to our materia medica.

6. Dr. Carter showed a typical specimen of that class of growths more generally known as Chronic Glandular Tumours. It was removed by Dr. Jolly from the breast of a woman aged 20, unmarried, and its weight was six ounces. It was oval, distinctly lobular, and provided with a loosely adherent capsule. On section, the lobular and glandular nature of the growth was very apparent. On microscopical examination, it was found to consist of numerous saccules and tubes, crowded with epithelial elements. These tubules were supported and separated by a considerable amount of connective tissue, in which were contained the blood-vessels.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 14TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Poisoning by Homœopathic "Concentrated Solution of Camphor".—Dr. GEORGE JOHNSON related some cases of this kind.—Case I. Miss F., aged 20, having a cold and sore-throat, took in water twenty-five drops of "Epps's Concentrated Solution of Camphor". She went to bed, and in a short time was found foaming at the mouth, black in the face, and violently convulsed. Mr. Drake of Brixton was sent for in great haste. For several hours she was unconscious. She vomited blood-tinged fluid, smelling strongly of camphor, and had severe gastric pain. For several days she was partially paralysed, and six months afterwards she was still suffering from symptoms of nervous derangement. The preparation which caused these serious results is a saturated solution of camphor in alcohol, the proportion being an ounce of camphor to an ounce and a quarter of spirit. It is, therefore, stronger than the spirit of camphor of the *British Pharmacopœia*, in the proportion of 7.2 to 1.—Case II. The Rev. W. R. was advised to take for a cold three drops of the same preparation every five minutes for an hour. After taking the eighth dose, he was seized with intense headache, which confined him to bed for forty-eight hours; and he was afterwards so weak and ill, that he was unable to enter his pulpit for two months.—Case III. Another case was communicated to Dr. Johnson by Mr. Delamark Freeman. A young lady, aged 19, took for diarrhoea a teaspoonful of the same preparation, which rendered her comatose for several days, and caused a variety of nervous symptoms, which did not pass away for several days. Dr. Johnson remarked upon the notorious fact that many of the disciples of Hahnemann have passed from the irrational and ludicrous extreme of infinitesimal dilutions to the dangerous extreme of the greatest possible concentration of active and poisonous drugs. There is an obvious risk that this concentrated solution of camphor may be mistaken for the much weaker solution of the *British Pharmacopœia*—a mistake which, in spite of the printed directions on the bottle, was probably made by both the young ladies who suffered so seriously for their error.—Mr. EASTES thought that the concentrated solution of camphor was not the only homœopathic prepara-

tion in which uncertainty of the dose existed. He knew that Dr. A. S. Taylor had examined some powders of morphia prescribed by a homœopathic practitioner, and that he had found in each powder an almost poisonous dose of the drug—five-sixths of a grain—instead of an infinitesimal proportion. Who could treat disease accurately without exact knowledge of the strength of the medicine which he employed in the combat?—Mr. BRUDENELL CARTER had no experience of homœopathic medicines. He remembered, however, being, many years ago, told by a dispensing chemist in the West of England how shocked he (the chemist) had been by the statement of an assistant. The chemist had been in the habit of ordering from London, of the makers, the different varieties of globules required by his customers. The assistant, who had lately come from the service of a homœopathic chemist, said that that was a needless piece of trouble, and that any other globules would do as well; that homœopathic chemists were in the habit of ordering their globules in a Winchester quart from a maker, and themselves sorted them out into differently labelled bottles; that the globules sold to the public were all alike; and that the chemists gave the same globules whatever their customers might order. Many years ago, Dr. Robertson, of Manchester, published a small work containing prescriptions of homœopathic practitioners, which showed that they are in the habit of using powerful medicines in ordinary doses.—Dr. HERMANN WEBER had frequently seen patients who had been under homœopathic treatment. Their prescriptions showed that they had been taking large doses of mercury and other medicines, which other practitioners are in the habit of prescribing. Some of the leading homœopathic men in London declare that they do not give the minute doses recommended by Hahnemann. He knew of a leading practitioner who acknowledged to being a homœopath, and who, in a case of liver-disease, had given, at different times on the same day, calomel, nitro-hydrochloric acid, and taraxacum. Another gave iron in large doses. Homœopathic physicians also prescribe mineral waters and full purgative doses of Carlsbad salts. He was very glad that Dr. Johnson had drawn attention to the subject, because this solution of camphor is now largely used as a remedy by the public—frequently, he thought, with harmful results. In one gentleman, who took, three or four times in twenty-four hours, five to eight drops of the solution, it caused, on three different occasions, great sickness and headache, followed by pain in the neck, shoulders, and arms, which lasted more than a week, all of which symptoms Dr. Weber considered due to the depression of the central nervous system caused by the drug.—Dr. GREENHOW remarked that the concentrated solution of camphor is now largely employed as a popular remedy, even by people who are not homœopaths; these cases of Dr. Johnson show that there is certainly danger in its being so taken. Concerning other homœopathic remedies, Dr. Greenhow went on to observe that he had lately seen a lady who had been under homœopathic treatment, and was taking "mercurius" in large doses, by which she had been mercurialised; the remedy was discontinued by Dr. Greenhow, and the patient recovered. We are wrong in the views we take of homœopathic practice. We think only of the infinitesimal doses, and consider that the central point of the system; whereas the absurdity of the thing lies in the theory "*similia similibus curantur*," which runs contrary to, and would upset, the collective medical experience of 2000 years.—Dr. A. P. STEWART thought it had been, as it should be, generally known that the homœopathic tinctures are very much stronger than those in ordinary use. He agreed with previous speakers as to the importance of this being known in regard to their tincture of camphor, which is now a very common domestic remedy. With other tinctures, the effects of ignorance of this point might be still more serious than in the case detailed by Dr. Johnson. One of Dr. Stewart's patients proposed to him, some years ago, that she should take some tincture of nux vomica, to which he assented, as he had often previously prescribed it for her with advantage; and, not knowing that it was the homœopathic tincture which she had in her medicine-chest, he ordered eight or ten minims for a dose. She stated that three minims had previously produced diarrhoea; consequently, two minims were ordered, and even this dose was followed by nausea and diarrhoea. He supposed that homœopathic practitioners, being identified in the mind of the public with their own absurdity of infinitesimal doses, and being unwilling, publicly, to renounce it, have recourse to these concentrated tinctures, in order to produce an appreciable effect by very minute doses. That homœopathic globules are not always the inert things which Mr. Carter had described as made up wholesale, was proved by the case of a well-known Italian nobleman, who, some years ago, having forgotten to take one globule at the appointed hour, took two together, and died, with all the symptoms of poisoning by strychnia, the same night. Dr. Stewart believed that many homœopathic practitioners are in the habit of putting a private mark, known to their chemists, upon their prescriptions, which do not represent the doses actually dispensed.

Remarkable Case of Death from Meningeal Congestion without Inflammation.—Dr ANSTIE related a case. The patient was an active intelligent lad of nearly thirteen years, previously quite well. At the end of his school vacation, he had a slight swelling of some cervical glands, and looked somewhat pale, but was quite cheerful and lively. He went back to school for a week, did his lessons with ease, played football, and sculled on the river; but during the whole time a sense of stiffness in the legs was gaining upon him. On October 5th, the boy fell down on getting out of bed; and, on Dr. Anstie visiting him, it was found that he had lost the power to stand, but could execute any movements of the legs when sitting or lying, though rather slowly. There were tingling sensations in the fingers and toes, but no other affection of sensation. There was a total absence of pyrexia; pulse 85, full, but compressible. The upper limbs almost immediately became implicated in the loss of power; the right arm and (to a less extent) the right leg were more affected than the left limbs. Throughout the case, sensation of all kinds was only very slightly affected. There never was any fever, either subjective or as measured by the thermometer. The pulse continued to increase in frequency and to lose in power; it was 130 in the evening of the third day. On this day paralysis of the sternomastoids had been detected in the morning; and towards night paralysis of the respiratory muscles set in, and this last symptom steadily increased till it proved fatal, at one o'clock the next day—viz., October 8th, the fourth day (inclusive) since the commencement of actual paralysis. Neither speech nor swallowing were affected; and there never was the least interference with consciousness or intelligence till within five minutes of death. The affection was diagnosed on the third day by Dr. A. Clark, with the concurrence of Dr. Anstie, as congestion of the spinal cord and medulla oblongata. *Post mortem* examination by Dr. Anstie and Mr. Warrington Haward entirely verified this diagnosis. The only pathological phenomenon was congestion, and that congestion was strictly and very remarkably limited to the vessels of the meninges of the cord and the medulla oblongata, and the sinuses at the base of the skull. There was no trace of effusion either of serum, lymph, or blood. The absence of inflammatory products agreed with the symptoms during life, for there was no muscular rigidity or pain on movement; no pyrexia, and no paralysis of the sphincters of either rectum or bladder. Dr. Anstie remarked on the rarity of these cases of rapidly fatal congestion, and the little information that is to be found on the subject in the literature of nervous diseases. In Dr. Radcliffe's treatise, however (Reynolds's *System of Medicine*, vol. ii), the occurrence of rapidly fatal cases is alluded to; and Dr. Radcliffe had privately related several such instances to Dr. Anstie, in which death occurred on the fourth day from the first decided symptoms. Dr. Andrew Clark (whose absence was much regretted) had also, it appeared, seen some similar cases, and, what is more important, thinks he has seen one such recover. But there can be little doubt that the malady, coming on in the shape and with the rapidity shown in the case which formed the subject of the paper, presents very little ground for hope of success in treatment. "Derivation" of blood from the affected part would be the ideal treatment; and in the present instance it was attempted by means of diaphoretics, and would have been further attempted by means of purgation had not the case become too evidently hopeless. But Dr. Anstie thought that it is more than doubtful whether effects of this sort can be really produced, either by these measures, or by leeching to the anus, etc. The etiology of Dr. Anstie's case was remarkably obscure. Of causes that had been assigned as capable of producing spinal congestion, viz., external cold, repressed hæmorrhoids, extreme over-exertion, etc., none were in operation; and it seemed impossible to give even a rational guess at the cause.—Mr. BARWELL inquired as to the condition of the pupils; and were the muscles in the ordinary state of rigidity, or flaccid and loose?—Dr. CHARLES CARTER related the following case, somewhat similar to Dr. Anstie's. A young naval officer on the China Station, a temperate man, and previously quite well, complained one day of pain and stiffness in the legs. He had taken a long walk—twenty to twenty-five miles—a few days before; and it was thought to be due to this. The pain and stiffness continued, and then were supposed to be rheumatic. He suddenly lost power in the legs, falling when walking; and was taken to hospital. There, in a few days, he died; the paralysis gradually creeping up the trunk, affecting the upper limbs and respiratory muscles; and he died asphyxiated. There was no loss of sensation; the bladder and rectum were unaffected; the mind was clear to the last. At the necropsy, the spinal cord was examined; but nothing was found to explain the symptoms.—Dr. SOUTHEY mentioned the case of a gentleman, a tutor, whose legs, after a long ride, became stiff, so that he clumped his heels upon the ground on going up stairs. Next day, he lost power in both legs; and the paraplegia, at first partial, shortly became complete. He had taken his meals irregularly; also too much stimulus. He was

ordered to give up all stimulants, to remain in a tepid bath one or two hours daily, to lie quietly in bed, and take milk and lime-water. He had no medicine for three days; then took twenty grains of bromide of potassium nightly for want of sleep. He recovered slowly, but completely. Was that a case of spinal congestion?—Dr. SYMES THOMPSON related particulars, sent to himself, of a case which occurred at Port Elizabeth. The illness began with pain and stiffness at the nape of the neck, to which succeeded paralysis of the legs, and then of the arms. There was an epidemic of the disease, involving thirty or forty individuals, sometimes ending fatally, and sometimes leaving nervous symptoms of a more or less chronic kind.—Dr. G. HARLEY described another case which in some respects resembled Dr. Anstie's. A young gentleman, aged 17, engaged in a city office, complained of having a cold for three weeks, and then had stiffness of the neck six days before his death. On the following day, his limbs became stiff, but he went to his office. Next day, he could not walk well, but went to the City. A third day also he went; but he then fell from his stool to the ground and staggered. Being sent home in a cab, he walked well from the cab through the hall, but could not mount the stairs. The paralysis increased. He could not void his fæces, but passed urine extra easily. On the day of his death, he could walk across the floor, and was cheerful, saying he felt nothing at all wrong. The paralysis spread rapidly from the legs to the thighs, to the abdominal and to the thoracic walls—when his breathing became affected. Two days before death, his pulse was 65; next day, it was 84; and it rose to 120 just before death. He had also difficulty in pronouncing words and in swallowing water. Dr. Harley had often seen animals die in the same way. The symptoms were considered to be due to congestion of the spinal cord; so belladonna was injected, as it constricts the vessels of the cord; but the lad died asphyxiated. The necropsy was made by Dr. Lockhart Clarke. On removal of the brain, a large quantity of black blood welled up from the spinal canal. There was no morbid congestion of the front columns of the cord; in the posterior columns, some of the axis-cylinders looked a little damaged. There were no naked-eye appearances of disease, except that the cord was raised in a few places by the congestion of its substance. No congestion of the meninges existed—only that of the cord itself.—Mr. BARWELL said that the paralysis of infants is not due to congestion of the cord, as Dr. Radcliffe asserted. Children do not die from the disease; which shows that the cause is not congestive, as in these fatal cases of adults.—Dr. G. JOHNSON suggested that perhaps some of the venous engorgement which had been found after death might have been due to the mode of death—viz., by asphyxiation.—Dr. ANSTIE, in reply, said that in the condition of the pupils there was nothing remarkable. The muscles were flaccid. Dr. Carter's case he considered to be of the same nature as his own. Dr. Southey's case was also one of spinal congestion; but was not the paralysis the result of alcoholism? He was rather sceptical of the good to be obtained from bromide of potassium in these cases. He had, however, seen it benefit a man who had knocked himself up by excessive activity in conjugal duties, and in a few other instances. Dr. Hammond of New York gives ergot of rye for spinal congestion; but Dr. Anstie had had no experience with the drug. Dr. Thompson's case was one of cerebro-spinal meningitis, which involves rigidity of the muscles and pain on moving, as Dr. Radcliffe observes. Also the disease was epidemic. Dr. Harley's case was one of softening of the cord—"myelitis". Both that case and Dr. Thompson's case had affection of the bladder and rectum, which never occurs in simple spinal congestion. If any one had, four weeks before, told Dr. Anstie that congestion could produce such fatal symptoms, he would then have laughed him to scorn. He must now retract his former opinion. He was sure his case was not one of myelitis. In that disease, there is elevation of temperature; in his own case, the temperature was not at all augmented. There must have been some sign of inflammation, if it had existed; but there was nothing of the kind.

MEDICAL SOCIETY OF LONDON.

NOVEMBER 10TH, 1873.

SAMUEL O. HABERSHON, M.D., President, in the Chair.

Removal of a Piece of Lint from the Chest.—Mr. A. F. DURHAM related a case where he had removed a portion of lint that had been accidentally introduced into the pleural cavity through an opening made for the evacuation of an empyema. The patient was a young man, aged 19, under the care of Dr. Wilks in Guy's Hospital. Mr. Durham performed paracentesis; and after some time a plug of lint, soaked in carbolic oil, that had been used for keeping the aperture open, was drawn into the chest by a violent inspiratory effort. Mr. Durham introduced a pair of long slender forceps, of special construction,

which he had designed for the removal of foreign bodies from the œsophagus. He felt the piece of lint at the extreme posterior part of the pleural cavity; having fortunately seized it at the first attempt, he withdrew it without difficulty. From this period the man progressed satisfactorily, and for two or three years followed his occupation as a shoemaker, and washed out his pleural cavity regularly. He died with symptoms of amyloid disease of the viscera, with albuminous urine. Mr. Durham called especial attention to the forceps which he had used, and stated that, as far as he knew, no other instrument had been yet designed with which the foreign body in question could have been reached and so easily withdrawn.—Mr. BRUDENELL CARTER related a case of empyema in which a drainage-tube, about six or eight inches long, slipped into the chest. The patient at the present time was able to do domestic work; she still wore a drainage-tube, and during the last seven years there had been no symptoms referable to the foreign body.—Dr. SYMES THOMPSON gave an instance of a gum elastic catheter, seven inches long, which had slipped through an opening into the thorax, and which remained there without exhibiting any signs of its presence till the death of the patient, about seven months afterwards, from exhaustion.—Mr. MAUNDER, Dr. ROUTH, Dr. SANSOM, and Mr. ROYES BELL, Dr. CRISP, and Dr. WILTSHIRE made some remarks on operations in cases of empyema.

Scrofulous Kidney.—Dr. SYMES THOMPSON read the history of a case of scrofulous kidney, and showed the specimen. E. T., aged 38, a bootmaker, had had irritation of the bladder for three years, and had been thrice sounded for stone. A large tumour was felt in the left hypochondriac and lumbar regions, extending to within two inches of the umbilicus; it could be felt deeply in the lumbar region behind. The free margin of the tumour was rounded, and the hand could be introduced between the tumour and the ribs. It conveyed an obscure sense of fluctuation, and was dull on percussion, except where covered by intestine. A fortnight before death, large quantities of pus were discharged with the urine; micturition was frequent, and occasional streaks of blood were detected. The tumour greatly diminished in size, and two days before death the veins of the left leg became painful and obstructed. The lung contained miliary tubercle. The left kidney weighed 1lb. 12oz. It was adherent to the surrounding viscera, which formed the walls of several large cysts; and, on separating the organ, a considerable quantity of greenish purulent matter escaped. The left ureter was thickened, but neither impervious nor dilated. The diagnosis of this case afforded some interest. The extreme pallor, the tendency to faint on assuming the upright position, the freedom from heart-mischief, or sign of extensive lung-disease, together with the tumour on the left hypochondrium, suggested the idea of leucocythæmia; but the blood showed no decided excess of white corpuscles, and the abdominal tumour appeared on deep palpation to extend far back, and not so much beneath the false ribs as is usual with enlarged spleen. The diagnosis of pyelitis was soon confirmed by the discharge of pus with the urine. The urine contained small quantities of blood, pus, tailed cells, and debris; the ureter was sometimes blocked with pus. The strumous aspect, phthisical family history, with developed though not advanced lung-disease, were all confirmatory of the view that the case was one of suppurating tubercle in the kidney.—The PRESIDENT mentioned that a gentleman, who had suffered much from renal calculus, had been, for seven years before his death, free from any symptoms. In another case, the symptoms commenced when the patient was sixteen, and continued at intervals until he was sixty. Every now and then a large tumour formed in the right side of the abdomen, a free discharge of pus took place with the urine, and the tumour gradually diminished. After death, a large calculus was found impacted in the right ureter.—Dr. CRISP mentioned the case of a gentleman who, whilst performing an athletic feat, was seized with sudden and severe pain in the lumbar region. The pain lasted three hours, and then subsided. After his death, from heart-disease, about a year afterwards, it was found that he had a renal calculus about the size of a man's finger; this was in two pieces.—Mr. DURHAM described a case in which he had removed the kidney, after having freely incised it at a previous operation, and in which, although all the symptoms pointed clearly to stone in the kidney, no stone was detected anywhere in the urinary tract.—Dr. ROGERS narrated the history of a lady who, two years after a fall, had various abscesses and sinuses in the iliac region and around the pelvis. During the whole of her illness there was no blood, pus, or albumen in the urine. After her death, a calculus, which had formed in the kidney and had caused suppuration, was found lying externally and posteriorly to that organ in a large abscess with which all the sinuses communicated. With the exception of one cyst in the kidney, the organ was healthy.—Mr. CRIPPS LAWRENCE mentioned the case of an infant, aged eight

months, in whom a calculus of the size of a pea was found in the left kidney.—Dr. FARQUHARSON suggested that clots of blood following blows in the lumbar region were often the cause of renal calculi.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MR. E. L. JACOB of Birkenhead has been elected Medical Officer of Health for the Chertsey, Epsom, Reigate, and Dorking districts.

SHORTCOMINGS IN THE PRACTICAL WORKING OF THE PUBLIC HEALTH ACT (1872).

ON the above subject we have received an interesting communication from Dr. Henry J. Alford, Medical Officer of Health to the Taunton Urban and Rural Sanitary Districts. It is the substance of a communication made to the West Somerset Branch. He acknowledges at once that, owing to the disregard of good advice, the Public Health Act (1872) is but an imperfect measure, and contains many errors both of omission and of commission. While he fully admits the inconveniences and incongruities arising from the great diversity of administrative areas and of medical arrangements, he does not discuss these points, but calls attention to practical shortcomings of sanitary law which have forced themselves on his notice.

(1.) As to infectious diseases, his great difficulty is to obtain early information of epidemic outbreaks. He finds that the aid of the Inspector of Nuisances, who has thirty parishes to look after, is wholly inadequate for the purpose. For instance, scarlatina had existed in one house for a whole month without official discovery, six or seven cases having occurred, and the convalescents having been sent out, some even to school, without disinfection. His request to have early information from the medical practitioners of the town had been only partially complied with; but, of course, he feels a delicacy in asking them to take the trouble of reporting without being remunerated. In the rural part of his district, he is provided by the Board with copies of all returns made by the Poor-law medical officers, and he is supplied every month with copies of the Death Register. He speaks very favourably of the hearty willingness of the sanitary authorities to assist him and to comply with his advice.

(2.) He encounters another difficulty in the dislike of private families, schools especially, to have their houses known to be infected, and their objection to his reports being read at meetings of the sanitary authority, at which reporters were present; so that these reports are now read "in Committee."

(3.) The poor complain of the hardship of sanitary interference in infectious disease, as tending, when their families are attacked, to throw them out of employ in workshops. One poor fellow, a journeyman tailor, was reduced to destitution in consequence of dismissal by his employer on that account.

(4.) The greatest practical defect in the law he considers to be the manner of dealing (or rather not dealing) with polluted water. The *Poll Mall Gazette* of September 12th contained the following sensible remarks on a letter which Dr. Alford had previously published on this subject.

"A letter in the *Times* from a medical officer of health confirms the remarks we made the other day on the miserably inefficient state of our sanitary law in respect to infected source of water-supply. 'In the course of my duties as medical officer of health,' says the writer, 'I am constantly called upon to analyse samples of water from various sources. I frequently find it polluted with sewage. I report the fact to the sanitary authorities, who then serve a notice on the occupiers of the property, informing them that on analysis the water is found to be unfit for drinking purposes, and there the matter ends. Neither sanitary authorities, officers of health, nor inspectors of nuisances have any further powers. It is optional with occupiers to do as they please; the law cannot prevent their using the water.' Nor by consequence can the law prevent them from distributing the water wholesale in the milk-can or otherwise, and sowing broadcast the seeds of deadly disease. All this, simply because in our legislative wisdom we have refused to define polluted sources of water-supply as a 'nuisance.' It is a nuisance for a man to accumulate sewage on his premises, so as to offend the nostrils of his immediate neighbours; but he may give them a solution of sewage to drink with the most perfect impunity, and no nuisance authority in the country can prevent him. The granting of powers to close infected pumps and wells was recommended long ago, and the re-

commendation may be read in a now forgotten volume, which is probably to be found covered with the dust of years on an inaccessible shelf in the Home Office. We refer to the Report of the Royal Sanitary Commission. It is only fair to say that Mr. Powell's Public Health Bill of last session made polluted wells 'nuisances.' That Bill did not pass, but a similar one will be introduced during the coming session, and it is earnestly to be hoped that by it many of the existing anomalies will be removed."

Dr. Alford mentions a case in which previous sewage contamination was shown by his discovering the water of a well to be rich in chlorides, nitrates, nitrites, and ammonia, but where the occupier, a small publican, demurred to give up the use of the well, "as it brewed such excellent beer."

(5). He also complains that the *rural* authorities have not the same powers as the *urban* in the control of the erection of new buildings. He has seen "rows of cottages erected in direct defiance of all sanitary considerations, and privies and ashpits all huddled together close to back doors, under bedroom windows, and what is worst, in closest proximity to the water-supply."

In conclusion, he again refers to the difficulties and inconvenience of the existence of many sanitary authorities where one combined board would have done the work much better and with greater ease. He advises a Supplementary Health Act, and the systematic utilisation of the Poor-law medical officers, with additional remuneration.

NOTES ON REPORTS OF MEDICAL OFFICERS OF HEALTH, 1873.

MALTON.—Dr. Young, the Health Officer, whose communication we noticed a fortnight ago, has sent us a copy of his first quarterly report, which has the great recommendations of simplicity and brevity. The mortality of his district stands at the same figure as in the corresponding quarter of 1872, and he reports, at present, an entire absence of zymotic diseases. He considers the basis of the district system of drainage to be in a fair state, but recommends its extension and improvement in one village, in which he has analysed fifteen samples of water, and finds thirteen of them unfit for drinking purposes. He urges the use of the water of the Malton Company. He suggests a ventilating shaft at the highest elevation of the "slaughterhouse-drain", the air of which he finds to contain an excessive proportion of sulphide of ammonium, sulphuretted and carburetted hydrogen, etc. He also recommends his Board to issue a regulation that all ash-pits be roofed with ventilating shafts; that "sanitary closets" (query, dry earth or water?) be adopted at a cost of about thirty shillings each; that all sash-windows be made to open and slide both ways; that house-drains and traps be flushed and disinfected more frequently; that the people cast into their privies the house-ashes, "or still better, where possible, a mixture of dry earth, lime, and ashes", which he thinks a most excellent disinfectant; that yards and out-buildings be freely lime-washed; and that every water-closet have a ventilating shaft connected with the soil-pipe, behind or below the trap.

NOTTINGHAM.—The first report which Dr. Edward Seaton has presented to the Town Council of Nottingham is unusually complete and comprehensive. Commencing with a topographical and geological description of the town, it gives a detailed account of the special peculiarities prevailing in the several wards into which the borough is divided; after which, the various circumstances which bear upon the public health are dealt with *seriatim*, complete sanitary statistics are given, and the adoption of valuable recommendations is urged upon the authority. The sewerage is stated to be generally efficient; for, though some houses in a low-lying portion of the town are below the flood level of the Trent and cannot hence be at all times properly drained, and though some parts of the town are still undrained, yet a modern system of sewerage is rapidly approaching completion, and it is stated to be well ventilated. A private company has obtained powers to supply Nottingham with water, and though the supply is derived from several separate sources, yet they appear to be mixed in reservoirs in constantly varying proportions before being supplied to the population. Some of these waters are believed to be of excellent quality; others again are known to be unfit for human consumption; thus, one is ascertained to be contaminated with sewage, another with refuse of bleach-works, and more than one supply has been utterly condemned by the engineer to the company, and declared by him, before a Committee of the House of Commons, to be unfit for domestic purposes. It will, however, scarcely be credited, that all efforts to procure samples of the separate waters for the purposes of examination have always been frustrated by the action of the company itself, and Dr.

Seaton specially refers to the fact that when both he and a government inspector have applied to the company for permission to collect such samples, a refusal has always been the result. Here, then, we have a town compelled to pay a private company for water, the quality of which it is not allowed to ascertain; and, we confess, we are not aware of any means by which compliance with the requests which have been made towards this end could have been enforced, and we specially note the instance as one affording the most complete evidence of the necessity which exists for prompt legislative interference with monopolies such as are now so often enjoyed by water companies to the detriment of public health. Nottingham is stated to contain many of the old midden privies which allow their filthy contents to soak into the surrounding soil, and which foul the air with their noxious effluvia. Efforts have, however, for some time past been made to meet the evils which are everywhere attendant upon the storage of large quantities of excremental filth in the proximity of dwellings, and in the poorer parts of the town water-closets, improved midden-privies with dry contents, and tub-closets are in course of trial on a large scale. The general house accommodation is then referred to; the condition of the common lodging-houses, the overcrowding which prevails, and the evils attendant upon the building of houses back to back being specially noted. Dr. Seaton then points out in an interesting chapter, the special social and other peculiarities which have affected the mortality of his district, and he gives numerous tables indicating how, in different portions of the borough, the gross death-rates, and those due to special diseases, have varied. The general death-rate, which, in 1872, was 24.5 per 1000 living, though large, is less than that prevailing in former years; some parts of the town appear to be specially unhealthy, and in the Byron ward the mortality was at the rate of 28.0 per 1000. The class of zymotic diseases caused a death rate of 5.2 per 1000, which indicates a slight increase on that of previous years. This must, to some extent, have been due to the prevalence of small pox, the spread of which, in Nottingham, was greatly facilitated by the neglect of vaccination for which that town has been notorious. But continued fever and diarrhoea are also markedly prevalent, both diseases, it is admitted, being due to the existence of removable causes. The death-rate of children under one year, receives special attention. Infantile mortality is large in Nottingham, and it is not, as in so many towns, brought about by the employment of married women in factories; but the town contains nearly 8000 more females than males, the number in excess being largely made up of warehouse-girls, who, owing to the special circumstances of temptation in which they are placed, often give evidence of considerable laxity of morals, and among whom occur a considerable number of illegitimate births. But the waste of infant life cannot all be due to this cause, for it extends also to children below the age of five, and it is stated by Dr. Seaton to be, to a great extent, attributable to the unhealthy influences by which children are surrounded in some parts of the town. The Town Council of Nottingham have evidently spent large sums of money in effecting sanitary improvements; they are still at work in the same direction, and we trust that they will endeavour to support their medical officer of health in performing duties to which he has devoted himself with evident energy and ability.

PADDINGTON.—Dr. Hardwicke, Medical Officer of Health for Paddington, sends in quarterly reports on the health of his district to the Vestry. These reports contain complete mortality statistics, and indicate precisely in what parts and in what streets of the parish the various causes of death have prevailed, a class of information which must be of great local value. Summaries of the nuisances complained of and investigated, and also of the sanitary work performed, are given, and any points deserving special attention are dealt with. Dr. Hardwicke speaks in strong terms of the injurious effects produced upon the health, and also on the morality, of a certain portion of the population, by the existence of public-houses in out-of-the-way localities which are never traversed by respectable persons, and which appear to be under no supervision whatever. Money which should be spent on necessary domestic comforts is squandered in drink, and the families of well-to-do labourers and other persons are in consequence soon ruined in health, besides being reduced to pauperism. In the renewal of licenses, Dr. Hardwicke's views on this point should receive careful attention. Through-ventilation for courts and small streets is much needed in certain portions of the parish, and to the want of it is attributed both an augmentation of the death-rate and the ready spread of infectious diseases in the localities specified. The required ventilation can, it appears, only be procured by the destruction of existing property, and Dr. Hardwicke is desirous of inducing the Vestry to avail themselves of the opportunity thus afforded them of building some improved dwelling-houses for the labouring classes, to serve as a model to other authorities.

MEDICAL NEWS.

A STRANGE COMPANY.

THE following document has been forwarded to us from an eminent source. It is difficult to believe it, however, a genuine and sober document. Supposing it to have any of the elements of seriousness which on its face it claims to have, we should not hesitate to pronounce it a grave scandal. But we invite Dr. Churchill to pronounce it a discreditable hoax. In any case, it seems right to rescue such a proposition from the obscurity of private circulation only. Judging from the freedom with which this document has been distributed unasked, no secrecy is really desired for it, although it is formally claimed. It is impossible to believe that Dr. Churchill's conduct is such as it is here represented to be, or that he is in any way a party, or ever would be, to a project such as is here set forth. Public and professional opinion has long since pronounced itself far too strongly on the subject of secret "inhalants," and the sale of secret remedies, declared to effect marvellous cures in consumption, bronchitis, and asthma, to make it credible that an M.D. of Paris and St. Andrews, and a late Vice-President of the Paris Medical Society, should consent to be a party to such proceedings and such a bargain as are set forth in this surprising document. It is too circumstantial, however, to be set aside without some sort of a disclaimer.

Rough Draft. For Private Circulation only.

The undersigned having been convinced, either personally or through members of their families, of the remarkable benefit derived from the use of Dr. Churchill's Hypophosphites and Inhalants, in consumption, asthma, bronchitis, and other respiratory diseases, even in the most extreme and most advanced stages, have resolved to form an Association (Limited) for the purchase of the *Inhalants* (the composition of which has not yet been made public), and for taking means to distribute them amongst the public at a comparatively trifling cost. Dr. Churchill, on being invited to name a price, has asked £20,000 cash for the remedy, if it is to be given to the public absolutely; or, in case a company is formed for the purchase of the remedy and sale of the medicine, he is willing to take £5,000 in paid-up shares and £15,000 cash. A sum of £7,000 has already been provisionally subscribed amongst patients. When the list is increased, a meeting of subscribers will be called to negotiate more closely, and to decide whether, and on what conditions, the Company is to be formed. Many persons object to pay for another's invention; but the fact remains, that the Inhalants are known to effect marvellous cures, and the knowledge of their preparation is only to be obtained by purchase. Subscriptions are invited at once, as the doctor is about to remove from London to his home in Paris. Communications may be addressed to John L. Bowes, hon. secretary, *pro tem.*, Burlington Hotel, 19, Cork Street, London, November, 1873.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 13th, 1873.

Baskerville, John Dunbar, Kingstown, Ireland
Findlay, A. C. T., Brookley Street, Islington
Gard, William, John, Stoke, Devonport
Taylor, John William, Lewes, Sussex

The following gentleman also on the same day passed his primary professional examination.

Jones, William Makeig, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

BEDFORD GENERAL INFIRMARY.—House-Surgeon: £100 per annum, board, rooms, etc. Applications, 10th December, to the Chairman of the Weekly Board.

BIRMINGHAM.—Surgeon to the Borough Prison: £200 per annum. Applications, 29th instant, to Messrs. Gem and Hebbert.

BIRMINGHAM AND MIDLAND COUNTIES ORTHOPEDIC HOSPITAL.—Consulting Physician. Applications, 24th instant, to Alfred Browett, Honorary Secretary.

DERBY URBAN SANITARY DISTRICT.—Medical Officer of Health: £20 for one year.

DERBY UNION.—Dispenser: £50 per annum. Applications, 27th instant, to W. C. Watson, Clerk.

DORSET COUNTY HOSPITAL.—House-Surgeon: £70 per annum, and £10 additional as Secretary, with apartments and board. Applications, 26th instant, to C. W. Bingham, Chairman.

DROITWICH UNION.—Medical Officer and Public Vaccinator, Droitwich District: £85 per annum, and fees. Applications, and December, to Henry Bearcroft, Clerk.

HALIFAX INFIRMARY.—House-Surgeon: £50 per annum, with progressive increase, board, lodging, and attendance. Applications, 25th instant, to the Chairman of the Medical Staff.

HOSPITAL FOR INCURABLES, Dublin—Apothecary.

HOSPITAL FOR WOMEN, Soho Square—House-Physician. Applications, 29th instant, to John Ray, R.N., Sec.

IPSWICH RURAL SANITARY DISTRICT.—Medical Officer of Health.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 28th inst., to Thomas Southce, Sec.

KENT COUNTY LUNATIC ASYLUM.—Two Assistant Medical Officers: £130 per annum each, furnished apartments, etc. Applications, 10th December, to Messrs. Beale and Hoar, Maidstone.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, Ireland—King's Professor of the Institutes of Medicine: £200 per annum and fees. Applications, 1st February, to Dr. J. Magee Finny.

LIVERPOOL DISPENSARIES.—Two Honorary Medical Officers to the North Dispensary. Applications, 26th inst., to Wm. Lister, Secretary.

MERTHYR TYDFIL UNION.—Medical Officer for the Penderyn District.

METROPOLITAN FREE HOSPITAL.—Assistant House-Surgeon: apartments, board, etc.

RIPON DISPENSARY AND HOUSE OF RECOVERY.—Resident Medical Officer: £100 per annum, furnished apartments, etc. Applications, 5th Dec., to the Honorary Secretaries.

ST. GEORGE PROVIDENT DISPENSARY, Mount Street—Physician-Accoucheur. Applications, 24th inst., to Col. Alcock, Hon. Sec.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Surgeon to Out-department. Applications, and Dec., to G. Scudamore, Sec.

SOUTH SHIELDS RURAL SANITARY DISTRICT.—Medical Officer of Health: £25 per annum. Applications, 27th inst., to John Salmon, Clerk.

SUNDERLAND GENERAL INFIRMARY AND DISPENSARY.—Surgeon.

SUNDERLAND EYE INFIRMARY.—Surgeon.

SUNDERLAND AND BISHOP WEARMOUTH INFIRMARY AND DISPENSARY.—Senior House-Surgeon: £80 per annum, board and residence.

Applications, 25th December, to John Kitto, Secretary.

UNIVERSITY OF DUBLIN.—Professor of the Institutes of Medicine. Applications 13th February.

WATERFORD UNION.—Medical Officer, Public Vaccinator, and Registrar of Births, etc. for the Woodstown Dispensary District: £100 per annum, and fees. Applications, 28th instant, to Garrett Meade, Hon. Sec.

WORKINGTON PORT SANITARY DISTRICT.—Medical Officer of Health.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HODGES, William, Esq., elected Surgeon to the Clifton Union Workhouse.

*HOPKINS, H. Culliford, Esq., appointed Surgeon to the Western Dispensary, Bath, *vice* Dr. Hamilton, resigned.

*JAY, Henry Mason, M.R.C.P., appointed Medical Officer to the Chippenham Union Workhouse, and to the Second District of the First Division of the Chippenham Union.

RUSSELL, Henry, B.A., M.B., elected Resident Surgeon to the Clinical Wards of the Royal Infirmary of Edinburgh.

LEONARD, John, appointed House-Surgeon to the Charing Cross Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATH.

KAY, John, Esq., Surgeon, at Old Street, St. Luke's, aged 62, on November 19th.

COMMUNICATIONS, LETTERS, &c., have been received from:—

Mr. G. W. Callender, London; Dr. Rumsey, Cheltenham; Dr. J. Matthews Duncan, Edinburgh; Dr. Dobell, London; Dr. J. C. Thorowgood, London; An Associate; Mr. Wm. Mac Cormac, London; Dr. Brunker, Dundalk; Mr. J. B. Bindlow, Stockport; Dr. Bell Taylor, Nottingham; Dr. Whittle, Liverpool; The Secretary of the Clinical Society: Mr. J. Bassett, Birmingham; Mr. H. Terry, Northampton; Dr. Campbell, Boston, U.S.; Dr. Aitken, Rome; Mr. Sandwell, London; Dr. Kelly, Taunton; Dr. Miller, Dundee; Mr. F. Mason, London; A Member: Mr. Alderson, Hammersmith; Dr. Sturges, London; The Secretary of the Pathological Society: Mr. Freeman, London; M.R.C.S.; Dr. Hutchins Williams, Aylesford; Dr. Althaus, London; M.D.Ed.; Dr. Wardell, Tunbridge Wells; Mr. Eastes, London; Dr. Percy Boulton, London; Dr. H. Charlton Bastian, London; Mr. T. Holmes, London; Dr. A. Edis, London; Dr. Stanley Haynes, Malvern; Dr. Fred. J. Brown, Rochester; Mr. A. Underhill, Tipton; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Mr. Blackett, Wickham; Dr. Cole, Bath; Dr. Umpleby, Bedale; Dr. Blackshaw, Stockport; Mr. H. M. Jay, Chippenham; Dr. Sayre, New York; Dr. Demarquay, Paris; Dr. W. Boyd Mushet, Southgate; Our Dublin Correspondent; Mr. Lord, Crewe; Mr. W. Hodges, Bristol; Mr. Poole, London; Dr. Bell Taylor, Nottingham; Mr. Ingpen, London; Mr. Thurston, Ashford; Mr. J. W. Walton, London; Dr. T. W. King, Camberwell; Mr. Sanger, London; Mr. P. Le Neve Foster, London; Mr. Welsh, London; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Sansom, "A Case of Mitral Stenosis with Presystolic Murmur, with specimen Cases of Exudation treated by the Aspirator"; Mr. Jabez Hogg, "Arrested Development of Eye—Obliterated Lacrymal Duct; Multilocular Cyst in Neck."

THURSDAY.—Hunterian Society, 8 P.M. (London Institution.) Dr. Phillips, "On Retro-Uterine Haematocele"; Mr. Rivington, "On Psosas Abscess."

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. George Johnson, "On Cases of Temporary Albuminuria, the result of Cold Bathing"; Mr. Henry Arnott, "On a Case illustrating Professor Esmarch's method of preventing Loss of Blood during Surgical Operations by means of Elastic Bandaging"; Dr. Cayley, "On a Case of Hemoptysis"; Quekett Microscopical Club (University College), 8 P.M. Dr. Braithwaite, "The Histology of Plants."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. STEVENSON'S letter on the Adulteration of Bread will appear next week.

MR. LAWSON TAIT'S CONVERSATION.

MR. LAWSON TAIT writes to us a further letter. He does not forward the references requested last week, but is desirous of letting our readers know that "at the said *conversazione* no 'matter of private interest,' but simply the observations and experiments of Drs. Richardson and Norris" (on Anæsthesia), "were brought forward; that no reporters of the public press were asked to be present; but that only the editors of the three London medical weeklies were invited, if they thought fit, to send representatives, with the view of noticing in the medical journals any original and useful matter which Drs. Richardson and Norris might bring forward, and which they might think of sufficient interest to the medical profession." We are very well satisfied with this statement, and with the general outcome of our observations, which were not made without maturely weighing, by the light of past occurrences elsewhere, the evils which may flow from converting a *conversazione* at the house of a medical man into an occasion for inviting the attendance of reporters of any sort to the exercise of their functions. Mr. Lawson Tait's intentions were no doubt excellent, and we entirely accept his explanations. The proceeding was, in our opinion, not the less one which called for professional warning and objection.

DR. UMPLEBY (Bedale).—Will be soon published.

MR. WELSH.—The pamphlet reached us.

T. B.—The right of a Bachelor of Medicine to call himself Doctor is, of course, a matter of custom and courtesy. Some of the most eminent London physicians (*e.g.*, Dr. Lionel Beale and Dr. Handfield Jones) have not proceeded beyond the degree of M.B. Nobody has ever denied them the privilege of calling themselves Doctors.

A MEMBER, whose case was described in a paragraph headed "Evasion of the Public Health Act by a Rural Authority" (p. 562), again applies for advice in the difficulty in which he is placed, owing to the provisions of the Public Health Act not being carried out in his district. [If he is resolved not to "let matters take their course" and if calling the attention of his Authority to the case proves fruitless, he had better apply to the Local Government Board, asking them to send down a Medical Inspector.]

CAN any member refer me to an English notice or translation of the work of Dr. Joseph Seegen (of Vienna and Carlsbad) on "Diabetes Mellitus" (1870)?—T. I. A.

BRITISH MEDICAL BENEVOLENT AND SCIENTIFIC FUNDS.

SIR,—I venture to make a suggestion concerning the British Medical Benevolent Fund. It is, that each member of the Association should be invited to send five shillings, as a Christmas offering, to those aided by that excellent Fund, to its Secretary. If five thousand members contributed, £1250 would be raised—a welcome addition to the Fund, at very slight sacrifice to any one.

If each of five thousand members were to send, to the Secretary of the Association, an extra amount of half-a-crown as a contribution to a scientific fund, £625 would be accumulated. A leading article in the JOURNAL of 23rd August, stated that £500 would be enough to begin with. If this opinion is maintained, I would suggest the extra £125 should be paid to the Society for the Relief of Widows and Orphans of Medical Men.

Should not the Society just named be extended to all British practitioners willing to subscribe their annual two guineas? This question is in consequence of your notice of the Society, in the JOURNAL of 8th November, showing that metropolitan members only are eligible for membership. Surely the area of the Society's advantages could be beneficially increased.

Malvern, November 15th, 1873.

I am, etc.,
STANLEY HAYNES.

AN INQUIRY.—A correspondent writes as follows:—

At —, there hap to dwell,
Four humble sons of Galen. Well,
Each Æsculapian hires the lamp,
Before his house its panes to vamp,
With color'd glass, whose flaming light,
With blazing brightness mocks the night.
But people think—who think at all—
The glaring sign a music hall,
Or gin-shop, rather should denote;
And so, to know *your* views, I wrote.

MEDICAL EDUCATION OF WOMEN IN RUSSIA.

ON this subject, the *Pall Mall Gazette* gives the following information.—However arbitrary may have been the measures taken by the Government of St. Petersburg to discourage the emigration to Zurich of Russian women desirous of studying medicine at the University there, great advantages appear to be held out to such persons in their own country. According to an official report lately published, eighty-four out of ninety-two young women who claimed to matriculate at the Academy of Medicine and Surgery in St. Petersburg, passed a satisfactory examination, and were admitted to the lectures. Two were sent back to undergo a second examination later, and only six were rejected on account of insufficient preliminary knowledge. While 14 per cent. were rejected last year, the number of the unsuccessful candidates for matriculation has now fallen to 63 per cent.—a circumstance which is all the more gratifying that the requirements of the examiners increase every year. About one hundred and sixty-seven young women are now studying at the Surgical Academy of St. Petersburg, generally with successful results. Some of these passed a less severe examination than the eighty-four who have now matriculated; but experience has shown that it is more advantageous to the women students in respect of their studies and of their subsequent career that the first examination should be strict and comprehensive.

CHLOROFORMING HORSES.

SIR,—Several letters have appeared in your pages bearing upon the "chloroforming of horses", in which the writers strongly urge veterinarians to use chloroform in all painful operations upon the horse.

I write these few lines to exonerate ourselves from a charge either of wilful inhumanity to our patients, or ignorance of the use of chloroform.

The chief reason why we do not use it in horse practice is, that while the animals are inhaling the vapour, they struggle so violently, that a percentage of them break their backs. The last case of this kind that I heard of was a £300 hunter. Such an accident is a serious matter to a veterinary practitioner, and may effectually blight his professional prospects. So long as our clients refuse to take the sole responsibility of such cases, I should imagine our medical friends will agree with us, that it would be foolish indeed for a veterinary practitioner to incur the risks. Under these circumstances, I think, we cannot be blamed if we operate without chloroform.

Your correspondents have evidently a very limited knowledge of practical veterinary surgery, as the cases quoted—viz., operations upon the eye for defective vision—clearly show that their practice upon the horse is based upon their knowledge of the treatment of like diseases in the human subject. But the analogy does not go far, as the results are widely different. Instead of improving the horse by partially restoring sight, you destroy his usefulness. A horse that has imperfect vision, becomes addicted to shying—a habit that renders it a dangerous animal; whereas, a blind horse is a patient quiet servant. I should, therefore, most decidedly prefer a blind horse for work, to one that has been operated upon, no matter how successfully; for the sight is never so fully restored as to prevent the animal from shying.

I am, etc.,

JOHN ADAM MCBRIDE, M.R.C.V.S., Lecturer on Veterinary

Medicine and Surgery in the Royal Agricultural College, Cirencester.

Cirencester, November 8th, 1873.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Manchester Examiner and Times; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Temperance Record; The Bath Express and County Herald; The Birmingham Gazette; The Dublin Morning Mail; The Derbyshire Journal; Saunders's News-Letter; The Glasgow News; The Derby and Chesterfield Reporter; The City Press; The Southampton Times, and Winchester, Portsmouth, Isle of Wight, and Hampshire Express; The Lincoln Gazette; The Stroud News; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Nov. 12th; The Anti-Game-Law Circular, Nov. 15th; The Northern Echo, Nov. 14th; The Daily Post, Nov. 17th; The Bedfordshire Mercury, Nov. 15th; The Eastern Daily Press, Nov. 15th; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Pacquet; The New York Evening Post; The West Country Lantern; The Aberdeen Times; The Dublin Express; The Aberdeen Free Press; The Belfast Evening Telegraph; The Carlisle Journal; The Daily Courier; The Melbourne Age; The Malton Messenger; The Altrincham and Lowden Guardian; The Stafford and Gloucester Advertiser; etc.

CLINICAL LECTURE

A CASE OF ANEURISM OF THE ARCH OF THE AORTA TREATED BY GALVANO-PUNCTURE.

Delivered at University College Hospital.

By H. CHARLTON BASTIAN, M.D., F.R.S., F.R.C.P.,

Professor of Pathological Anatomy in University College, London; Physician to University College Hospital; and Senior Assistant-Physician to the National Hospital for the Paralysed and Epileptic.

PART II.

THIS case is an interesting one in several respects; but I propose to limit my remarks to three principal topics:—

- I. Concerning the mode and cause of death.
- II. Concerning the effects of the galvano-puncture in this particular case.
- III. Concerning the methods of procedure in treatment by galvano-puncture.

I. Mode and Cause of Death.—We learn from the patient's history that the thoracic parietes had begun to project rather rapidly below the inner end of the right clavicle, and in the neighbourhood of the sternal end of the second rib, about a month before his entry into the hospital; and that a slower increase had been taking place in the upper and more prominent part of the swelling, which was covered only by a thin layer of integument. During the interval between the second and third galvano-punctures, it became unmistakably evident (October 15th and 16th) that the lower part of the swelling was still increasing in size, although this portion of the parietes of the aneurism had not as yet been interfered with; whilst it was not until after the third operation that any increase in size of the upper part is noted (October 20th), although the two punctures in this situation had never shown the least signs of irritation, and had closed in three or four days so as to leave almost no trace behind. Again, although some amount of irritation was set up around the two punctures made on the last occasion in the lower part of the swelling, and although this continued for ten days, yet this part of the aneurism ceased to increase after the operation, and the pulsation then underwent a marked diminution. There is, therefore, no evidence to lead us to believe that the punctures themselves had, either directly or indirectly, anything to do with the increase in size of the swelling noted whilst our patient was under observation. This conclusion is, moreover, strengthened by the results of the *post mortem* examination. The examination showed us that the walls of the sac were unusually thin in almost all parts, though it also revealed an absence of any trace of inflammatory change. We have a right to infer, therefore, that the slight increase in size which took place whilst the patient was in the hospital was a result of the continuance of those pathological changes which had initiated the aneurism and led to its previous stages of growth.

Next, it is important to note that the man had no constitutional symptoms of an unfavourable nature till three days before his death. This condition was ushered in by attacks of a neuralgic character affecting the limbs—obscure both as to nature and cause, but to which he declared he had been frequently subject during the last six years. The pains disturbed his sleep for two nights, and a slight febrile condition became developed. The temperature rose to 101.8 on the night of the 26th; but, by the following morning, at ten o'clock (that is, only thirty-nine hours before his death), it had dropped to 97 degs.—this temperature being verified by two observations, and being quite in accordance with the state of the pulse and respiration at the same time. But, almost immediately after this, changes of a more rapid kind set in. A rigor occurred and the temperature rapidly rose, so that by 6 P.M. of the same day it stood at 104.6. The next morning, the temperature was a trifle higher still; the patient was troubled with an irritative cough, and vomited several times, whilst the integuments over the swelling were notably oedematous. About six o'clock in the evening, he began to have frequent fits of dyspnoea (not of a congestive type), which increased in frequency and severity, and seven hours afterwards he died—a partial collapse of the aneurismal swelling taking place at about the same time.

Now, in the light afforded by the *post mortem* examination, we are enabled pretty well to interpret these phenomena. There was, in the first place, no inflammatory condition of any of the organs found, of such an extent as to account for the high temperature; and the attacks of dyspnoea from which the patient suffered were very similar to those occasionally occurring in aortic aneurisms associated with irritation of

the pneumogastric nerve, an example of which some of you may have recently seen in the same ward. I allude to the case of a younger man, named Cook, for whose frequently occurring attacks of dyspnoea laryngotomy had at last to be performed. The attacks, however, persisted almost as badly after the operation, so that, in thirty hours after its performance, he died. In this case, the left pneumogastric nerve was much pressed upon and firmly adherent to the sac, and, although there was little more than a highly congested condition of the left lung, and no trace of inflammation in other organs, the temperature had (in spite of the very imperfect aeration of the blood) risen to 105.6 immediately before death. Two days before death also, as in the case of Faraday, this patient's temperature had been 100 degs. This agreement is very significant, seeing that, in the necropsy of Faraday, we also found evidence of a decided structural change taking place in the left pneumogastric nerve, which was closely adherent to a part of the sac where it had evidently of late been undergoing further attenuation. It seems to me, therefore, very probable that a rather sudden thinning in this direction, with consequent changes in the pneumogastric nerve, may have had much to do with the onset of dyspnoea and vomiting, and also with the rapid development of the febrile condition—all of which symptoms, as before stated, began to show themselves only thirty-nine hours before the patient's death. But the walls of the sac had become more and more attenuated in other parts; so that, even just before the onset of the symptoms above named, the wafer-like membrane over the roughened inner and eroded end of the clavicle seems to have given way slightly, so as to lead to the oedema of the integuments over the swelling, and subsequently to the effusion of blood which was found in the substance of the pectoral muscle. A little later on, the immediately determining cause of death (hastened, doubtless, by the cough and dyspnoea) was, perhaps, the slight rupture which occurred in the equally attenuated lower and anterior part of the aneurism—permitting the effusion of blood into the anterior mediastinum, which was in all probability followed by that partial collapse of the aneurism observed by Mr. Downes only twenty minutes after the patient's death.

II. The Effects of Galvano-puncture in this Particular Case.—The *post mortem* examination showed that the aneurism was very distinctly sacculated, notwithstanding the original absence of all *bruit* over its site. It happened to have, in fact, just that conformation which was peculiarly favourable to its cure by galvano-puncture. Only one vessel—the left carotid—arose from the sac. When the patient came under observation, the circulation through this vessel had already very much diminished since (as we found after death) it had but a valvular communication with the sac. Finally, the circulation through it became obliterated (probably about the 20th), without attracting attention or producing symptoms of any kind. The origin of the innominate and of the left subclavian was altogether outside the sac of the aneurism.

Within the sac we found a large clot—moderately firm and laminated—rather more than half filling the aneurismal cavity. It had no notable attachments, except around its base, where it tended to shut out the stream of blood from the sac. Everything, therefore, seemed favourably progressing towards a cure of the aneurism. But unfortunately the progress of the other changes did not allow time for its completion: the patient died too soon.

But it may naturally enough be asked, Was the clot found after death a result of the galvano-punctures? This is a question well deserving our careful attention.

It has been now thoroughly established by the labours of Dr. John Duncan, Dr. Fraser, and others, that a clot can be readily obtained in blood-vessels by the action of the galvanic current. We know, however, comparatively little about the exact nature of this clot. It is described as being of dark colour, and as differing in appearance from ordinary coagulated blood. As Mr. Holmes has pointed out in his most able lectures on the surgical treatment of aneurism (*Lancet*, 1872, vol. ii, page 327), the clot, which is first formed by electrolysis, is apt at times not to be persistent. Pulsation may cease in a tumour for a time after galvano-puncture, whilst, in a week or ten days, it may again manifest itself—apparently because the clot first formed has subsequently melted away. But, in addition to this clot of somewhat uncertain composition and durability, formable directly by the action of the voltaic current, we have to bear in mind the fact, that even a very minute clot produced in this manner may form the nucleus around which a process of spontaneous coagulation takes place. This process of spontaneous coagulation leads to the formation of a more or less colourless clot, composed, in the main, of interlaced fibres of fibrine containing white blood-corpuscles within their meshes. This colourless clot also grows by the deposition of successive lamellae, and the whole forms a firm, coherent, and somewhat elastic substance, admirably adapted to take off the pressure of the blood, and to act as a thoroughly efficient buffer. Now it was a clot of this latter nature which we found more

than half filling the aneurism, and there are several reasons tending to show that the clot had been recently produced—as an indirect result, in fact, of the galvano-punctures.

It seems obvious that changes took place within the aneurism, as a result of the galvano-punctures. Thus, after the first occasion, a slight *bruit*, not previously audible, was to be heard over the sac itself; there was also apparently an altered incidence of blood-pressure for a time, since the blood began to pass more readily through the valvular opening into the left carotid—the pulsation in this vessel became more distinct. After the second galvano-puncture, there was a slight diminution in the amount of pulsation over the upper end, the *bruit* there still continuing; and then there came a gradual diminution in the flow through the valvular opening of the left carotid, as judged by the diminished pulsation. After the third operation, the flow gradually ceased through the left carotid, and a very marked diminution took place in the amount of pulsation over the lower part of the swelling, where it had been previously increasing.

It seems almost certain, therefore, that the clot which we found in the aneurism had been produced as a result of the treatment to which the patient was submitted; this view being still further confirmed by the fact, that a button-like piece of the same kind of colourless material as that which constituted the larger clot, and of just the same diameter as its apex, was actually attached to the wall of the aneurism in a situation corresponding with the puncture made by the zinc-coated needle. I think there is good reason for believing, indeed, that the apex of this clot had been accidentally separated from the parietally attached portion, during the removal of the aneurism. For the laminated strata of the larger clot, were—to use a geological phrase—“conformable” with the surface of its upper portion. The clot had been formed by the successive deposition of laminae upon its under surface; these laminae becoming larger and larger, so as to give the whole a rudely conical shape, the base of which was already partly attached around its margin to the walls of the sac.

III. *Methods of Procedure in Treatment by Galvano-Puncture.*—The modes of performing galvano-puncture are numerous; and, concerning their respective merits or demerits very opposite opinions have been expressed by different physicians and surgeons. The subject itself is in its infancy; but the time at our disposal now will only allow me to allude to a few of the points concerning which a difference of opinion exists—and this principally with the view of explaining the reasons for the course pursued in the present case, and of suggesting the principles of a safe and tentative mode of attacking sacculated aneurisms of the arch of the aorta or of other great arteries of the body.

The risks specially attendant upon this mode of treatment are thus referred to by Mr. Holmes in the admirable lectures to which I have already referred. He says (*loc. cit.*, p. 665):—“The dangers are principally from two causes—the inflammatory action produced in the sac and the cellular tissue which surrounds it, and the gangrene or ulceration of the skin at the points of entrance of the needles.”

Whichever method we adopt, we must, therefore, strive to reduce these dangers to a minimum. The principal points to be considered in this relation have reference to the nature of the battery to be employed, the strength of the current, the mode and duration of its application, and the size and nature of the needle which it is most desirable to use.

As in this method of treatment we wish to make use of the electrolytic powers of the battery current and to avoid the heat-generating effect upon the electrodes, it is better not to use the more powerful combination and larger plates of a Bunsen's or Grove's battery. We may get all the good and none of the bad effects from the careful use of the battery which we employed in the present case, viz., Foveaux's modification of Smee's battery, made by Weiss and Co.

It is upon the question as to the most advantageous mode of employing the current that the greatest differences of opinion exist. Some writers recommend the insertion of the negative pole only into the sac, whilst the positive pole is applied to the integuments outside. Others recommend the introduction of two needles into the sac, one of which is to be connected with the positive pole and one with the negative, the current being allowed to pass all the time in the same direction, and, in the hands of different operators, being either strong for a short time, weak for a long time, or even strong for a long time. But some of those who recommend the insertion of both poles into the sac, follow Pêtriquin in advising that the direction of the current should be changed from time to time, during the same operation. And, lastly, a third set of writers recommend the method of procedure which we adopted in the present case, viz., the introduction of a needle or needles in connection with the positive pole into the sac itself, whilst the negative pole is applied by means of a wet sponge to the adjacent skin.

Now, before making any comments of my own on these different methods of procedure, I will quote the conclusions arrived at by Baumgarten and Wertheimer, as given by Meyer (*Electricity in its Relations to Practical Medicine*, translation by Hammond, 1869, page 470). He says:—“The numerous experiments made by them on animals invariably gave the following results. 1. If the needle connected with the negative pole was introduced alone into the blood-vessel, while the other needle was applied to the surrounding parts, no coagulation took place. 2. The introduction of both poles produced a slow, rather weak, and rarely perfect coagulation. 3. The introduction of the positive pole alone, with the application of the negative pole to the neighbouring parts, always brought about a rapid and complete coagulation.” It would seem, therefore (if we are to rely upon the observations of the experimenters above mentioned), that the third mode of procedure is the best, even from the point of view of the readiness with which coagulation is brought about, and its satisfactory nature; but it was not for these reasons alone that I was led to adopt this method, and discard those which consisted of the introduction of the negative pole into the sac, either alone or in combination with the positive pole. Whilst these latter methods seem to me to be open to grave practical objections, I know no compensating advantages to recommend them. In several cases in which the negative pole only has been inserted into the sac, blood has actually spirted out or come away in smaller quantity on withdrawal of the needle (see Holmes's Lecture in *Lancet*, 1872, vol. ii, pp. 697, 708), and it has generally happened that bleeding has been more prone to occur through punctures which have been in connection with a negative needle. Then, again, the bulk of gas given off from the negative pole is always much greater than that which appears at the positive pole, and this leads to the formation, in the former situation, of a loose frothy coagulum, as any of you may easily satisfy yourselves by introducing the poles of a battery into a little egg-albumen. Now, independently of the *a priori* undesirability of liberating a larger quantity of gas than is necessary within the circulatory system, this liberation tends to produce effects which the case we have been considering to-day seems to show should be especially avoided. A copious liberation of gas is apt to cause swelling and distension of the aneurism, in confirmation of which I need only refer you to the valuable paper on “The Treatment of Aneurism by Electrolysis,” by Dr. Duncan and Dr. Fraser (*Edin. Medical Journal*, August 1867). Now this of itself is a condition of things which we should generally strive to prevent. On the other hand, if we seek for the reasons which should induce us to employ the negative pole, none are to be found which do not seem to be born of an over-zealous wish to accomplish too much in a short space of time, whilst some of those who recommend it base their reasonings upon an altogether unsafe foundation. They argue that adequate results cannot be produced with the positive pole alone and moderately weak currents, because, under totally different conditions, a wholly different fluid (such as egg-albumen) is not appreciably affected. But they should recollect that the changes in a fluid so chemically complex and unstable as blood, cannot safely be measured by those which will occur in a fluid like egg-albumen. And, moreover, if we be not dealing with a case where galvano-puncture is resorted to with the view of producing a considerable and immediate coagulation, with the view of warding off an actually impending rupture (as in the case recently operated upon in this hospital by Mr. Beck), I think we should always strive to advance slowly and cautiously. We should operate with the view of initiating the formation of a laminated clot by starting the formation of a small nucleus in connection with the wall of the vessel, rather than with the view of producing a large non-laminated clot immediately.

Because, therefore, the introduction of the negative pole into the sac can do nothing more, even according to its advocates, than increase the size and amount of the clot by a material which is admitted to be less durable and tenacious than that formed around the positive pole (Drs. Duncan and Fraser, *loc. cit.*, page 14); because it is very questionable whether this is to be regarded as an advantage in the class of cases which we are now considering; and, finally, because its use seems to carry with it the positive disadvantages of favouring hæmorrhage, of liberating an unnecessary amount of gas within the circulatory system, and of occasionally producing an unsafe distension of the sac itself, I am decidedly of opinion that it is undesirable to introduce both poles into the aneurism.

The method which I should adopt in any future case, therefore, would be that to which I have already had recourse; and you will find that in one of the most satisfactory cases yet on record of decided relief, practically amounting to cure, of an aortic aneurism, the treatment was conducted in this fashion by Dr. McCall Anderson of Glasgow. (*Lancet*, 1873, vol. i, page 211.)

We come now to the question as to the nature and size of the needle to be used in galvano-puncture, and as to the strength of the current.

The needles previously employed by most operators seem to have been larger than it is at all necessary to use, whilst some of them, such as Weiss's modification of Dr. Duncan's needle, are unquestionably very much too large. Recognising the desirability of reducing to a minimum the chance of hæmorrhage through the punctures and of inflammation in the track of the needle, and, at the same time, of diminishing the painfulness of the operation, I was led to use a very small hare-lip needle. Of course, the needle must be large enough, and used in such a manner as to avoid all chance of breakage. The smaller the needle, the greater would be the amount of heat developed in it by the passage of the current, if this were strong and evolved from a large-plated Bunsen's or Grove's battery; but, using such a comparatively weak current as we employed from one of Foveaux's batteries, we get rid of the heat-effects, and also, therefore, of any disadvantage which might otherwise attend the use of a small needle. But, whilst it is desirable to keep down the strength of the current as much as possible, in order to diminish the shock and pain which its passage may occasion (Dr. Duncan, *loc. cit.*, page 8), and also with the view of avoiding, as much as possible, the two special risks of inflammation in the sac, or of inflammation or gangrene of the skin at the seat of puncture, we should do all in our power to increase the amount of chemical action excited by the weak current at the positive pole. For you must understand that the experiments of Dr. Fraser and others have unmistakably established the fact that the coagulation induced in the blood by the passage through it of a galvanic current, is wholly attributable to the electrolytic or chemical changes which the current occasions. If, therefore, after the fashion originally introduced by Steinlein, we cover the positive pole with an easily oxidisable metal, such as zinc, we are enabled to summon to our aid what Faraday always distinguished as the "secondary" effects of electrolysis. The salts as well as the fluid of the blood are decomposed by the action of the current, and a part of the oxygen and acids which are liberated at the positive pole will combine with the zinc and corrode the surface of the needle. Some of the salts thus formed will aid in producing further coagulation around the needle. Corrosion occurred to a marked extent in our last operation, when a current from eleven cells of the battery was allowed to act upon a needle which had been plated with zinc,* although no corrosion was produced in an ordinary steel needle submitted to the same influences. Of course, a gilt needle would be still less amenable to the action of these "secondary" effects of the current.

With regard to the strength of the current, it was found that eleven cells acting for half an hour, although producing no pain or obvious sensation at the time, did induce some amount of irritation of the skin around the punctures. The current from eight cells, however (the battery being in good condition at the time), produced, on the previous occasion, no irritation, so that all traces of this needle-puncture had disappeared in four or five days. This needle also was insulated within half an inch of its point merely by two layers of spirit varnish; and probably, in employing a comparatively weak current such as this, no insulating material is needed. This, indeed, is the opinion of Dr. Althaus. At all events, it seems desirable that the needle should not be pushed too far into the sac, and that the part of the needle actually in the sac and within its coats should not be insulated, because clot should form in contact with the wall of the aneurism, so that it may be left adhering to it on the withdrawal of the needle.

Conducted upon the principles now laid down, the treatment of aneurisms of the arch of the aorta or of other large vessels may, doubtless, in a large number of cases, be safely attempted by galvanopuncture. The treatment should be painless, non-irritating, tentative, and slow; and I believe that it is a method from which, in the future, we may look to obtain the most satisfactory results.

AN UNUSUAL FORM OF BIRTH.

THE following case, happening to me this week, and not being of everyday occurrence, may prove worthy of record.

Mrs. A. was in labour with her fourth child. A foot and hand presented; the second foot was sought for and brought down; at the same time, a head descended. Interference was now suspended, and presently, the pains being vigorous, a head and lower extremities were extruded together from the vagina. The advent of twins was announced, when another pain completed the birth of a single child thus doubled up. It was an eight months' child, and appeared to have been some time dead. The nurse stowed it away in a corner; but, to her astonishment, half an hour after my departure, a feeble cry was heard, and the little creature proved to be alive.

EDWARD GARRAWAY, Faversham.

* The needle was prepared for me by Messrs. Weiss and Co.

ON THE CAUSES OF UNAVOIDABLE HÆMORRHAGE DURING MISCARRIAGE OR LABOUR WHEN THE PLACENTA IS PRÆVIA.

By J. MATTHEWS DUNCAN, M.D.,

Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the School of Medicine, Edinburgh.

(Concluded from page 599 of last number.)

It is well known that the amount of blood lost may be very great, and produce alarmingly sudden death before any placental detachment takes place, and in every variety of placenta prævia; but it is a natural consequence of the laws of spontaneous premature detachment that, as a general rule, the hæmorrhage will be greater in proportion to the centrality of the placental attachment, and in proportion to the largeness of the body to be expelled—in other words, the age and size of the child; and I believe these statements are confirmed by clinical experience. When the placenta is centrally attached, the hæmorrhage begins with the early part of the dilatation of the internal os, and continues as long as in any other kind of previous placental insertion.

When, on the other hand, the placenta is prævia, but does not cover the os internum, nor has its margin close to it, then there may be some dilatation and progress of labour before detaching expansion takes effect or begins.

When the child is not premature and small, but at the full time and big, then the amount of spontaneous premature separation will reach its utmost, and may be considerably more than if the child were small; for a small child will pass through the internal os uteri and lower uterine hemispheroid when these are much less expanded than the degree of expansion, and consequent placental separation, required to transmit a big child.*

Most authors, among whom Legroux† enumerates Duparcque, Desormeaux, Dubois, and Depaul, ascribe to the pains an influence in increasing the hæmorrhage. Legroux, on the other hand, believes the hæmorrhage to be, in unavoidable as also in accidental cases, not systolic, but diastolic; not increased by pains, but arrested by them. He has satisfied himself of this by feeling it duly flow and stop in an actual case, and he points out that the increase of discharge simultaneous with the coming on of a pain is the result of the expulsion of blood accumulated during the absence of a pain; that the increase with the prevalence of a pain is apparent, not real. In these views Barnes‡ coincides. I also agree generally with the view of Legroux; but, in actual practice, I have not observed increase of bleeding with pains in unavoidable and stoppage in accidental hæmorrhage, with any such marked constant regularity even of appearance or seeming, as would lead me to accede to the diagnostic principle, so generally laid down, of increase with each pain in the flooding of placenta prævia and decrease with each pain in accidental hæmorrhage.

At the bedside, it is very difficult to get these various points verified, in consequence of confusion of blood flowing from vessels with blood flowing which has already been for some time extravascular, that is, in the uterus or vagina. One would, *à priori*, expect the following course, and I believe it to be consistent with most observations. Hæmorrhage will take place from vessels, in a more or less considerable gush, during and immediately after every act of separation or of increase of separation, but not necessarily with each pain. Such hæmorrhage will be with pains, not between them. It often happens that, while pains go on hæmorrhage stops for a time, and it is hereby explained. But hæmorrhage may go on between the pains, before the limit of premature spontaneous separation is reached, as in cases of accidental hæmorrhage. After the limit of spontaneous premature separation is reached, the hæmorrhage, if any, will be, as in accidental cases, during the absence of pains or between them. In thus describing the hæmorrhage, reference is made only to hæmorrhage from vessels, not to expulsion of blood from the vagina or uterus, which is so apt to obscure the evidence derivable from observations.

The latter part of this statement is clearly implied in the following passage from Gendrin.§

"Dans les cas où les eaux se sont écoulées peu à peu par une rupture

* "Suivant Puzos, les hémorrhagies sont rarement mortelles avant le cinquième mois de la grossesse. L'expérience confirme tous les jours la vérité de cette assertion." Desormeaux et P. Dubois, *Dict. de Médecine*, article Métorrhagie, 2nd édit., tome xix, p. 663.

† *Archives Gén. de Médecine*, 1855, vol. ii, p. 643.

‡ *Lectures on Obstetric Operations*, 2nd edition, p. 473.

§ *Traité Philosophique*, etc., p. 197.

des membranes opérée dans l'utérus, quelle que soit la partie du placenta qui réponde à l'orifice du col, l'hémorrhagie ne se montre plus que dans les intervalles des contractions utérines, et encore dans ces cas est-elle toujours peu considérable, et ne devient-elle véritablement alarmante que lorsque la matrice tombe dans l'inertie."

In hæmorrhage from placenta prævia during labour, as in all cases of flooding during pregnancy or labour, uterine action will constrict the bleeding vessels, and produce diminution of the area fitted to discharge blood; and although, in cases of unavoidable hæmorrhage, expansion of the bleeding area in one direction must go on during early labour, yet uterine action, by diminishing or contracting it in another direction, must always keep the area liable to bleed less than it would be were the uterine action or pain absent. Expansion without uterine action or pain must enlarge the bleeding area. But expansion goes on under the influence of uterine action or pain. Expansion under the influence of uterine action or pain may possibly increase the area liable to discharge blood, but instead of increasing it, it probably diminishes it. Certainly, the effect of the pain or uterine action must be to make the area liable to bleed less than it otherwise would be. Besides, the statements already made in explanation of cases of placenta prævia, which pass over without considerable bleeding, and the further considerations to be hereafter stated regarding the arrest of the bleeding, all tend to support the view that uterine action or pain does, *per se*, restrain or stop the hæmorrhage instead of increasing it, as most authors allege.

I am not, in this paper, discussing the subject of the arrestment of the hæmorrhage, but that of its causes. Yet to avoid misconception, I make a slight digression. I do not say that uterine action or pain stops the hæmorrhage. It may, I believe, have this beneficial effect in some cases. It certainly, always and in every case, does, *per se*, tend or help towards its arrestment, and not indirectly, but directly, by constricting vessels and diminishing the area liable to discharge blood.

Indirectly, in the early part of the first stage of labour, uterine pain causes or increases hæmorrhage by producing separation or increasing its amount, as has already been said. But this increase of hæmorrhage is not the direct result of the pains nor even a regular consequence of their supervention.

Simpson and Barnes, erroneously believing that the cervix is the placental site, and knowing that this part does not contract during and immediately after labour, as the body of the uterus does, have been led to unnecessary and misleading reflections based on these anatomical points. Simpson* calls attention to the rarity of bleeding when the placenta is separated from this uncontracting portion of the uterus. Barnes† describes the cervix as liable to paralysis for a time, and thinks this state is more liable to occur in labour with placenta prævia, and that it is then doubly dangerous. But such reflections on the influence of the placental site on the hæmorrhage are to be utterly disregarded, because founded on anatomical error. The cervix is never the placental site.

It is desirable, however, to have more knowledge of the condition of the placental site in placenta prævia, after premature spontaneous separation. In general features its condition is, no doubt, closely similar to the placental site after separation anywhere else. But what are its peculiar features?

While the area of the placental site is diminished in the longitudinal or meridional direction, it is much stretched and extended in the direction transverse to the uterine axis. The shrinking in the longitudinal direction is the direct result of muscular action, while the expansion in the transverse direction is passive, or a result of relaxation and an indirect result of the same muscular action. The same change of shape will affect the sinuses and their orifices. From these, blood may be discharged when the uterus is not in action, especially if the blood pressure is great. It appears to me that the peculiarity of shape of the vascular orifices and the peculiarity of the muscular action in this part, in early labour, in cases of placenta prævia, will have little or no special effect on the liability to hæmorrhage from it. In other words, the longitudinal shrinking, in cases of unavoidable hæmorrhage, will be as efficient in checking hæmorrhage as the corresponding amount of shrinking in every direction which may occur in certain cases of accidental hæmorrhage, or the longitudinal shrinking, without transverse expansion which may occur in other cases of accidental hæmorrhage.‡ Many authors, among whom I mention Legroux, § regard the openings

of the uterine sinuses in cases of placenta prævia as being made to gape (*béants*) by the peculiarities of the uterine retraction. But this is plainly erroneous; for while the longitudinal contraction will tend to close the vessels by bringing the upper and lower edges of their openings nearer to one another, so also will the transverse expansion, while at the same time it may render somewhat more distant the ends of the transverse diameters of the openings, giving them a more and more elliptical shape.

The more elliptical form, while it involves diminution of area, not increase or gaping, may perhaps involve slight increase of area above what would be the case were there only longitudinal shrinking without transverse expansion. But truly the state of the mere mouths or openings is a matter of little importance. They are big enough, when at their smallest, for the injurious purpose of transmitting a large quantity of maternal blood. The important matter is the alteration of shape of the sinuses, and this is outlined by the shape of the orifices. Now, the whole of this alteration of shape is favourable not to increased discharge of blood, but to its diminution; and there can be little doubt that any possible increase of area by transverse expansion will have much less effect in favouring increased discharge of blood than the change of shape will have in producing diminution of discharge. All this is a matter of hydraulics, and the principle involved may be thus stated. Diminution of area of a tube, with approximation of its walls, such as would be produced by pressure on the tube in one direction, will have very much more effect in diminishing the flow of a passing fluid than the same amount of diminution of area without change of mere shape, or such diminution of area as would be produced by equal pressure in all directions on the outside of the tube.* It must be admitted that, at present, it is impossible to apply this principle of mechanics exactly to the case on hand, but it must have important bearings such as are here pointed out.

The last cause of hæmorrhage, to which I shall refer, generally acts indirectly, but it may be even a direct cause of vascular rupture and hæmorrhage: it is the condition of the abdomen as to retentive power. When this important power is absent or annulled, and still more when the abdomen has an expulsive tendency, as in cases of hernia or of uterine procidentia, bleeding, in cases of placenta prævia, may even be induced, and certainly will be greatly encouraged. Mere plethora will, by loss of blood, soon be—for the time at least—destroyed, and no ulterior increase of hæmorrhage will arise from it. But when the mechanical conditions of the abdominal cavity are such as to favour evacuation, bleeding, in such cases as we are now considering, may receive a persistent and very baneful encouragement. In other words, the increase of blood-pressure due to mere local hyperæmia or general plethora may cause hæmorrhage, but will soon be annulled; whereas the increase of blood-pressure due to mechanical conditions of the abdomen may persist and favour the continuance of bleeding till it is checked by means sufficiently powerful; and this will be as true in cases of accidental and *post partum* hæmorrhage as in cases of unavoidable hæmorrhage. I may here add, that the beneficial influence of a vaginal plug is sometimes probably quite as much owing to its changing the mechanical conditions of the abdomen as to its mere mechanical pressure, exerted directly or indirectly on the bleeding vessels.

It appears to me that absence of retentive power in the abdomen, or the existence of an expulsive force, is the cause of those calamitous departures from the general laws of floodings which result in excessive or fatal losses. When this influence is at work there is great probability that the hæmorrhage will not be arrested by any of the ordinary causes of this fortunate event which operate during labour. The blood-pressure, direct or indirect—direct through the right side of the heart, indirect through impeded returning current—will keep blood flowing, chiefly in the absence of pains, from the open uterine sinuses, and perhaps from the marginal sinus of the placenta.

This cause of bleeding is illustrated in many conditions. One woman may have wound of a labium with trifling hæmorrhage; another, probably having varicosity of veins, produced by the same cause, will die of a slight wound entering such a vein in the same situation. One woman will lose little blood from a large wound of a vein in the leg; another, even while in the horizontal position, may die of bleeding from a very small opening in the same situation. A woman having an uterine fibroid, with a sinus on its surface opening into the uterine cavity, may have no bleeding, except when the blood-pressure is increased by standing or by local congestion; so most women will have no bleeding, in cases of placenta prævia, after the completion of spontaneous premature detachment, unless there be an unusual amount of blood-pressure in the uterine region.

* This seems to follow at once from the fact discovered by Poiseuille, that, under given circumstances, the flow through tubes of circular section is as the fourth power of the radius. This note and the relative text I owe to Professor Tait.

* *Selected Obstetrical and Gynaecological Works*, p. 237.

† *Lectures on Obstetric Operations*, 2nd edition, pp. 401 and 421.

‡ The shrinking of the placental site, when it is above the region of spontaneous premature detachment, and below the fundus, must be almost entirely in the longitudinal or meridional direction. In the region of spontaneous premature detachment there is the same shrinking, but it is accompanied by transverse expansion. When the placental insertion is the upper uterine hemispheroid or fundus, the shrinking will be in every direction.

§ *Archives Gén. de Médecine*, 1835, tome ii, p. 653.

AN URETHROTOME FOR INCISING NARROW STRICTURES.

By BERKELEY HILL, F.R.C.S.,

Surgeon to University College Hospital, and for Out-patients to the Lock Hospital.

HITHERTO, among the variety of instruments that have been constructed for internal urethrotomy, none, so far as I know, can be used for strictures through which a No. 6, or, at most, a No. 4 catheter cannot be passed. The treatment of such cases, whatever method of dilation be selected, does not usually present much difficulty; but, with smaller passages, the difficulty of introduction and the amount of suffering to be contended with have induced me to seek for some means by which a narrow stricture, when an instrument has been passed through it, may be at once enlarged to the normal capacity. This may be done by *internal incision* or by *divulsion*; which of the two proceedings should be adopted in any given case, depends upon certain points that are now pretty well agreed upon.

The instruments which I have here are both manufactured and, to a great extent, devised by Mr. Coxeter, who has exerted much skill in constructing instruments to carry out my suggestions—one for cutting, the other for breaking through, the stricture. Before introducing the instrument for enlarging the stricture, the distance of the contraction from the meatus urinarius should be ascertained by passing an olive-headed bougie with a slender graduated stem. This being done, both

instruments are passed in the same manner. A guide bougie of fine whalebone, about one-fourth the calibre of a No. 1 catheter, is passed through the stricture to the bladder; should the operator be in doubt if he have reached the bladder, a fine silver catheter, having its end tunneled with an eye, is threaded, and, thus guided, the catheter is slipped along the bougie and through the stricture till the bladder is reached. Urine then runs through the catheter, and makes it certain that the instruments are in the right track, when it may be withdrawn, leaving the bougie *in situ*. However, in most cases, this precautionary exploration may be omitted.

The next step is to pass the enlarging instrument along the guide in the same way. The incisor consists of a slender grooved sound of steel, with the ordinary curve, and provided with a tunneled end. In the groove runs this little rod having a blunt end fixed to it by a joint. When run along the groove of the sound, the jointed end and rod are quite concealed until they reach a point $\frac{6}{8}$ inches down the shaft. Here the groove becomes shallow and ceases; thus, the jointed end is thrown out and projects about one-tenth of an inch beyond the surface of the sound. (See B in the figure annexed.) It thus forms a little catch on the sound, which will travel along the urethra until it reaches the stricture, against which it will be caught. After the grooved sound has been passed along the guide, through the stricture, the little rod may be run down, and its end made to project into the urethra behind the stricture. By drawing forwards the sound thus armed, the posterior limit of the stricture is ascertained; the anterior limit is already known. The little rod is then withdrawn and replaced by another which carries, instead of a blunt point, a knife attached by a joint in the same way; this knife, concealed in the groove of the sound, travels down until it has reached the place



A. The knife. B. The projection to ascertain the posterior limit of the stricture.

where the groove grows shallow. (See A in the figure annexed.) This termination of the groove being already carried beyond the posterior limit of the stricture, the knife is thus made to project to a distance regulated by a screw at the handle against the floor of

the urethra; and, if the sound be drawn forwards, the knife cuts its way until the whole stricture is divided. When the anterior limit of the stricture is reached, the knife is again brought within its groove, and the sound is withdrawn. The knife projects half an inch as a maximum, but, by adjusting the screw, can be set to any less distance. The sound, with the knife lying in its groove, is of less calibre than a No. 2 catheter, being between that and No. 1 of Weiss's catheter scale. After the incisor is withdrawn, to make assurance more certain that the stricture is thoroughly divided, the split sound of the wedge-dilator may be passed, and the wedge which corresponds to the natural capacity of the urethra No. 14 or 16 may be run through the divided stricture.

This wedge-dilator, which I had the pleasure of showing to the profession at the Plymouth meeting, acts on the same principle as that so well known and so successful in the hands of Mr. Barnard Holt. It differs in being of simpler construction, being a wedge at the end of a rod, which, being pushed between the blades of a split sound, separates them to the required extent, and thus splits the stricture it passes through.

My dilator can be made as small as a No. 14 catheter, is easily passed along the canal, and, when through the stricture, the wedge requires very little force to separate the blades; for the surfaces of friction are together little more than half an inch in extent, instead of being the whole distance traversed by the instrument both within and without the separating tube, as in Mr. Holt's dilator.

At the beginning of the paper, I said that, when forcible enlargement is selected, the rules that influence the adoption of a cutting or a splitting instrument are tolerably well known. I may, perhaps, be allowed to recapitulate the most important.

1. All contractions in front of the bulb—that is, in the penile part—should be cut, not split, because cutting causes less cicatricial tissue to be formed than does splitting; this is important where the layer of erectile tissue is thin and easily replaced by fibrous tissue, by which erection at this point may be wholly lost.

2. Whenever the contraction is very elastic, it stretches rather than breaks before the wedge, and is best divided by a sharp edge.

3. Whenever the induration matter extends more than half an inch along the passage, or is very thick, it is usually best to make an incision through it.

In other cases, as divulsion is simpler and needs less precaution, it is on those accounts generally preferable to incision.

THE TREATMENT OF POST PARTUM HÆMORRHAGE.

By ROBERT BARNES, M.D.,

Obstetric Physician to and Lecturer on Midwifery at St. Thomas's Hospital.

THE question of the treatment of *post partum* hæmorrhage is one so momentous, so many lives literally hang upon the decision arrived at, that I feel I am not at liberty to refrain from offering some observations upon the papers of recent contributors. In doing this, I depart, almost for the first time in my life, from the rule not to enter upon any discussion which might bear the semblance of controversy. Great questions in practice, like this, must eventually be settled by clinical results. To experience, the appeal as to the value of perchloride of iron or some equivalent styptic directly applied to the bleeding uterus, must ultimately be made. A war of words, ingenuity in criticism, will do no more than obscure the facts and retard the full establishment of the truth. And this is the present danger. The not unreasonable prejudice against the resort to a bold and novel practice has been fostered of late by the timid protests of routine teachers on the one hand, or by the subtle argumentations of Zoilistic critics on the other. These combined forces might sway certain minds to stand upon the old ways, however treacherous, and thus to sacrifice lives that might be saved.

It is impossible for me to discuss the many papers, some of sterling value, such as those of Dr. Whittle, Dr. Bassett, and others, upon the anticipation and treatment of *post partum* hæmorrhage. I limit myself on this occasion to the paper of Dr. Boyd Mushet in the last number of the JOURNAL, because it seems to express some current errors as to fact and theory which require correction. He advocates a plan which he "deems novel." This is, "to inject cold water freely into the uterus." That this has its value, is well known, for it is far from novel. But when he goes on to say that "the virtues of the perchloride of iron are mainly to be ascribed to its vehicle, cold water," he emits a perfectly arbitrary theory. Surely Dr. Mushet has never used the perchloride. The choice between cold and styptics depends upon our appreciation of two entirely different physiological conditions. Styptics will act when cold will not. When the diastaltic system

is dead to irritation, when life is almost ebbing away, when no known power can compel the uterine muscle to contract and thus to close its bleeding vessels, styptics, which act chemically, will still seal up the mouths of those vessels and corrugate the inner surface of the uterus.

For want of experience, perhaps, of the more desperate forms of hæmorrhage, this fundamental distinction has not made sufficient impression upon some men. I frankly accept their assurance that they have never failed to control hæmorrhage by compression of the uterus or aorta, by ergot, or by cold. I hope they will equally accept my assurance that I have seen many cases where men of the highest ability and experience had failed to subdue hæmorrhage by these means, and where, at this juncture, the perchloride of iron has instantly rescued the patient from impending danger.

In my *Obstetric Operations*, I have insisted as forcibly as I could upon this classification of cases, because I think that upon it rests the justification for urging a new plan of treatment. So long as cold acts, use it; but, when cold fails, use iron, which will not fail. Each has its use; each must have its turn. I am afraid Dr. Mueset has not done me the honour to read my book. At p. 461, 2nd ed., is the following passage. "Cold is more effectual if applied internally. Levret was, I believe, the first who used ice in this way. Perfect, says Levret, 'hit upon a very odd and ingenious expedient; he introduced a piece of ice into the uterus, which, being struck with a sudden chill, immediately contracted and put a stop to the hæmorrhage.'" A graphic clinical description of reflex action before the theory was known! Tyler Smith, to whom the theory and practice were alike known twenty-five years ago, advocated the injection of iced water; and, notwithstanding his early teaching and long experience, this keen observer and sagacious practitioner in the latter years of his life resorted to perchloride of iron.

I long used cold-water injections. At p. 472 of my book is the following passage. "At one time, it was my habit to wash out the uterus with iced water first. I now prefer not to do this. . . . At the period when the perchloride is especially indicated, the exhaustion is generally so great that the injection of cold water is ill borne. I am inclined to think that, under the circumstances, the injection of cold water is more hazardous than the injection of perchloride of iron."

This leads us to the consideration of Dr. Mueset's statement that "he has no dread of cold-water injections; no compunctious fears of pyæmia or metritis, or irritant influence on the uterine tissues or sinuses, as he has never witnessed any injurious effect from their employment, which cannot be affirmed of the perchloride, if we trust the evidence adduced at a former meeting of the Obstetrical Society." I have italicised the concluding sentence in order to point my assertion that the "evidence adduced" cannot be trusted. Few were there who heard the discussion referred to, but were satisfied that the positive evidence of good done by the perchloride far outweighed the doubtful evidence against it. A report of the proceedings of a learned society is often very like a newspaper report of a trial in a court of law. One must see and hear and know the witnesses in order to judge of the value of their evidence; and, even when we have formed a just estimate of evidence, we must be careful not to build a larger structure of deduction upon it than it will bear.

I will not contend that an injection of perchloride of iron may not be followed by pyæmia. But it is one thing to show that pyæmia has followed such injection, another to prove that the injection was the cause. But, let it be granted that the injection has caused pyæmia, is the remedy thereby absolutely condemned? Is no account to be taken of the numerous cases—for numerous they now are—in which life has been saved by it? Certainly, after severe hæmorrhage, under any treatment, or no treatment, the liability to pyæmia is great. That perchloride of iron adds sensibly to that liability is not proved: unless, indeed, we take the case of a woman who, but for the use of perchloride, must have died of hæmorrhage. If she have pyæmia, it may truly be said that, but for the perchloride, which enabled her to survive the immediate peril of flooding, she would not have had pyæmia. But pyæmia has often occurred after the use of cold water. Will it be said that the cold water caused the pyæmia? I will not affirm that it did; but of the frequent sequence there can be no doubt. Scarcely a week passes without my having the opportunity of seeing some case of pyæmia after labour at term or abortion where iron had not been used. In some of these, experience justifies me in the belief that pyæmia would not have taken place had the iron injection been used in time to lessen the loss of blood, and thus to spare the conservative forces of the system.

I still feel justified in repeating the formula expressed at p. 474 of the work quoted.

"We have three stages of hæmorrhage to deal with. 1. There is hæmorrhage with active contractility of the uterus. Here the diastaltic

function may be relied upon; excitants of contraction find their application. 2. There is the stage beyond the first, when contractility is seriously impaired, or even lost. Here excitants of contraction are useless; our reliance must be upon the direct application of styptics to the bleeding surface. 3. There is the stage beyond the first two, where not only contractility, but all vital force is spent, where no remedy holds out a hope unless it be transfusion; and even this will probably be too late."

The practical directions are as follows. Take a Higginson's syringe, to which is connected a uterine tube nine or ten inches long. Mix in a deep basin four ounces of the strong liquor ferri perchloridi of the *British Pharmacopœia* with twelve ounces of water; pump through the delivery-tube two or three times to expel the air; then pass the delivery-tube into the uterus, so that its end touch the fundus of the uterus; then pump gently and slowly; the styptic fluid will thus bathe the whole inner surface of the uterus.

Had I the smallest misgiving as to the value or general safety of the practice for which I am mainly responsible, I would, without hesitation, retract all I have said, and avow my error. I have not the vain ambition to set up a "currus triumphalis" of iron. But knowing that lives dear to me, and lives dear to others, have been saved by it; and still believing that the benefits far outweigh the evils springing from it, I again commend the practice to those who have the courage to try a new remedy in desperate circumstances, and who fear to let a woman bleed to death relying too long upon means sanctioned by routine.

As I have said at the beginning, this momentous question must be decided by facts. From every quarter of the compass assurances flow in that lives have been saved by it. I earnestly appeal to every man who has had a fatal case of flooding after the use of perchloride of iron to publish as full an account of it as possible. At some future time I shall endeavour to sum up the evidence, giving faithfully the records of my own observations and reflections.

ON THE USE OF PERCHLORIDE OF IRON IN POST PARTUM HÆMORRHAGE.

By LOMBE ATTHILL, M.D., *Lecturer in Midwifery, King and Queen's College of Physicians; Obstetric Physician to the Adelaide Hospital, Dublin; Vice-President of the Dublin Obstetrical Society.*

THE treatment of *post partum* hæmorrhage, being altogether a distinct subject from the possibility of anticipating and averting its occurrence, was not considered in the papers recently published by Dr. Whittle and myself in this JOURNAL. The question is, besides, so important, that, to do it justice, it should be treated of at length. I shall, therefore, in response to Mr. Moorman's appeal, merely state my own experience of the results of the use of the direct application of the solution of the perchloride of iron to the interior of the uterus, when used for the purpose of arresting *post partum* hæmorrhage.

Since I commenced the practice of injecting this styptic salt into the uterus in the class of cases under consideration, I have not had a fatal case of *post partum* hæmorrhage, while I believe I have saved several lives which were in great jeopardy. In one case only did death subsequently occur. The patient was a lady, a member of a highly strumous family, who herself, prior to the occurrence of labour, was in very bad health. Sudden and uncontrollable hæmorrhage set in immediately after the birth of the child. Not a moment was to be lost, or my patient would have been beyond the reach of medical aid. What the exact strength of the solution I employed may have been I know not, for it was made by guess. I injected about four ounces of it. The hæmorrhage was instantly arrested, and the patient did well for five days; then symptoms of pyæmia set in, and she finally died. I do not believe that her death was due to the injection of the perchloride; but I relate the case as it occurred. Of this I am sure—that she would have died in a few minutes from hæmorrhage, had it not been restrained by the action of the perchloride. I now always carry the perchloride of iron with me, and, if any excessive loss occurs, use it as directed by Dr. Barnes in his work on "Obstetric Operation." I believe the satisfactory results which I have met with are due to my using the solution promptly, and in not waiting till the patients were in a state of collapse. For the purpose of injecting it, I use a common syphon syringe, to which an ordinary vaginal flexible nozzle is attached. This should be carried fairly up to the fundus of the uterus. I generally find that four or five ounces of the solution are sufficient. As to the strength, Dr. Barnes recommends that four ounces of the strong liquor ferri perchloridi be added to twelve of cold water. I generally use it stronger—about two parts of water to one of the liquor. One precaution only is needed,

namely, to take care that the tube is passed well into the uterus before any of the fluid is injected; otherwise the vagina will be corrugated and the os uteri contracted from the effects of the iron, the styptic will not reach the interior of the uterus, and great difficulty will be experienced in any subsequent efforts to introduce the tube. The same reason, namely, the effect produced by the action of the styptic on the vagina and os uteri, renders the application of the iron by means of a sponge difficult and unsatisfactory.

In conclusion, I believe the injection of the perchloride of iron to be not only a justifiable, but, in general, a safe mode of treating severe cases of *post partum* hæmorrhage, and that it, or the use of some similar styptic, can alone be relied on in severe cases.

The great injury to which steel instruments are liable, when kept in a bag which also contains a solution of the perchloride of iron, has induced me to carry the salt in the solid form, the bottle containing it being enclosed in a box-wood case.

ON THE REMITTENT FEVER OF THE WEST COAST OF AFRICA.

By JOHN M. HUNTER, M.D., Staff-Surgeon, R.N.

IN answer to a request that medical officers who have had experience of fever on the African coast would forward the results of their observations, I beg to send some notes, made in the course of four years' service in various men-of-war, during which period nearly every port from Sierra Leone to Benguela was frequently visited.

The majority of cases of fever seen on board vessels that cruise along the coast are cases of simple continued fever, resulting from the effects of the sun or over-fatigue, or from careless exposure to chills at night. The attack commences with rigors, frontal headache, hot skin, coated tongue, and can only be diagnosed from remittent fever by the progress of the case, or, as I believe, by the temperature of the skin, as shown by the thermometer immediately on the hot stage supervening. The temperature then is always under 102 deg., generally under 101 deg.; and with a saline aperient and a few doses of quinine, the febrile symptoms disappear in from twenty-four hours to three days; strength is rapidly regained, and usually the period on the "sick list" is from three to eight days. But if the vessel anchor near the mouth of a river, or herself or boats go up it, or if any of her crew sleep ashore in a malarious district, being unprotected by quinine, a very different disease is developed. The initiatory symptoms were much the same as in the simple continued, only generally of a severer character. There was a general feeling of *malaise* for several days; then (often in the evening) chilliness, rigors, severe frontal headache, and vomiting; the skin became dry and hot, the tongue was coated with whitish-brown fur, and the bowels were usually constipated. Occasionally diarrhœa existed; but this appeared to have no beneficial effect on the severity of the symptoms. The pulse was full and bounding, from 110 to 120; sometimes though rapid, it was not full. The temperature in the axilla was from 103 to 105.8 deg. So confident did I become in the indications of the temperature, as shown by the thermometer, that, when the temperature at the outset was under 102 deg., I felt certain I had to deal with only a case of febricula, that would be well in a few days; and, on the other hand, when the temperature was over 103 deg., I knew that I had met with a case that would present serious symptoms and have a slow convalescence. The febrile condition generally continued for a period of from four to fourteen days, or even longer—remissions usually occurring in the morning, and in some cases being more marked every second day. In a few cases only have I seen the head-symptoms so serious as to appear likely to be the cause of death. In all the others, the excessive irritability of stomach which caused all food and drink to be rejected immediately it was swallowed, the great exhaustion from this, and the weakness arising from the continuance of the febrile condition, occasioned the fear that death would result from failure of the heart's action during some slight exertion—the most usual manner of death in cases which terminate fatally.

I did not use the thermometer till the year 1870; but I used it twice a day, at 9 A.M. and 5 P.M., in every case that showed febrile symptoms, and I here give four tables, which are from fairly typical cases. No. 1 was a case of simple continued fever, convalescent on the fifth day. No. 2 was a case of remittent, showing the second day remissions; on the fourteenth day, when the fever subsided, the patient was as helpless as an infant. No. 3 was a case of remittent, complicated with dysentery. At one time recovery appeared hopeless in this case: beef-tea increased the dysentery, and Liebig's extract and wine were the only foods used. No. 4 was a case where the fever had a short course,

but the resulting feebleness was considerable and long continued; and during the first week the pulse had the peculiar jerky hardness which I have found to be a sign that a very little exposure or fatigue will cause a relapse. I have no fatal case to record out of a considerable number, though many were so shattered in health as to necessitate their being sent to England. The naval statistics of the West Coast of Africa for the year 1870 show that the deaths from continued and remittent fever were only .6 per cent. of the cases—a result, no doubt, greatly due to being able to remove bad cases quickly from the focus of the disease, but still a result which is very encouraging.

Tables of Temperature in Simple Continued and Remittent Fever.

TABLE I.

Days.	Temperature.		Pulse.	
	M.	E.	M.	E.
1.	—	100.1	—	94
2.	100.8	98.5	95	95
3.	98.5	97.3	100	82
4.	97.3	97.3	72	76
5.	98.2	98.3	76	—

TABLE II.

Days.	Temperature.	
	M.	E.
1.	—	105.8
2.	101.8	101.5
3.	101.5	105.6
4.	100.4	99.4
5.	102.7	102.9
6.	100.6	103.4
7.	103.5	101.8
8.	102.6	104.4
9.	101.5	98.8
10.	103.4	99.5
11.	101.6	99.5
12.	98.4	100.8
13.	98.4	93.6
14.	98.4	98.4

TABLE III.

Days.	Temperature.		Pulse.	
	M.	E.	M.	E.
1.	—	99.5	—	82
2.	103.2	103.4	82	82
3.	99.8	102.8	78	78
4.	99.4	103.2	64	74
5.	100.4	103.6	64	84
6.	99.4	101.6	66	78
7.	100	101.4	78	74
8.	99	101	68	76
9.	97.8	99.8	68	72
10.	98.8	97.9	78	50
11.	97.2	97.2	68	62
12.	98.4	97.2	62	68
13.	98.4	98.4	62	64
14.	98.2	98.2	62	62

TABLE IV.

Days.	Temperature.	
	M.	E.
1.	—	105.4
2.	98.8	97.4
3.	100.4	102.3
4.	100.4	98.4
5.	96.6	96.4
6.	97.4	97.2
7.	98.4	98.4

Remittent fever is non-contagious, and the period of incubation generally varies from three to twelve days. The treatment pursued was much the same by all the medical officers of the squadron, varying a little as regards large and infrequent, or small and frequent, doses of quinine. It is scarcely necessary to mention that no one used blood-letting; the rapidly supervening prostration due to the effects of the fever itself, and the dire results of its use in former times, were sufficient to prevent this. The Portuguese doctors usually give an emetic at the commencement, but uncontrollable irritability of stomach is apt to follow this. I pursued the following course. The patient was placed in a cot on the upper deck, or in a well ventilated part of the ship, and told to exert himself as little as possible. His hair was cut off, and single strips of calico, dipped in vinegar and water, were applied over the fore part of the head; a grass-mat pillow helped to keep the head cool, and always gave much relief to the severe headache. If there were any vomiting, thirty minims of chlorodyne were given, and a mustard plaster applied over the stomach. As soon as the vomiting ceased, quinine, in four-grain doses, was given every four hours in the following form.

R Quinæ sulph. gra. iv; acid. citrici gra. iv; magnes. sulphatis gra. x; syrupi aurantii 3 ss; aquæ 3j; fiat haustus quatuor quaque hora sumendus.

In about twelve hours the bowels usually were opened; if not, about three drachms of sulphate of magnesia were given in the form of draught, and, if necessary, an enema also was used. If there were diarrhœa, the sulphate of magnesia was omitted from the mixture; and if vomiting ensued, about fifteen minims of chlorodyne or compound tincture of chloroform were given, which generally succeeded in stopping it. In one case, the vomiting was so persistent that I had to inject one-third of a grain of muriate of morphia subcutaneously, which had the desired effect; and the patient's skin, which had become yellow, resumed its natural colour in twenty-four hours. Cool champagne in small quantities was also found useful in allaying the stomachic irritability. The underclothing was frequently changed, and an occasional sponge-bath of tepid water, tinged with permanganate of potash, was found to be very refreshing. One of the most important points was the dieting of the patients. Stimulants were well borne, and were found to be beneficial in quantities of about four ounces of brandy, or six to eight ounces of port, or ten ounces of champagne, daily. Beef-tea (filtered through blotting-paper to remove the fat, if there were nausea), Liebig's extract, preserved chicken, milk, and eggs beaten up, were given frequently and in small quantities. The desire for food was gone, and in many cases the difficulty of retaining nourishment was the chief element of danger in the case.

The patient was strictly forbidden to sit up during the later stages of the disease, as many cases have been lost through neglect of this rule, even when the actual fever had left the patient. Convalescence was often very tedious, and in one case complicated with sunstroke. Paralysis of the lower limbs remained for so long as two years, and in another dementia supervened. In two cases, where carbonate of ammonia was used as a stimulant, a typhoid condition came on, and departed when the use of the drug was given up.

As regards prevention, I have many reasons for placing great confidence in the daily use of the quinine. On one occasion, a boat's crew went up the river Congo as far as Embomma, a distance of fifty miles. Each person took four grains of quinine once and sometimes twice a day; and though they were nearly a week in the river, not one had fever. On another occasion, a boat's crew went up the same river as far as Ponta da Linha, a distance of thirty miles, and were absent about four days. Owing to the hurried manner in which, from pressing circumstances, the boat was sent away, no quinine was taken, and soon after their return two very severe cases of remittent fever appeared amongst the ten who formed the boat's crew. The barque *Camilla*, in 1868, anchored in a part of the River Congo, called Banana Creek, and I was asked to visit her. The crew consisted of Englishmen and natives of the West Indies. They had not used any quinine, and every one was ill, excepting a little English boy, who afterwards told me that he had run away from school to join the ship. The first mate was dying and was quite insensible, and unable to swallow anything. The second mate had been constantly sick for three days, and was very weak, but quite collected and sensible, endeavouring to crawl about the ship and do the light duty required in port. I made up some quinine mixture, gave them chlorodyne, and also carbolic acid for the bilges, which were foul, and did all I could for them in one day. We left the place the same evening; but I afterwards heard that the second mate recovered; the first mate and another died, and one white seaman I afterwards saw at Thabenda in a condition of dementia, the result of remittent fever.

CLINICAL MEMORANDA.

FÆCAL ACCUMULATION.

Mr. S., aged 60, had been more or less ill for two years, with gradually increasing distension of the abdomen, accompanied by some emaciation, loss of appetite, much flatus, and confined bowels. On examination, I detected an immense tumour filling the whole of the abdomen, except a small portion of the left lumbar region, where there was tympanitis. It passed upwards under the ribs, downwards into the pelvis, was perfectly smooth, very hard, and quite immovable; over a small part, to the right of the umbilicus, was indistinct resonance; and somewhat below this, I felt a coil of small intestine between the tumour and abdominal wall, evidently filled with fecal matter. By firmly pressing the finger against the swelling, at different parts, I found that a slight indentation was made, though with difficulty. The superficial abdominal veins were much distended. The rectum was full of large hard lumps. My diagnosis was fecal accumulation to an extent I never saw nor heard of before. Large injections of warm water daily for three weeks, aided by small doses of belladonna and nux vomica, brought away a most astonishing quantity of fecal matter, and resulted in the total disappearance of the tumour, and the restoration of the patient to perfect health. I may add, that homœopathy had had a lengthened trial in this case.

THOMAS COLE, M.D. Lond., M.R.C.P., *Physician to the Royal United Hospital, Bath.*

THERAPEUTIC MEMORANDA.

THE USE OF PHOSPHORUS.

MR. J. ASHBURTON THOMPSON is polite enough to say that some details of those cases in which I found phosphorus of no value would prove interesting to the members of the Association, and I would gladly comply with his request, if I had anything novel to remark upon the general aspect of these diseases. Such, however, is not my fortune; and hence a summary of the cases may, perhaps, be considered sufficient.

Locomotor Ataxy.—Dr. Thompson may quite fairly doubt my right to speak of the valuelessness of phosphorus in this affection, as a sufficient number of cases are not likely to fall beneath the care of any single surgeon. It so happened, however, that, some time ago, I was much

interested in diseases of the spinal cord; many of my professional friends very kindly gave me opportunities of seeing, and in some instances treating, cases of their own. In this way, I obtained notes of eighteen cases of locomotor ataxy, in all of which, first, nitrate of silver and then phosphorus were tried, but none of them, in any case, seemed to derive the slightest benefit.

Melancholia.—I treated three cases with phosphorus. There was no amendment in any of them; but one gentleman, a solicitor, of a highly nervous temperament, suffered, as a result of the treatment, from a severe and obstinate attack of dyspepsia.

Impotence.—During the last six months, two or three cases of impotence have presented themselves in the out-patient department of the Manchester Infirmary: to all of them I have administered phosphorus, but they have failed to derive any benefit from the drug.

Mercurial Tremor.—A very well-marked case of this disease presented itself among out-patients of the infirmary some months ago, who recovered under the use of iodide of potassium, after phosphorus had completely failed.

I should like, however, before closing this memorandum, to mention a disease which appears to be influenced in the most beneficial and rapid manner by the administration of phosphorus—I mean bronchocœle. I have only notes of one case, but this is an instructive one. The patient, a girl aged 20, had an increasing goitre for some months, when she was placed on the usual iodine treatment, with no benefit whatever. After a month's interval of no treatment, phosphorus was given in doses ranging from the one-fiftieth to the one-twentieth of a grain, with the effect of directly causing a diminution in the size of the gland; the decrease went on steadily until the neck, in a month, measured two inches less than it did before the commencement of the treatment.

S. MESSENGER BRADLEY, Manchester.

OBSTETRIC MEMORANDA.

ON THE ANTICIPATION OF POST PARTUM HÆMORRHAGE.

DR. ATTHILL does not state in his paper on this subject, which appeared in this JOURNAL of November 1st, that it is of the utmost importance that the binder should be placed round the patient, if possible, before the completion of the second stage of labour, so that it can be tightened up without moving her, as soon as the placenta is expelled. It used to be customary to wait till the third stage was completed, and then bind; but very early in my professional career, I discovered the danger of movement immediately after the expulsion of the placenta to place the binder under the patient, which was almost always followed by more or less relaxation of the uterus and hæmorrhage, slight or otherwise, even when pressure was kept up by the hand on the fundus. I invariably have the binder put on beforehand, so that it can be tightened up after everything is completed without any movement of the patient; and I have for many years had so much reason to be pleased with this precaution, that I should insist on it as one great safeguard against post partum hæmorrhage.

6, Seymour Street.

PERCY BOULTON, M.D.

FORTNIGHTLY HÆMORRHAGE DURING PREGNANCY.*

H. M., age 36, states that in all her pregnancies there has been a hæmorrhagic uterine discharge, more profuse than her menses (which are of usual quantity and quality), but of exactly the same nature, every fortnight up to the sixth month, whence, until labour, there has been no loss. Each flux is preceded by a few days' very severe headache, and is accompanied by much dorsal pain and very bad bearing-down sensations. She never has any leucorrhœa. When not pregnant, she has regular monthly catamenia; an abundant discharge every fortnight is therefore her test of pregnancy; this recurs fortnightly for four or five months after each labour; the menses then become natural. She has had seven children: all carried to full time, and born alive and perfect. When she was pregnant with her first, the hæmorrhage was so copious that her medical attendant told her the pregnancy could not go on. It was not more abundant than that it has always been since. Treatment, position, and rest, had no influence; so she now takes no extra precautions during her pregnancies. She does not lose much after her confinements, and there are no ordinary indications of hæmorrhagic diathesis. She is a stout plethoric woman, who says she "makes blood" very quickly, and that her mother used to be often bled

* Read before the Worcester Medical Society.

with benefit, and died from apoplexy. I attended her in her last confinement, when I did not find anything unnatural. She objects to any local examination.

STANLEY HAYNES, M.D., Malvern.

REPORTS

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

UNIVERSITY COLLEGE HOSPITAL.

CYSTIC SARCOMA OF THE BREAST: OPERATION BY THE ELASTIC THREAD: REMARKS.

(Under the care of SIR HENRY THOMPSON.)

ON the 21st instant, Sir Henry Thompson demonstrated, for the first time in England, a surgical procedure which has been practised for some time past by Professor Dittel, of Vienna. It consists in substituting an innocent-looking elastic thread for the formidable array of knives, tourniquets, artery-forceps, and other paraphernalia with which the surgeon ordinarily approaches the patient. Before proceeding to perform the operation, Sir Henry related the curious accident by which Professor Dittel was first led to appreciate the extraordinary results which may be produced by the slight, yet continuous, pressure of a simple elastic thread. He was called to see a girl about 11 years of age, who was suffering from acute and severe, but somewhat anomalous brain-symptoms. The case was altogether obscure; the girl seemed in other respects healthy, but could give no account of herself—she was, in fact, at the point of death—nor could any satisfactory history be obtained from her friends. The attack soon proved fatal, and Professor Dittel made a necropsy. It was then found that the India-rubber band of the hair-net which she was wearing had ulcerated through the whole thickness of the calvarium, and had set up meningitis. On further inquiry, it was ascertained that the girl, having been constantly scolded by her stepmother on account of the untidy state of her hair, had, about three weeks before her illness, purchased an ordinary hair-net, and the elastic thread of this net, tied round the head and worn day and night, had, in less than a month, cut through skin and bone and penetrated to the brain; and this apparently without causing any pain to the patient.

Professor Dittel at once proceeded to reduce to practice the ideas suggested to him by this unfortunate accident. He first applied it to a case of nevus of the scalp in a child; then, finding that the plan quite answered his expectations, he applied it to the removal of the testicle, penis, etc., and finally to the amputation of limbs. He has now performed, by means of the elastic ligature, a large number of operations of all kinds, including five amputations of limbs. It is not understood, however, that he proposes to apply his method to the performance of the larger amputations; these were done rather with the view of testing the capabilities of the process. The time required for the completion of an operation varies according to the amount and density of the tissues which have to be divided, e.g., for the separation of the mamma from eight to twelve days are required.

The chief advantage which Dr. Dittel asserts this plan to possess is, that patients so operated on are less liable to pyæmia than those treated in the ordinary way. He bases this assertion on the experience of the numerous cases referred to above. Remembering also what a morbid dread of the knife many nervous patients have, the depressing mental effects of an operation may often be greatly diminished. Lastly, the operation itself is absolutely bloodless.

Among the operations for which it is admirably adapted may be specially mentioned *fistula in ano*, which Dr. Dittel now invariably treats in this way. One end of the India-rubber thread is passed in the eye of a probe up the sinus into the bowel, then caught, brought out at the anus, and tied; it cuts out in a few days.

The patient on whom Sir Henry Thompson operated was a stout, middle-aged woman, who was suffering from an ulcerating fibro-cystic tumour (cystic sarcoma) of the right breast. She had had a lump in the breast for twenty years, but it caused her little inconvenience till two years ago, when it began to enlarge rapidly, and finally the skin over it gave way. At the time of the operation, the tumour was of the size of a large orange, and somewhat pendulous, the breast itself being wasted; it was crowned by a large, sloughy, fungating ulcer. The ligature used was tubular, about one-twelfth of an inch in diameter, the calibre of the tube being about one-third of this. A large nævus needle was threaded with this and with a piece of twine (the use of which was explained afterwards) and passed under the base of the tumour; the elastic was

then cut, the needle withdrawn, and the halves of the pedicle tied separately.

Sir Henry Thompson remarked, after the operation, that, although this was a very suitable case for the method adopted, it was not a severe test. The only accident that could happen was the snapping of the elastic when stretched; in that case, another length was tied to the twine, which had been passed under the tumour with the elastic and drawn by it along the track of the needle; otherwise, the twine was removed as soon as the ligatures had been properly tied. The best way to avoid the occurrence of this accident was always to use freshly-prepared elastic; if kept only a month, it was very liable to become brittle.

The skin over the tumour should be tightened just before tying, so that as little as possible might be included. Sir Henry added that, as that was the first time he had operated by that method, he had been anxious to conform in all respects to the practice of Dr. Dittel; but he thought that, another time, he should be disposed to make a superficial incision through the skin along the course of the ligature, so that it would be in a groove, and would not be liable to slip. He thought also that this would obviate the pain which Dr. Dittel said that patients sometimes experienced during the first two or three hours after the operation; in most cases, however, the pain was slight. This patient complained of pain, apparently not very severe, for about twenty minutes after she recovered from the chloroform. Dr. Dittel's paper in the *Allgemeine Wiener Medizinische Zeitung*, 1873, has furnished very full details respecting this mode of treatment.

THE LONDON HOSPITAL.

REMARKS ON MUSCULAR CONTRACTION AFTER PARALYSIS OF THE FACE.

(By J. HUGHLINGS JACKSON, M.D.)

IN cases of paralysis of muscles supplied by the portio dura nerve, the mouth is, of course, drawn to the opposite side—to the side *not* paralysed. But occasionally, after a time, the face becomes straight, although there may be no recovery of power in the facial muscles, as is to be plainly seen when the patient smiles. The explanation is, that the paralysed muscles have undergone contraction analogous to that of the muscles of the hand in the "rigidity" of cases of hemiplegia. The inexperienced may easily suppose a patient so affected—the *distortio* being less—to be recovering in a real sense, and may thus erroneously attribute good results to impotent treatment. We find, too, in the kind of cases under remark that the ocular aperture becomes narrower (making the eye appear to be smaller). The patient, however, cannot close his eye on this side; although in rest, that eye has, from sustained slight closure, a peering look, somewhat like that of short-sighted persons, who bring their lids into action when looking intently without glasses.

In some cases, the contraction not only draws the face straight, but overdraws it. The mouth is drawn to the paralysed side by this *rigor mortis in viâ*. The face is drawn, let us say, to the right side, and the patient cannot close his right eye. At first consideration, this looks like a "crossed" paralysis in the face; it simulates paralysis of the left cheek and of the right orbicularis palpebrarum; but, if the patient be told to whistle, we see that the cheek is paralysed on the "drawn" side, on the same side as that on which the eye cannot be closed.

ON THE ARM AND LEG IN CASES OF HEMIPLEGIA.

(By J. HUGHLINGS JACKSON, M.D.)

It is by no means difficult for a hasty observer to be very wrong in estimating the relative degree in which the arm and leg suffer in cases of hemiplegia. A patient may tell us that his leg has recovered more than his arm, when an examination shows the very reverse to be the case. A patient may walk—may be able to walk miles—when he has very little power over the separate parts of his leg. He can walk when the leg is stiff and can be swung from the pelvis. The action of the flexors of the thigh on the pelvis, iliacus, psoas major and minor, and tensor vaginæ femoris is, however, essential in walking.

Duchenne says that walking has been still practicable in a case in which these muscles, being preserved, all others were paralysed. The leg was kept flexed on the thigh, and the foot on the leg, by a rigid apparatus. Dr. Hughlings Jackson has seen more than one case in which a patient could walk, who, when sitting, could not move his toe, could not move his foot, and who could not bend his knee. When a patient strains to move part of a leg which is nearly completely paralysed, he brings into action the muscles of the body—brings into action more automatic parts and displaces the whole limb, but does not move parts

of it in any considerable degree. Nevertheless, the leg is often very useful when in this condition. The arm, when it can be moved much more, is often useless. To be able to move a part and to be able to use it are very different things. The leg, over the separate parts of which there is scarcely any power of movement, may be very useful; whilst the arm, the parts of which the patient may move in considerable range and some power, is useless.

Another thing never to be lost sight of is, that it is impossible for us to make sure that one leg is not *slightly* paralysed when a patient is lying in bed. If the face and arm are much paralysed, we must not conclude that the leg is not, at least, weak, however well the patient can move it whilst lying in bed; we must, if his condition permit it, get him up to walk. In most cases, we shall then see signs of weakness. These matters are important with regard to localisation. Dr. Hughlings Jackson believes that, in most of these exceptional cases of hemiplegia, when the leg suffers more than the arm, the upper part of the arm suffers more than the hand. But, as is above pointed out, it is easy to err as to the relative degrees in which the arm and leg do suffer in cases of hemiplegia.

BRISTOL ROYAL INFIRMARY.

CEREBRAL ABSCESS IN A CHILD.

(Under the care of T. E. CLARK, M.D.)

THE following notes of a case of cerebral abscess are, I think, of sufficient interest to be put upon record.

James Adams, aged four years, was admitted, under my care, at the Bristol Royal Infirmary, on December 22nd, 1869. Five months previously, he was kicked by a horse over the right orbit. This was followed by a wound and free discharge, but no piece of bone came away, and, after some weeks, the wound healed.

On admission, the body was drawn backwards, and rather to the left side; all the flexors were in a state of permanent spasm; there was no sensation and scarcely any reflex action. He was perfectly deaf and blind; the pupils were widely dilated; he had no power to swallow, fluids seeming to run down the throat. Over the right orbit, a little outside the centre, was a soft pulsating tumour about the size of a large marble, the integument over it not being reddened, although the temperature was higher over this side of the head. There was the mark of a cicatrix on the centre of the tumour. Upon examination, there appeared an entire absence of bone corresponding to the base of the swelling, although there was no history of any bone having come away. The child was frequently convulsed, and everything passed involuntarily. He was ordered three grains of bromide of potassium in water every four hours.

December 23rd.—After a consultation, a grooved needle was passed into the swelling, and, after passing it nearly two inches, pus flowed through the groove. I then divided the skin with a scalpel, and could see the cerebral substance with the pus flowing through the puncture. The scalpel was then pushed into the brain, and three ounces of thick pus issued forth. There was no foetor. A piece of wire drainage-tube was placed in the cavity of the abscess, and fastened outside by means of adhesive plaster, and the child was taken to bed. In less than an hour, relaxation of the muscular spasm took place, and shortly afterwards the child moved the limbs of the right side. Two hours afterwards, he had spoken, and asked for bread and butter, which he could now bite and swallow.

December 24th.—He was still improving. There had been some discharge through the tube; this was removed to be cleaned, and, after its removal, some pus followed. The parts being cleaned, the tube was re-introduced. There had been no convulsion. He seemed quite hungry. The bowels had not acted since his admission. He was ordered to have a drachm of castor-oil immediately.

December 27th.—He had gone on well; the discharge was less; the opening appeared filled up. The tube troubled him, and he rubbed his hand over it, and also his head in the pillow, and by these means removed it. I replaced it.

December 30th.—He continued doing well. The tube causing much irritation, it was removed, and the part was covered with a solution of carbolic acid (one part in eighty).

January 10th, 1870.—A hernia had begun to protrude. It was firmly strapped, leaving an opening for discharges.

January 17th.—The hernia increased. The discharge had ceased, except from the surface of the protusion. The child continued as before; ate well and slept well. The bowels acted regularly. He had no sight in either eye; the pupils were very dilated. Under the influence of Calabar bean discs, the irides contracted, but only for a time, and they relapsed into their dilated condition.

February 17th.—The hernia protruded nearly three-fourths of an inch. A lotion of sulphate of copper was applied.

February 24th.—The hernia was considerably reduced. The child was playful, and smiled when spoken to.

February 28th.—The hernia was only just raised above the level of the skin, and the parts were healing around.

March 3rd.—The wound had now healed. He continued well in every way, except that the sight of both eyes was lost. He was taken home.

REVIEWS AND NOTICES.

RETROGRADE VIEWS ON CHOLERA.*

THIS report on the cholera epidemic of 1872 in Northern India forms, the author tells us, the first section of the ninth annual report of the Sanitary Commissioner with the Government of India. On account of its importance copies of this section have been issued separately, and one is now before us.

We have read this report with the attention due to the reputation and to the official position of its author, and to the importance of the questions with which it deals. We regret to say it has rarely been our fortune to meet with a more disappointing document. No one, we think, can read this report without being satisfied that the 150 pages of which it consists only give expression to a foregone conclusion. Consciously or unconsciously, Dr. CUNNINGHAM has been led captive by the theory of his able colleague, Dr. Bryden, that the sole agent worthy of serious notice in the propagation of cholera is air. We say this perfectly aware that, again and again in the report before us, Dr. Cunningham declares his intention of dealing with the question of the contagiousness of cholera, its diffusion by human intercourse or water contaminated by the excretions of cholera-affected persons, by no other method than a patient investigation of facts. Nor are we unmindful that the author says (section 121, page 35) that "he does not write in support of the air-borne theory," a statement involving as remarkable an example of self-deception as we have met with in the course of our reading or in the exercise of our critical duties.

Dr. Cunningham gives in detail the progress of the epidemic from its "endemic area" in Lower Bengal. It must suffice to quote the passage in which he refers to the map prefixed to the report. "Glancing at the map," he says, "the epidemic extending out of the endemic area stretched upwards on the north-east, downwards on the south-west, and upwards again through the eastern districts of the north-west provinces and through Oudh and Peshawur, and far beyond our frontier. And side by side is the tract which was either altogether exempted, or suffered so lightly that it cannot be included in the epidemic area, a tract which commences with Chota Nagpore, just outside the endemic area, and stretches for many hundreds of miles on to Ajmere, Scinde, and Cabul." Dr. Cunningham shows that, even within the epidemic area, although there is evidence of the general prevalence of an epidemic influence, the proportion of places that suffered was often very small.

In Bengal proper, out of a population estimated at 66,856,859, the deaths amounted to 46,901. In the north-western provinces, the registered deaths amounted to 50,565. The disease was widely spread in Oudh. In the Punjab it was not violent, the western districts of the province escaping almost entirely. Cashmere suffered severely, while Afghanistan is said to have escaped. In Bokhara, the epidemic was severe. The central provinces of British India were lightly visited, the disease having been confined to the south and south-west. In Berar it was slight. The epidemic affected the Bombay Presidency chiefly in the south. Scinde escaped altogether. In the Central Native States, there is no registration of deaths; but the disease was severe only in a few places, although widely distributed. Cholera was more circumscribed in the Madras Presidency in 1872 than it was in 1871. In 1870, the mortality was 55,876; in 1871, it was 17,656; it fell in 1872 to 13,247. The deaths from cholera in British Burmah in 1872 were few. Turning to the European army of India, out of a strength of 77,235, including men, women, and children, there were 888 cases of cholera, of which 615 were fatal. The disease was almost confined to the troops serving in the Bengal Presidency, only two fatal cases having occurred among those serving in Madras and 54 in Bombay. In this epidemic, more hill-stations were attacked than was ever noticed before.

Such was the general distribution of the disease. In the opening paragraphs of his report, Dr. Cunningham puts the following questions.

* Report on the Cholera Epidemic of 1872 in Northern India. By J. M. Cunningham, M.D., Surgeon-Major, Bengal Medical Service, Sanitary Commissioner with the Government of India.

"What is the history of this epidemic? What are the facts connected with its spread, and how do they tend to increase our knowledge? Is cholera a contagious disease? Is it a specific poison multiplied in those who are attacked, which is capable of being transmitted to, and of producing like symptoms in, others; and is it usually disseminated by means of water? Or, setting aside the doctrine of contagion, both in the ordinary and modified acceptations of the term, is man the carrier of a specific entity from an infected locality, which germinates and bears its deadly fruit whenever the local conditions are suited to its growth? Is human intercourse the great and indispensable means by which cholera is borne from its home and spread over the face of the earth?" The answers given to these momentous questions are to be sought for in the body of the report, and the evidence on which they are based in the so-called "Notes on Outbreaks" appended to it. Dr. Cunningham denies that cholera is in any sense contagious, that it is a specific poison capable of multiplication in the bodies of those affected, or that it can be transmitted through the medium of water, or that human locomotion has anything to do with its propagation from place to place. It is hardly necessary to say that the above is wide as the poles asunder from the generally accepted doctrine of our highest sanitary authorities in Europe. We freely acknowledge that this is no reason for declining to examine the ground on which Dr. Cunningham rests it. This we have done; and we are constrained to say that, in our judgment, his proof fails at every point. From the carefully observed and recorded histories, not of one, but of many epidemics of cholera, not in India only, but in every country yet invaded by the disease, sanitarians in Europe believe that human locomotion is the means of its extension from one distant place to another; in other words, as Mr. Netten Radcliffe has expressed it, "cholera does not travel, but is carried;" while air and water are the main agents of its diffusion in the vicinity of a place into which it has been brought, aided often by the agency of infected clothing, bedding, or what has been contaminated by the excretions of those affected by the disease. To give the evidence on which this opinion rests would be to write the history of cholera; and, strange as it may appear, one of our most important witnesses would be Dr. Cunningham himself.

Turning to the "Notes of Outbreaks" appended to the report, let us take first the question of importation. Dr. Cunningham truly, as it appears to us, shows the difficulty, nay the almost impossibility, of establishing round a station or cantonment in India, a really efficient quarantine, even with mounted and infantry troops, aided by strong bodies of police. In spite of all such precautions, which he describes as most hateful to the people, men contrive to evade the sentries and pass to and fro. Yet, in the face of this, the evidence of non-importation by human locomotion contained in the "notes" consists throughout of such vague and negative statements as this, "the first case, could not be traced to importation, nor was there any evidence to lead to the belief that the disease was spread by contagion." Again, "No reason to suppose that the first case was due to importation," and so on through every page of the "notes." What is the value of evidence such as this in a question of this kind? Would Dr. Cunningham accept it himself, if put forward by others? We think not; at all events, he can see the futility of it when he is arguing against quarantine. Even where importation seems in the highest degree probable from the "notes," Dr. Cunningham can shut his eyes or look another way. Thus, in the case of the artillery barracks in the cantonment of Lucknow, we are told, in the "notes," that the first case in the barracks occurred on the 6th of August, but that there had been other cases in the cantonment long previously, and some grass-cutters of the artillery were seized shortly before any of the men; yet it is gravely added, "There was no question either of importation or of contagion," and so on.

As regards the propagation of the disease by water-contamination, Dr. Cunningham has the hardihood to commit himself, without the least reserve or qualification, to the following statement. "In India, where the cholera is so prevalent, even in Lower Bengal, where it is always present, no case has ever been adduced in which there is good reason to believe that water contaminated with cholera-evacuations has really produced cholera." Turning once more to the "notes," we find the water evidence quite as unsatisfactory as that on importation. It is all of the same purely negative character. Unless all that has been published by the sanitary commissioners of India, and very notably by Dr. Cunningham himself, on the subject of Indian wells, tanks, and other sources of water-supply and channels of distribution, be altogether untrustworthy, we affirm without hesitation that, with the well-known habits and customs of the natives of India, nothing short of a miracle could prevent the excretions of cholera sufferers from contaminating the water-supply in innumerable instances, in the course of so wide-spread an epidemic as this; and, unless all the evidence on the effects of

drinking water so contaminated, observed and recorded in this and other countries, be entirely false and delusive, like results must again and again have followed, even if the facts and particulars have evaded the research of Dr. Cunningham and the observers on whose testimony he relies.

In not a single instance recorded in the "notes" does it appear that the water was subjected to anything worthy the name of examination. It is against all reasonable probability to suppose that, in this particular, there was anything exceptional in this epidemic, and that water-contamination did not contribute to its local diffusion.

The statements in the "Notes" are generally to the following effect. At Lahore: "The drainage is defective. There are 1,100 public and 300 private wells." At Meeran Meer: "The water used by the troops was supplied by a branch of the Baree Doab Canal. It is admitted to be open to pollution. People may wash in it when unobserved and against orders; and not long before Dr. Cunningham's visit, a dead body in an advanced stage of putrefaction was found in it." At the same places, "the native troops drank from wells. In none of them could the cases of cholera which occurred be connected with the use of any particular well. The natives in the cantonment all drank from wells." Again: "Water drawn from these wells is naturally of excellent quality; but fault was found with the filtering arrangements, which rendered it impure." In a great many instances, indeed, the water arrangements are favourably reported on, and any connection between the disease and the water-supply, so far as we can see in the "Notes" is distinctly denied. Of the value of this evidence our readers must judge for themselves. With all this, no one is more emphatic than Dr. Cunningham on the necessity of a pure water-supply; although, if impure water do so little harm as he seems to suppose, it is not easy to see the reason why. How far disinfection and isolation of the sick was attended with good, Dr. Cunningham declines to discuss, on the ground of insufficient data. The movement of troops from an infected locality is well spoken of; good having even followed such a partial movement as was made at Meeran Meer: he is, however, very earnest, and, we think, rightly so, in urging a more decided move. It is evident that, although an utter disbeliever in the possibility of infection by human intercourse, Dr. Cunningham believes in the deadly effects of living in an "infected locality", and in the danger of living in "infected buildings".

No one, we add, in conclusion, is more aware how much the statements in this report run counter to received opinions than the sanitary commissioner himself. He may with truth be said to have the courage of his opinions, for he states them freely without qualification and without reserve. He admits that, if his views be right, we virtually go back to the same state of ignorance in which we were a hundred years ago; adding, "if we are on the wrong road, the sooner we go back the better". He even goes so far as to say that the opinions he controverts have prevented progress. This we take to be the most fallacious statement in the whole of this report. So far from this being the case, we contend that the doctrines to which he objects have been most fruitful in good results. To them more than anything else we in this country owe the blessing of our improved and improving water-supply. Calcutta would never have spent a million sterling in giving to her children the pure water-supply which has brought the death-rate from cholera, even in epidemic years, to a figure lower than has been known for thirty years, if sanitary reformers had not taught her a lesson which Dr. Cunningham wishes her to believe is a foolish fable; and, above all, it is to the happy prevalence of the doctrines which the Indian sanitary commissioner is doing his utmost to discredit, that England at this moment owes her immunity from cholera, which, introduced in the course of this year into London, Liverpool, and Southampton, from foreign lands where it widely prevailed, has on every occasion been "stamped out" before it had time to establish itself in its old haunts, and carry death to thousands of our countrymen.

NEW BOOKS AND NEW EDITIONS.

MR. GEORGE LAWSON'S *Diseases and Injuries of the Eye, their Medical and Surgical Treatment* (Renshaw, London), has reached a second edition. It is one of those handy, complete, and compact handbooks, of which many are wanted, and few exist. In a very small compass, and in very clear language, Mr. Lawson gives the essentials of ophthalmic practice. The most practical and experienced ophthalmic surgeon will, we believe, read it, as we have read it, with pleasure and profit; and the student will find it the easiest, clearest, and most compendious guide which he can desire or possess. It is a piece of good literary workmanship, and thoroughly sound and trustworthy in its teaching.

Medical Visiting List. By ALFRED SHEEN, M.D. (William Lewis, Cardiff; and H. Hilton, Adams, and Co., London. 1873.)—This list will be found very useful by gentlemen who desire to carry, whilst on their rounds, an index of patients compressed into the smallest possible space. Anything superfluous, which could add to the bulk of the list, is rigidly excluded. Practitioners who habitually use a brougham need not, perhaps, be very careful of restricting the quantity of *matériel* which they carry about from house to house; but those who tread the daily round on foot are compelled to look to such matters. For such, this visiting-list is well suited, one of its recommendations being the small price at which it is sold. Obstetric physicians have for years carried a "gynæcological bag;" we have often wondered why a "G. P. bag," containing stethoscope, visiting-list, vaccine-tubes, lint, strapping, etc., has not been long since devised by instrument-makers for the much more numerous body of general practitioners. At present, the implements which are in continual use during the round of visits are wont to be conveyed, at considerable inconvenience, in his hat or pockets by the gentleman whom inclination or necessity constrains to walk.

INTRODUCTORY ADDRESSES IN DUBLIN MEDICAL SCHOOLS.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE Introductory Address of the School of Surgery was delivered by Dr. MAPOTHER, Professor of Anatomy and Physiology. The lecturer chose for his subjects a history of the institution, and accounts of the lives and labours of several of its great members. Mullen, the anatomist of the seventeenth century, and Proby, the first Surgeon-General were first treated of. In the year during which Steevens' Hospital was opened, Bartholomew Mosse became a surgeon, and for the remaining twenty-six years of his life he laboured with unexampled energy for the Lying-in Hospital. In the words of his biographer, Sir W. Wilde:—"His eulogy is to be found in his acts. Without fortune, without patronage, without precedent, he conceived the project of affording relief to a certain class of the community, and with extraordinary energy, prudence, and perseverance, by never relaxing, never despairing, he carried it into execution at an expense of his character, station, and pecuniary independence. By the earnestness of his benevolence he interested persons of all classes, and finally secured for his good work the patronage of Government, and the protection of the Throne. For this one great object of providing an asylum and refuge for woman in her greatest hour of trial he lived—for this he may be said to have died—died poor as to wealth, but rich in the blessings of the needy and of those who were ready to perish." The benevolence of Sir P. Dun and other founders of Dublin hospitals was dwelt on. Barry, of Cork, about the middle of the last century, dissected the most rheumatic skeleton on record. The description states—"He is one entire bone from the top of his head to his knees? he was valued by his master on account of his honesty and his fidelity in watching the workmen, for when he was once fixed in his station it was impossible for him to desert it. He could neither sit nor lie down, and slept in a sentry-box." The town of Strabane had also a surgeon of surprising boldness—John Ferguson, who extirpated the spleen, an operation never before performed. Silvester O'Halloran, the surgeon of Limerick, better known as a historian, was next passed in review. "His writings probably suggested the formation of the College, for, in 1765, he proposed the election of professors, to examine and license all surgeons. He proposed also that the examination 'hold for three days—the first entirely for anatomy; the second for disorders of surgery, and, if a candidate for midwifery, for this also; and the third to finish with performing all the operations of surgery on a body, with their apparatus and bandaging. When a proper faculty, signed by the professors, is given to the candidate, if some little honour were annexed it might add greater stimulus to the young students." This last proposal I have advocated as a substitute for that hurtful farce, the giving of testimonials. After tracing the origin of the guilds of barber-surgeons, the proceedings which led to the formation of the College of Surgeons were detailed. The Rev. Mr. Whitelaw, the historian of Dublin, wrote as follows of its founders:—"Their prospects for the public good and for the advancement of the profession were not circumscribed by narrow tenets, nor actuated by those selfish monopolising motives which frequently influence the acts and proceedings of incorporated societies. Men of all persuasions were admitted, and the most lucrative and honourable situations were as open to the licentiates of every sect as to those of the Established Church." Two good old surgeons, although mentioned in the charter, do not appear

to have taken office, owing, probably, to their consciousness of the disabilities of age—George Daunt and Henry Morris. The former is well remembered by his lithotomy instruments, for which the Academy in Paris voted him thanks in 1754. Morris, from the dedication of Dease's work, and his constant presidency of the Society of Dublin Surgeons, seems to have been an acknowledged leader. Another senior, Gustavus Hume, also soon passed away, but his sixty years' experience and benevolence are attested in the ward in Mercer's Hospital, which bears his name—and his wealth, by his having built several streets, Hume Street amongst others. Sir Henry Jebb was also a member of the Society of Dublin Surgeons, and became professor of midwifery, and finally president of the College in 1800. It was probably owing to the fact of such able obstetricians as Dease and Jebb being among the founders of the College that midwifery, despised by contemporary bodies, was at once fostered. According to that excellent poem, the *Medical Review*, by Dr. Gilborne (1775), in which about two hundred Irish doctors are noticed, nearly all the surgeons practised midwifery. Many of them insisted on maternal nursing, and in three days milk was always on draught, never in bottle. One of the original surgeons of the Meath Hospital is alluded to in the following lines of the poem:

"With well-contrived utensils, good Hawkshaw,
An aching, useless, hollow tooth can draw,
With straight, diverging, or converging fangs,
And give the jaw and tender gum no pang;
But if the pain proceed, in young or old,
From scurvy, rheumatism, or humours cold,
He sooner would the expected fee forego,
Than make a breach in fair enamelled row."

The lives and writings of Colles and Carmichael were then discussed. The gifts of Carmichael, for professional purposes, exceeded £18,000 including £5,000 to the Medical Benevolent Fund, and the sum which yields every third year, for essays on our profession, £200 and £100, or twice those amounts if not awarded on the previous occasion. His large bequest to the school which bears his name was to revert upon the decease of his widow, but she advanced it while she lived. Several of the reforms which Carmichael disinterestedly advocated have been achieved; for instance, pharmacy is now conducted almost exclusively in a few large establishments, there being, besides, highly qualified practitioners; and again, in Dublin, no rigid division between medicine and surgery is attempted. A medical degree is no longer needed for the fellowship of the College of Physicians or hospital physicians, and in one large hospital not any of the three physicians possess it. Early in the century Colles and Crampton took medical degrees in order to lead to this unification of the profession. One other concession which Carmichael claimed is not yet granted—the admission of students to the surgical Society. We are told that Cheselden lectured on surgery, when twenty-two, and had gained the Fellowship of the Royal Society the year before. Crampton, a year after his apprenticeship had ended, and when his only qualification was that of "army assistant," was made surgeon to the Meath Hospital, an office which he held for sixty years. Behind his house, in Dawson Street from 1804 to 1813 he lectured on "anatomy, physiology, pathology, and surgery. Practical anatomy, as usual, under the direction of Mr. Crampton and Mr. Harkan." So runs the advertisement in the *Dublin Medical and Physical Essays*. In 1804 he published his essay on Entropion, and in 1813 discovered in the eyes of birds the muscle which bears his name. Throughout life, Crampton was an ardent worker at comparative anatomy, like other great ornaments to our profession. In 1813, having succeeded Stewart as Surgeon-General, Crampton moved to Merrion Square, and there, after an unexampled share of practice, and of social rank, he died in 1858. His great forte, says Maurice Collis, lay in acute observation and rapid power of combination. A look, a touch, one or two pregnant questions, and the diagnosis was made, and treatment rapidly determined upon. And with this rapidity of judgment—so captivating to the lookers-on, and so fatal to those who, with less accurate eye, and feebler powers of deduction, attempt to copy it—he seldom erred. To the last his hand was light and steady, his movements as an operator quietly graceful, devoid of ostentatious show, rapid but not hurried, cool in every emergency, and prompt in every danger. Several interesting statements concerning Mr. Cusack, Professor Macartney, Dr. Shekleton, and Dr. Houston, were made. Houston's most famous papers were those on the "Rectum," "The Section of the Pelvic Organs," which bears his name; "The Circulation of Diving Animals;" and "The Treatment of Fractures." His great work was, however, the Catalogue of the Museum, now out of print; its reissue with additions would be a fitting monument, the more called for as neither marble nor canvas perpetuate his fame within the building. To a namesake of Houston, and to a namesake of his contemporary, Ephraim M'Dowel,

is assigned the first performance of ovariectomy. Professor Gross, in a memoir of the great Kentuckian of the latter name, asserts that in 1809 he performed ovariectomy for the first time; but Dr. Mapother found, by the thirty-third volume of the *Philosophical Transactions*, that it was done successfully by a Dr. Houston in 1701. Dr. Mapother concluded by enumerating many other great surgical teachers.

MEATH HOSPITAL.

THE Introductory Address was delivered on November 3rd, by Dr. ARTHUR W. FOOT. Dr. Foot commenced by stating that he found himself rather unexpectedly called on to address his hearers on this occasion. It had been arranged that his illustrious colleague, Dr. Stokes, would have spoken to them; but a domestic affliction kept him temporarily absent, and deprived them of an address which his could not replace or represent. But with the interest that he (Dr. Stokes) always felt for students, he had charged him (Dr. Foot) to assure the students of his sympathy with the young men about to commence their study here; to encourage those with whose industrious labours he was already well acquainted to perseverance; and to those who had not yet exhibited any marked interest in their studies, he sent a timely and affectionate warning to bestir themselves before their golden opportunities were lost for ever. In execution of his instructions, Dr. Foot brought before their notice the ideas of work, earnestness, and persevering diligence. He was not afraid to treat these themes, for trite as they might seem to some, the idea of work, like a great diamond, shed its beauties from a thousand points of view. He had on a former occasion, similar to the present, brought this theme before them with results which had surprised his expectations—results shown in a crop of serious, diligent students, and with no eloquence but of earnestness he would attempt it again. He followed out the thread of work as illustrated in every stage of a student's hospital life from the first day to the last, dealing with the subject in a novel and interesting manner. The details of the address were strictly directed to the encouragement and direction of students, with whose feelings, studies, and difficulties he showed himself thoroughly familiar.

LEDWICH SCHOOL OF MEDICINE.

THE Introductory Address was delivered on November 1st, by Dr. FOOT, Lecturer on Medicine.

In the commencement of his lecture, he acknowledged the dignity and responsibility which had recently been conferred upon him in connection with that school, and alluded in feeling terms to the removal of both of his predecessors within the past year; one, having been transferred to another post, had left them with a crown of laurel, and the other lay secure from praise in the silent repose of the grave. He recommended to the students principles of industry, enthusiasm, earnestness of purpose, and counselled them to work this golden thread into the web of their lives, as it issued from the loom of time, and to persevere with the task until they stood as shining lights of professional perfection. With reference to the manner in which some succeeded, and others by neglect failed, he said that the latter resulted from "will," the proper training of which depended nearly altogether, in his own opinion, upon the proper supervision of students by those over them. He recognised no definition of a transcendent capacity for taking trouble, and, therefore, in the race for honour in the medical world, those who were handicapped at first heavily must, by indomitable will, succeed in the struggle. He urged the students to aim at success in the earliest beginning of their studies, and to concentrate their force on all difficulties as they met them. He illustrated the meaning by various allusions to matters of detail in anatomical and hospital studies. In giving that advice, and as a teacher of the school, he would proclaim from the outset his uncompromising hostility to idlers, and invited all true students to join him in the crusade. It was those who made a by-word of the name of medical student and brought into disrepute a class of men more brave, generous, tender—more true to all the truest instincts of human nature than were to be found among the students of any other profession. The heroism of true medical students was superb. It had stood the crucial test of martyrdom even without the support of public applause, for publicity of their brave and unremunerated deeds was the last thing that ever crossed their mind. It was the foolish freaks of a few idlers, screened by the majority, who had smirched their fair escutcheon, and given their enemies cause to blaspheme a name which was the embodiment of valour and disinterested virtue. After a brief recapitulation of the studies that would be entered upon during the session, the lecturer concluded.

ST. VINCENT'S HOSPITAL.

THE Introductory Address was given by Dr. QUINLAN. After detailing the great advance in medical and surgical science, rendered evident within the past few years, and the gigantic efforts made by Dublin hospitals to compete with the demands made upon them, the learned lecturer said—"You will sometimes meet curious patients. Last session we had a Mahommedan Arab, who, on being admitted into the ward, managed to convey to those in charge of it that he would comply with any treatment ordered, save that he could not drink wine or eat pork; and, at the same time, we had an ex-Zouave suffering from the remote effects of an injury received from the bursting of a shell at Sedan. This present moment we have in the hospital an ex-United States soldier who, in a negro riot some years ago, received a depressed fracture of the skull from a blow of a brick. A fragment of the skull presses on the brain, and causes severe epileptic fits at intervals of about a month. This distressing infirmity we hope to remove by trephining out the depressed portion of the skull which contains the seat of injury. With these remarks I declare the session open, with the fervent hope that it will be one of exertion and advancement, both to instructors and instructed. For the last four years the new arrangements of this great institution have permitted the proper development of clinical teaching, and the yearly increasing medical classes have proved that the efforts of the medical staff are appreciated by those for whose improvement they labour. I can only say that we are all determined to afford to our class the maximum of exertion and efficiency in clinical teaching, of strict punctuality of attendance, and *materiel* and appliances for illustration, both theoretical and practical, in this and all future sessions." Dr. Quinlan concluded by expressing his hope that four years hence he might be able to hold up the new students, who were commencing that day, as an example of progress and industry to those who would then be beginning their profession.

MATER MISERICORDIÆ HOSPITAL.

THE Introductory Address was delivered on November 3rd, by Dr. VALENTINE BROWNE. He said that the subject that he had chosen on which to offer some remarks was one of surpassing interest, and now that a mysterious dread seemed to have fallen on the people, and the horrors of an epidemic were believed to be imminent, it was specially congruous to endeavour to realise, with studiousness and care, all that was embraced in the word cholera. There were those amongst his hearers who could recall the dreadful days when cholera stalked triumphant throughout the land. He had read in "tale and history" of those sorrowful times, and had contemplated, with shuddering grief, the annals of woe which one read with a mixed feeling of regret and satisfaction—regret that the hand of Providence should have dealt so grievously with the children of our race, who, in those unhappy times, fell like ripe "grain before the reaper;" with satisfaction because the story of the epidemic, with all its mournful details, included the record of such glorious heroism, such devoted charity, such indomitable resolution, such noble self-sacrifice, as must make us feel pride for our fellow-men. But there was one particularly bright spot which he could not help regarding with a feeling of satisfaction. To those who belonged to the profession—and to those also who did not belong to it, but who could not help feeling proud of Irish courage and endurance—the knowledge must be very gratifying that in these grievous times Irish medical men nobly and disinterestedly did their duty—their duty only, to be sure; but so terrible a duty so well carried out ought to elicit the approbation of every one who reads the records of its glorious performance. Dr. Browne then gave a brief summary of the history of cholera during the various epidemics. In concluding, he said: "On whom rests the responsibility of anticipating the epidemic and preventing its evil consequences? On those certainly to whom is allocated the task of providing for the well-being of the community, and in a special degree of the poor, who, in the touching words of Mr. Blackwood's exquisite poem, 'make no new friends.' In Dublin, undoubtedly the corporate authorities are responsible for the proper ordering of these matters, and to them we appropriately look for the adoption of such measures as may ensure the greatest protection to the inhabitants of this populous city. I need hardly mention the direction in which their foresight and protecting care ought to be directed. They may be summed up briefly under the following heads:—Firstly, the adoption of such sanitary precautions as will ensure cleanliness in the dwellings of the lower classes; secondly, the supervision of strangers coming by ship or otherwise; thirdly, the providing of the necessary hospitals or houses of refuge, and of proper vehicles to convey them thereto; fourthly the appointment of a competent medical staff, to whom the care of patients should be entrusted. With such provisional care, we may hope to achieve the maximum of security."

SELECTIONS FROM JOURNALS.

ANATOMY.

THE GROWTH OF BONE.—According to Kölliker (*Würzburg. Phys.-Med. Verh.*, 1873), observations on the bones of animals fed with madder give the following results. 1. In the long bones with epiphyses at both ends, that end of the diaphysis grows more rapidly to which the epiphysis remains the longer unattached. 2. The smaller hollow lines (the os calcis, metatarsal and metacarpal bones, and phalanges) which have only one epiphysis, grow most at the end nearest to this. 3. All the free edges and epiphyses of bones of all kinds manifest a great, often remarkably developed growth (e.g. the crista ili, the tuber ischii, the spinous and transverse processes, the xiphoid process of the sternum, the base of the scapula, the olecranon, and the styloid process of the ulna). 4. The same is the case with certain ends of long bones which have a large cartilaginous addition, such as the ribs. 5. Short bones, with or without epiphyses, grow nearly equally on all their surfaces that are covered with cartilage and that are in contact with other bones or cartilaginous parts (the bodies of the vertebrae, bones of the tarsus and carpus, and segments of the sternum). 6. All epiphyses near joints grow most at the end next to the joint. 7. The thickness of the layer of proliferating cartilage-cells is generally in relation to the energy of the growth in length of the bone; but there are exceptions (as in the apophyses of the vertebrae).

ON CERTAIN POINTS IN THE HISTOLOGY OF THE OMENTUM.—According to Dr. Payne (*Microscopical Journal*, August 1873) the fenestrated portion of the human omentum consists of fibrous bands or trabeculae, in which are embedded connective-tissue corpuscles, and on which is spread a continuous and most uniform layer of endothelial plates. The best mode of examining the latter, that of staining with silver, is generally inapplicable in the human subject, in consequence of the time which elapses before examination is possible; but the structures can be very well seen either without any reagent at all or after staining with carmine. The attention of the author of the paper was first drawn to the subject on examining the omentum in persons dying of acute tuberculosis, with miliary tubercles in the peritoneum. In these cases were found, around the tubercles, epithelial cells in various phases of change: some with nuclei, some almost divided so as to show two cells, and some groups of cells, the shapes of which showed they had been produced by cell-division or multiplication. These have been described by several authors (Rindfleisch, Kundrat, etc.) as showing the origin of tubercle. There were also seen large compound cells, like "myeloid or giant cells," and small masses of adenoid tissue. Similar proliferative changes are seen in acute inflammation, and the appearances in the neighbourhood of small cancerous growths are likewise very similar. In the one case they have been recognised as a source of pus cells; in the other, of new cancerous growth. The important fact, however, is that appearances just like those described above may be found in the normal omentum, viz., evidences of cell-proliferation, many nucleated or giant cells and masses of adenoid tissue. It appears, then, that the morbid changes that accompany inflammation (as well as the formation of tubercle) are not only essentially alike, but are identical with processes that are always going on in the omentum, and not indicative of any special disease. The inflammatory changes or those of specific diseases differ from the normal chiefly in their greater abundance and activity, and are doubtless simply due to hyperemia and consequent increased nutrition. It is probable that appearances, which are strictly normal, have sometimes been described as those of disease.

THE ACTION OF ATROPIA, PHYSOSTIGMA, AND CURARE, ON THE COLOURLESS BLOOD CORPUSCLES.—An account of some researches on this subject, by Dr. Osler, is given in the *Microscopical Journal* for August 1873. The reagents made use of were, a fresh solution of sulphate of atropia, a fresh solution of sulphate of physostigma, one per cent. strength, and a rather stronger solution of curare; a half per cent. saline solution was used to dissolve them. In the case of newt's or frog's blood, about four times as much reagent as blood was made use of, while for human blood the proportion of reagent to blood was 5 : 1. The specimens were examined on a Stricker's stage at a temperature of 39 degs. C. (102.2 degs. F.) The experiments were undertaken to show, if possible, in the corpuscles, the antagonism between the reagents, which had been already demonstrated by Dr. Fraser. A solution of one part of sulphate of atropia to two thousand of water allows the normal amoeboid movements of the corpuscles, while a one to three per cent. solution definitely alters the form and structure of their pro-

cesses; for it is in these that the changes noticed lie. Generally in about ten minutes the corpuscle is seen to throw out processes, bud-like, long and thin, or tuberos; the number of processes being indirectly as their size, while the outline of the corpuscles may change two or three times in a minute. Sometimes the processes are retracted, but not always, and they may remain without any change of shape, while some corpuscles in the field never alter nor move at all: all, however, retain their spherical form. The processes are mostly hyaline, but sometimes granular, and have a sharply defined line where they join the body of the corpuscle; a fusion of the granules which they contain may restore their original transparency. The phenomena described do not always occur upon the addition of the reagent, being at some times more evident than at others. In the experiments on the action of atropia, all motion ceased in the corpuscles, on the application of the reagent, sooner in the blood of the newt and frog than in that of man, and sooner also the stronger the solution used. The blood of frogs and newts poisoned with atropine showed normal amoeboid movements without any modification whatever. The action of physostigma is somewhat different. A solution of the strength of one to one thousand of water stops all motion in two hours; while one of a strength of one to three hundred of water, all but completely prevents the formation of processes, and causes the movement to be of an undulating and heaving character; a rather stronger solution produces changes the same as atropia. As a rule, fewer corpuscles are affected by a given amount of the reagent than in the case of atropia. The red corpuscles are changed by a one to two per cent. solution of the reagents; their surfaces become irregular, from involutions and cuppings of the surface; but scarcely two corpuscles are affected alike. The explanation of the changes above mentioned is difficult: that they are of a vital nature seems certain; the hyaline processes strongly reminding the observer of some of the pseudopods in Rhizopoda. The normal prolongations of a white corpuscle are formed of its hyaline substance (protoplasm), together with the granules it contains: but these resulting from the application of atropia and physostigma are free from granules: similar processes can be seen in the yolk-spherules of the Batrachia. The result of these experiments would show that no antagonism exists between atropia and physostigma, at least as far as their action on blood-corpuscles is concerned: and in proof of this, blood treated with the reagents mixed showed just the same changes as when used separately. Experiments to show the action of curare upon blood-corpuscles produced only negative results; the normal movements going on as usual: yet where a half per cent. solution was used, these ceased in ten minutes.

DEVELOPMENT OF THE NERVE-CELLS IN THE EMBRYO.—Dr. Alexis Lubimoff of Moskow has made, in Professor Virchow's physiological institute, a series of researches on the development of the nerve-cells in the cerebro-spinal and sympathetic systems of embryos from two and a half to seven months old. He finds that the cells of the sympathetic nervous system arrive at their full development sooner than those of the central part of the cerebro-spinal system. Further, among the sympathetic nerve-cells those are earliest developed which are connected with cerebro-spinal nerves, such as those of the thoracic ganglia and the coeliac ganglion. In the cerebro-spinal system, the cells of the spinal cord (those of the anterior cornua first) are developed before those of the cerebrum and cerebellum. In an embryo about two and a half months old, the sympathetic nerve-cells of the Gasserian ganglion, of the gangliform plexus, and of the intervertebral ganglia, are well developed; they are nearly of the same size—about 0.012 millimeters in diameter. In the cerebrum, cerebellum, and spinal cord, nuclei only are found at this time. In an embryo five months old, the sympathetic nerve-cells are still better developed; those of the gangliform plexus and the intervertebral ganglia measure 0.030 millimeters in diameter, and those of the superior cervical ganglion, the thoracic ganglia, and the coeliac ganglion, 0.015 millimeters. The nerve-cells of the anterior cornua of the spinal cord are well developed, and measure 0.024 millimeters; in the posterior cornua of the cord and in the grey matter of the cerebrum and cerebellum, distinctly formed cells cannot be found.—*Centralblatt für der Medicin. Wissenschaften*, September 13th.

THERAPEUTICS.

ATROPIA IN PHTHISICAL SWEATING.—A notice in the *Philadelphia Medical Times* of last year, in which Dr. J. C. Wilson stated that he had successfully used sulphate of atropia in doses of one-eighth of a grain for the relief of profuse sweating in four cases of phthisis, led Dr. Fränzel to make an extended series of researches in the Charité Hospital in Berlin on the effect of atropia in such cases.

In a paper on the subject published in Virchow's *Archiv*, vol. lxviii, part 1 (*Allgemeine Medicin. Central-Zeitung*, August 2), he states that, having given it to seventy-five patients, he has arrived at the conclusion that it is a remedy which he can confidently recommend not only in phthisical sweating, but also in that which attends other diseased conditions, such as acute articular rheumatism and convalescence from trichinosis. Among the 75 patients were 15 cases of more or less recent cheesy pneumonia, of whom all had more or less fever with night-sweats; 48 of distinct pulmonary phthisis, of whom 42 had hectic; 1 of acute articular rheumatism with high fever, 2 of ulcerative endocarditis, and 2 of trichinosis. In the first 15 patients, the sweating was in 6 completely arrested, in 7 much diminished; in 2 there was no change. In the 48 phthisical cases, the medicine had no effect in 5, in 21 the sweating was remarkably abated, and in 22 it disappeared entirely. Several of the patients in whom the atropine failed were near death when it was given. In the eight cases of rheumatism, the atropia gave permanent relief in 5, in 2 it produced a marked diminution of the sweats, in 1 it was useless. In one of the cases of ulcerative endocarditis, it proved useful; not so in the other. In the two cases of trichinosis, the cessation of the acute stage of the disease and of the hectic fever attending it was followed, without any rise of temperature, by profuse night-sweats. Sulphate of atropia, in doses of a milligramme (.015 grain), was given two hours before the expected access of sweating daily, for five days in succession in one case, and for three days in the other; the result being, that the sweats entirely disappeared from the first evening when it was given. In one of the cases of rheumatism, in a man aged 32, nearly all the large joints of the upper and lower limbs had been severely affected during five days; the patient was covered with sudamina, and, when seen by Dr. Fräntzel, was bathed in sweat. A milligramme of sulphate of atropia was given immediately; and very soon there was an abatement of the sweating, which in two hours disappeared. It returned in the night, but ceased the next forenoon after the administration of a similar dose. The atropia was thenceforth given regularly night and morning, with the effect of completely preventing the sweating. The fever lasted fourteen days. In another case of acute articular rheumatism, atropia was given, first in doses of one, then of two milligrammes, with a similar result; and it is remarked that, on two days in the course of the disease on which it was omitted, the sweating returned. The atropia was given according to the following formula: Sulphate of atropia, 6 milligrammes (9-100ths of a grain); extract of gentian, sufficient to make ten pills. Dr. Fräntzel has never given larger doses than 1.2 milligrammes (a little less than one-fiftieth of a grain), from fear of producing toxic symptoms. Even doses of 0.6 and 1.2 milligrammes, though unattended with any mischief, have produced slight symptoms of poisoning. In not a few cases, after taking the medicine, the patients felt itching in the neck, which, however, disappeared in one or two hours; the pupils not unfrequently acted slowly, and were sometimes dilated; and in some cases there were muscæ volitantes. The atropia had to be stopped in four cases on account of diarrhoea; that this was due to the medicine, was proved by the fact that it ceased when the atropia was discontinued, and reappeared when it was resumed. What the physiological action of atropia is in arresting perspiration, Dr. Fräntzel says it is difficult to determine. He is, however, inclined to believe that the profuse sweats arise from relaxation of the walls of the vessels supplied to the sudoriparous glands; and he remarks that the researches of Meuriot, Fleming, Jones, Hayden, and Brown-Séquard, have shown that atropia contracts the smallest vessels. To this are to be ascribed both the diminution of sweat and the dryness of the mouth and skin observed in cases of poisoning with belladonna and with atropia.

BROMIDE OF POTASSIUM IN CHOLERA.—Dr. William Pepper (*Philadelphia Medical Times*, July 12th, 1873) recommends the use of bromide of potassium in the collapse of cholera. He advises it given in doses of forty-five grains in three ounces of water every twenty minutes, by mouth or injection. This drug, he thinks, has a wonderful power in quieting irritation of the sympathetic nerve, which irritation he regards as the source of the symptoms of collapse.

ATROPIA IN CHOLERA.—Dr. Hodgen (*St. Louis Medical Journal*) states a plan which he had used in treating cholera in 1866. He was so encouraged by its results, as to present it to the St. Louis Medical Society as worthy of their consideration. He injected subcutaneously, during the stage of collapse, from a sixtieth to a thirtieth of a grain of sulphate of atropia. In addition, he injected salt water into the bowels. The action of atropia in paralysing the peripheral extremities of the spinal nerves, in stimulating the contraction of the arterioles, and in increasing the beats of the heart, is well known.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 29TH, 1873.

A LIBERAL EDUCATION.

THE addresses delivered by Mr. Brudenell Carter and Mr. Henry Morris, at the opening of their respective medical schools, have received the well merited honour of a reprint, and may be commended to the notice of the enlarged circle of readers. The training of the mind in the study of medicine is, in effect, the subject of both of them. That is a subject which affords to an accomplished rhetorician ample scope for his powers, and we may say at once that, in so far as these addresses are hortatory, they will excite deserved admiration and approval. No sounder advice can be given to a student of medicine than to be told to cultivate the faculty of observation and to discriminate carefully between facts and inferences; to learn to suspend his judgment; to maintain a grasp of principles, so as apply them in any given case; and, in general, to emancipate himself from the dominion of rule of thumb. In this spirit, students are to bring their intellectual powers to bear on the subject-matter of their profession; and it is reassuring to find that Mr. Carter and Mr. Morris were able to congratulate their audiences on their ability, acquired from preliminary studies, to approach the study of medicine in the scientific spirit. Thanks to "a liberal education," says Mr. Carter, you come to the study of medicine with well disciplined minds. It was a happy day for medicine, thinks Mr. Morris, when "a mixed classical and mathematical education" was made the portal to the profession.

In using the expression "a liberal education," Mr. Carter no doubt had in his mind those modernised school studies with which the name has recently come to be associated. After much controversy and much eloquent declamation, we have at length become more or less familiar with the notion that a liberal education is something more than the "mixed classical and mathematical" training of former days. We have even got the length of a series of science primers adapted for the discipline of juvenile intellects. But we doubt very much if the time has already come to congratulate the new generation of students on being in possession of the full fruits of those reformed school duties. Mr. Carter, indeed, did not pass from the subject without expressing politely certain misgivings that he felt as to those well disciplined faculties that were to be applied to the study of medicine. Let students examine themselves, and if, perchance, they were still somewhat deficient in the faculty—for example, of accurate observation—let them make use of the opportunities that were still open to them, and cultivate that faculty in their studies of botany and osteology, and even in the study of diseases of the skin. That is no doubt as good advice as an orator at the opening of the medical session could give.

By means of those preliminary studies that are in this country still retained in the medical curriculum, a student may acquire that scientific training of his faculties which a too exclusive devotion to the humanities had left him unprovided with, and he may consider himself fortunate if he profit by this opportunity. Nay, a student may still be called fortunate if, at the end of all his studies, skin-diseases and all the rest, he have acquired even a modicum of those desirable qualities of the scientific mind which Mr. Carter supposes him to have started with. With a very large number of students, even this consummation is never reached; the shortest road is taken to acquire so much pro-

fessional skill, and rule of thumb becomes the ready substitute for a basis of scientific principles. What else is possible for a student who, in the course of three or four years, has to bring into exercise faculties hitherto unused, and at the same time to acquire and hold intelligently a vast complexity of technical details? When a youth presents himself for the study of medicine, it usually happens that he is fresh from a protracted course of Greek and Latin vocabularies, and from the manipulation of those still more terrible abstractions x and y . The objective characters of things are strange to him, and the faculty of scientific observation has not only to be cultivated, but it has to be awakened. Even the elementary problems of chemistry and physiology are sufficient to preoccupy him for an entire session, while such principles as form the subject, for example, of Dr. Odling's *Animal Chemistry*—principles that are in their nature introductory to the study of medicine—the time fails him to attain to. We observe that Mr. Morris is of opinion that a student who has been brought up on the mixed classical and mathematical system is in a position to learn in six weeks all the natural science that its advocates demand. That is certainly not so, making all allowance for the rhetorical nature of the remark; and we venture to say that not less than years of leisurely drill in the natural sciences will suffice to make schoolboys quite familiar with their methods and their elementary propositions. There is no need to depreciate the study of the humanities, but at the same time we are not all alike capable of that as a systematic study. The aptitude of some leads them rather towards the study of nature; and, if there be anything in aptitude at all, it is from youths of the latter class that the medical profession comes to be recruited. Art is vastly longer, while life is short; and it may well be made a question of expediency with those who are marked out for the medical profession, whether they should not leave the humanities to take care of themselves, and direct their school studies in such a way that they may approach the study of their profession with some prospect of doing it justice.

SURGERY AT THE BAR.

THE remarkable series of lectures by Mr. Callender "On the Treatment of Operation-Wounds," recently published in this JOURNAL, cannot be passed over by us without some words of comment; for, although perhaps no remark of ours is needed to attract to them all the interest they merit from surgeons who are engaged in operative practice, yet they have a bearing, far beyond the technical details of surgery, upon questions of the most vital interest both to the medical profession, to the general public, and to all who are studying the phenomena of life and disease.

We shall, however, speak of them chiefly with regard to the question mooted some time since by Sir J. Simpson, and recently revived by Mr. Erichsen. Mr. Callender's experience comes in most appropriately on the other side, to show that in a large hospital, and in the centre of the largest city in the world, surgery may be as safely and as successfully pursued as in the isolated country cottages which were the ideal of Simpson's fancy. And Mr. W. Stokes's recently published inaugural address confirms Mr. Callender in this particular, referring as it does to a continuous series of thirty-eight amputations, with only two deaths. It is quite open to any one to argue that these excellent results are obtained by virtue of the greater skill and greater care of the surgeons in question; but if this were conceded (and no one would deny the eminent skill of either gentleman), it would be equally fatal to the allegation founded on Simpson's figures, which was, that a morbid quality was generated in the air of a large hospital by the aggregation of the patients, and that this was the cause of a greatly increased mortality. Now, neither Mr. Callender nor Mr. Stokes claims anything in the way of precaution against aggregation of patients (beyond the ordinary hygienic care which is as possible in a large hospital as in a small one), or takes any steps to act upon the air of the hospital. In fact, one of Mr. Callender's main rules is, that the air

shall be as freely admitted to the patient as possible, so that the bed shall be thoroughly ventilated and no smell be perceptible when the clothes are removed from the part operated on. This experience shows, then, that there is no necessary unhealthiness in the air of a hospital, however large; and that, in favourable cases, great operations, if properly conducted and treated, terminate in recovery as often as the formidable nature of the operation itself permits us to expect. Still there is no question, that the results announced by Mr. Callender and Mr. Stokes are very much above the average of success which is obtained by most surgeons in their hospital practice. We have never heard that the accuracy of Simpson's statistics, as far as they related to hospitals, was questioned; in fact, the data were supplied by the hospitals themselves, and they have been accepted as probably a fair representation of the results of average hospital practice. To what shall we attribute the difference? Even if we repudiate Sir J. Simpson's conclusion that there is a necessary contamination of the air of a large hospital, we may fairly admit that accidental contamination is neither improbable, nor in fact unfrequent, and that something might probably be done in the way of saving life (not after operations only) by stricter attention to the well known principles of hospital hygiene on the part of physicians and surgeons. But clearly this cannot account for all, or even much, of the difference. The management of St. Bartholomew's Hospital has not probably changed in any appreciable degree since Sir J. Simpson published the statistics of that institution, showing in 262 amputations of all kinds a mortality of 36.6 per cent. Obviously the nature of the cases must have a very large influence on the result. Mr. Callender's series has been rendered more favourable in this respect by the small number of the more dangerous primary amputations; and it would be interesting to know the particulars of the diseases and injuries for which these amputations were performed. But the great point which is enforced by Mr. Callender's papers, is the extreme importance of personal attention on the part of the surgeon himself to the details which many surgeons pass over as hardly worth their attention, and leave to their dressers or nurses.

In regard to these details, Mr. Callender's lectures will no doubt be carefully studied by our surgical readers, and we can only refer to the originals for a precise account of them. It is sufficient to say that, though ingenious and minutely cautious, Mr. Callender's plans do not (as he is careful to impress on us) even aim at any originality. He uses carbolic acid freely, but is sceptical as to the theory on which Mr. Lister bases his recommendation of it, and takes no such precautions as Mr. Lister declares to be necessary for success in the pursuit of "antiseptic surgery." What he tells us is, in his own words, "not the story of any new plan of treatment, but what we may reasonably expect to accomplish by strictly adhering to the well known principles and practice of surgery." Mr. Callender has, in fact, shown that amputation is less formidable in itself than the statistics of amputation have led us to believe it. His uniform success must, we conceive, be an exceptional circumstance in the experience of any surgeon, however dexterous and cautious; since cases must occur in which it would be wrong to refuse to a patient suffering from serious disease or injury the faint chance of recovery which amputation will afford, and of such cases a large proportion must prove fatal. It is these cases, as we believe, which largely swell the mortality returns of amputation in our large hospitals. And we confess to a very strong impression that a great deal too much has been made of the morbid influence of hospital air. Without denying the reality of that influence, we believe that there are other causes, much more readily detected and much more easily removed, which tend to swell the death-rate of all the cases, and particularly of operations. Mr. Callender has exposed (and, as far as his own practice goes, has effectually corrected) what is, we believe, the most important of these cases; we mean the absence of that personal care of the case, on the part of the physician or surgeon in

nominal charge of it, which is so frequent a defect in our present system. This defect is, no doubt, balanced and even overbalanced by the many advantages of placing our city hospitals under the care of busy private practitioners; and it is to a great extent remediable by care and conscientiousness in the discharge of duties so important; but it is a very prevalent one. We have heard that a celebrated surgeon, now deceased, used hardly ever to enter his wards or to look at his cases after operating upon them; and we have also heard that the results of his hospital practice were not such as corresponded with his wide fame as a surgeon. Had Sir J. Simpson's attention been directed to that hospital, he would have spoken about aggregation, about the vices inherent in the atmosphere of a hospital containing more than a certain number of beds, and about the propriety of shutting up or taking away the staircases, and getting into the wards by the windows. Mr. Callender, on the contrary, would have advised the surgeon to employ the same care on the details of the after-treatment as on those of the operation; not to undertake hospital practice if he had not the time to give to it; but, if he did undertake it, to carry out all its minutiae as far as possible himself, and to have all, at any rate, under his own eye. We leave our readers to judge which advice is most to the purpose. Slovenly nursing, slovenly cleaning, and slovenly dressing, are sure to follow the withdrawal of the master's eye; and these, though not necessarily connected with any hospital arrangements, are, we fear, fruitful sources of failure in hospital practice. Mr. Callender's teaching is as practical and as suggestive of the way in which real improvement is to be found, as the other is theoretical, and, we believe, delusive.

THE ELASTIC LIGATURE.

OUR hospital reports contain an account of an interesting operation performed at University College Hospital by Sir Henry Thompson, in which that surgeon used, for the removal of a mammary tumour, the elastic ligature, as recommended by Dr. Dittel of Vienna. The proceeding is one of those which indicate the tendency of modern surgery to endeavour to obtain complete results by bloodless means. In the hands of Dr. Dittel, who has made extensive application of the India-rubber thread, the use of this material as a substitute for the knife has proved very successful; and this proceeding is one which, although of limited application, will doubtless find favour in many cases with surgeons, and no less so with patients.

To the accounts of the operation given by Sir Henry Thompson and our reporter, we have to add a few words on the history of the subject. While to Dr. Dittel is unquestionably due the merit of having made a most ingenious application of the result of an unfortunate accident, and of having called the attention of surgeons to a mode of operation which may prove to be of much value, it would be an error to suppose that he is the first surgeon who has used the elastic ligature in the way recommended by him. More than three years ago, Mr. Henry Lee read a paper before the Royal Medical and Chirurgical Society, in which he described an operation that he had practised for the removal of naevi by the use of elastic ligatures (BRITISH MEDICAL JOURNAL, vol. ii, 1870, p. 99). And Professor Vanzetti of Padua, in an article in the *Gazzetta Medica Italiana (Provincia Veneta)*, for June 7, while he speaks in complimentary terms of Dr. Dittel, points out that, as long ago as 1862, Dr. Grandesso Silvestri of that city published in the above-named journal an essay on the use of the elastic ligature, in which he recommended its use for the removal of tumours, and described cases of naevus, vaginal polypus, and scirrhus of the breast, on which he had thus operated. In a second paper, published in the same Italian journal in 1871, Dr. Silvestri repeats his advocacy of the elastic ligature, and describes additional cases of naevus, uterine fibroid, and tumour of the vulva, in which he had used it with success. He was also aware of the fact that it would cut through bone. Dr. Vanzetti further directs attention to Mr. Henry Lee's paper above-mentioned, and

to the fact that, in 1863, M. Richard of Paris, at the suggestion of M. Trousseau, used the elastic ligature in several cases for the removal of pedunculated tumours. Dr. Dittel has since written to Dr. Vanzetti a letter, in which he honourably states that "he has no doubt that the priority of using the elastic ligature belongs to Dr. Grandesso Silvestri; and he has no hesitation in acknowledging this, although he was quite independently led by an accident to his discovery." The use of the elastic ligature has, therefore, already a good amount of evidence in its favour, and it is well deserving the attention of surgeons.

PAYMENT FOR RETURNS OF SICKNESS AND DEATH.

WE have already pointed out that, amongst the numberless absurdities, errors, and omissions of the Public Health Act, 1872, was a total omission to provide the medical officers of health with the means of procuring the particulars as to sickness and death in their districts, for the purpose of their own information, and for filling up the returns which they are required to make to the Local Government Board. The omission was altogether inexcusable. It betrayed even ignorance of the fundamental facts of public health administration, and blind neglect of the information furnished to the Minister by the State Medicine Committee of the British Medical and Social Science Associations. The results have been brought out very strongly in our columns. Some registrars refuse to furnish the information; others are willing to give it if paid for it. Sanitary authorities are required to obtain the information for their officers: some are willing to do so, and to pay for it, if it be legal; others are quite unwilling to do so. In this comedy of errors, the Local Government Board are now endeavouring to introduce very partial order, by obtaining from the law-officers of the Crown an opinion whether it is lawful for those sanitary authorities who are willing to pay the registrars (at the rate of 2d. per case returned). We beg to call the attention of medical practitioners to the fact that it is proposed to pay the registrars for their returns, which are mere transcripts of existing official documents.

THE President of the Obstetrical Society has issued cards for a *conversazione* on the evening of December 5th.

THE offices of the Medical Department of the Local Government Board are now being pulled down, and the staff have removed to the new official buildings in the same square as the India Office.

WE desire, although tardily, to tender our warm congratulations to Dr. Lyon Playfair on his appointment to a high position in the Government. Dr. Playfair has been conspicuous for several years in Parliament for his great administrative power and unwearied attention to the least inviting subjects of parliamentary discussion. He will prove a source of strength to any Government. We fear that medical and sanitary interests will greatly miss his independent advocacy in the House.

EXCESSIVE MORTALITY FROM MEASLES.

DURING the week ending last Saturday, 130 deaths from measles were registered in London; the highest mortality from the disease which has ever been returned since the beginning of 1840, when the weekly returns of deaths were first published. We remarked a fortnight ago that the epidemic was showing a partiality for the north, east, and south groups of registration districts; such is still the case. Of the 130 deaths, 114 were pretty evenly distributed in those three districts; and the remaining 16 deaths were equally divided between the central and west districts. Children are the special victims of the malady; 121 of the 130 deaths of last week occurred in children under five years of age, whilst the death of only one adult was due to the disease. Notwithstanding the frequency with which measles terminates in bronchitis, it does not appear that any particular tendency of the two diseases to prevail together has at any time been demonstrated. In the present case, the

mortality from each malady rose *pari passu* week by week during October and the first week of November; since then, however, the two death-rates have followed divergent directions. Thus, the mortality from measles in the week ending Saturday, the 8th instant, was 116, in the following week 105, and last week it rose to 130; the death-rate from bronchitis fell from 386, at which number it stood in the first mentioned week, to 295 in the week before last, and further declined to 262 last week.

REPORT OF THE RIVERS POLLUTION COMMISSIONERS.

AFTER a series of investigations extending over a period of more than five years, the Rivers Pollution Commissioners have issued the last of their reports on the various methods by which our streams are fouled. One final report relating to the potable waters of Great Britain is now in course of preparation. The report just issued has reference to the pollutions which result from mining operations and metal manufactures, such as the washing of china clays in Cornwall, the washing of small and shaly coal in Cumberland and Derbyshire, and the numerous metal industries of such towns as Glasgow, Sheffield, and Birmingham. Unlike the previous recommendations which the Commissioners had made, and which had regard mainly to sewage and chemical pollutions, mere subsidence is now proposed as the only practicable method of removing the waste mineral matters in mine-waters; but, even after a period of at least six hours in subsidence-ponds, such liquids will still be deemed polluting and inadmissible into any water-course unless they comply with other named conditions. But, as regards certain streams in Cornwall, whose waters are so laden with valuable mining refuse that works have, at a great cost, been established along their banks for the recovery of those substances, it is considered that, if they were subjected to the special enactments on which the Commissioners depend for river-restoration elsewhere, the result would be the destruction of a vast industry, on which a large and prosperous population is dependent; and hence it is proposed that these streams be altogether exempted from the application of those enactments, such exemption being the more readily conceded, because rivers polluted by mines emit no offensive exhalations. Pollutions from coal-mines are deemed mineral, because, as far as rivers are concerned, the organic matter of coal is non-putrescible, and it inflicts no more actual injury on running water than is caused by sand or other non-poisonous mineral matter. Great injury is done to many rivers by the drainage from galvanising, tin-plate, and other metal workings; and instances are referred to in the report in which the water-supply of whole villages has been destroyed, and in which the corroding action of the polluted river-water upon steam-boilers indicates the necessity for a prompt and efficient remedy. A series of standard tests for such waters are proposed by the Commissioners with a view of checking this evil. It is also proposed that, with the object of effectually administering any laws which may be made for the protection of our streams from pollution, the Government should itself appoint a staff of inspectors, whose independence of all local influences would then be insured.

THE "VICTOR EMMANUEL".

WITH reference to our recent statement as to the appointment of a military officer to the *Victor Emmanuel*, we had learnt nothing of a positive nature for some time; and it seemed to have been the opinion of some that the affair would blow over, and the intended job abandoned by the Horse Guards. We confess that we had little expectation of the kind, knowing pretty well that the Horse Guards, as at present constituted, are not likely to let slip the chance of a job of this kind, for which there are only too many hangers on, who are always hungering. We have too good a living example of their way of thinking in the presence of that useless excrescence, the commandant at Netley, whose existence involves a scandalous and mischievous waste of public money. It would appear, however, that there can be now little doubt of the appointment being made, although we have heard no actual name mentioned, as Surgeon-Major Bleckly has been deprived of his cabin, and obliged to put up with one of the smaller ones, quite

inadequate for his position and duties. It is really worth while considering for a little the true bearing of this most preposterous proceeding. What is the ship commissioned for? For a hospital-ship to accommodate the sick and wounded of Her Majesty's troops at the Gold Coast? Who, then, is the most important officer? Surely the surgeon-major in charge. Apparently, the Horse Guards think differently, and consider it to be merely the means of providing a post as a job for some captain or major. For what possible reason can such an officer be required? Is it for the management of the ship as a sea-going vessel? Avowedly not; for the officer would be simply useless for the purpose, whilst a proper complement of naval officers are already appointed. Is it to administer the vessel as a hospital? Assuredly not; for the officer would be incompetent to do so, even if the surgeon-major appointed had not already had more experience of administration than is likely to have fallen to the lot of any that could be appointed. It is obviously not for the treatment of the sick and wounded that the appointment is to be made. It cannot be to take charge of the returns and documents: the surgeon-major in charge has already made out more than the military officer is ever likely to make (even if he were capable of understanding them), if he lived to the age of Methuselah. Is it for the dieting, etc., of the sick and their attendants? There is a naval paymaster, a great deal more useful for the purpose. As we presume he is not expected to act as chaplain, there is positively nothing left except the routine military matters of the army hospital corps and the discipline on board ship. For the former, there is already appointed a most intelligent and experienced officer of the corps itself; and for the latter, we take it the naval commander will provide, or know the reason why. It is, therefore, evident that this most unjust and vexatious appointment can only be made out of a desire to find a post for some favourite; to gratify the paltry jealousy of the military towards the medical department; and (this unintentionally) to show again with how little sense we are governed. Its results will be to place the surgeon-major, the really important officer on board, in an inferior position; to deprive him of his proper cabin-accommodation, and of his due position and respect before his own subordinates; and to excite a feeling of resentment in the whole medical department. We think it right to add that we believe the Commander-in-chief has not been the prime mover in this, but that we owe this piece of pestilent interference to the wisdom of Sir Richard Airey, on whose exploits as an administrator the history of the Crimean war is not altogether silent.

LONGEVITY.

DR. W. MUNRO, late medical officer St. Kitts, West Indies, writes to us that, the question of the actual possibility of human life in any case existing beyond a century having lately been referred to in the JOURNAL, the following case may be of some interest. While, even after the most careful inquiry, he found it impossible to fix the old woman's exact age, enough was elicited to make it certain that she was more than a century old. In November 1871, he was called upon to give a burial certificate for a black woman who had just died, and who was alleged to have reached 120 years of age. [In St. Kitts, it is required in every case, whether a medical man has attended or not, that a burial certificate certifying the cause of death, as far as can be ascertained, shall be given by a medical practitioner, who is paid by the Government for such certificate. The corpse cannot be buried until this is granted. This is, Dr. Munro observes, an excellent law, worthy of imitation by the mother country.] His informant, C. D., daughter-in-law of the deceased, herself an old woman, was the widow of the youngest son of A. B. (the deceased); and he was born at the same time (as C. D. said) as A. B.'s first grandchild. Therefore, as A. B. was a grandmother at the time of his birth, she must then have been at least 40 years of age; early marriages, such as are common now, not having been permitted by the slave-owners, so that at least twenty years must be allowed for each generation. The age of C. D. Dr. Munro considered to have been 69 in 1871, she having been married while a slave at 25 years of age, and having had three children, the youngest of

which was two years old at the time of the emancipation in 1834. Her husband was three years her senior; and thus, if alive, would have been 72. Therefore A. B., having been at least 40 years old at the time of his birth, must have been 112 when she died. As another proof, Dr. Munro asked C. D. if she had often spoken of the French being in St. Kitts, and was answered yes, and that she was a young woman at the time. On being asked the name of the leader, he was at once answered, the Marquis de Bouilly (Bouillé). This was their great invasion in 1782. They attacked and plundered the island in 1805; but the name of the leader shows that this latter was not the time referred to. Now, had A. B. been 100 or under, she could not have been a young woman in 1782—89 years back from 1871; so that, from all the evidence Dr. Munro could collect, he was induced to believe that she was certainly not under 100, and that 112 or 115 was the nearest approach to the truth, while it was not really impossible that she had actually reached 120 years. He searched the lists of slaves registered in 1817; but, as she had belonged to private owners, and had changed hands several times, he was not able to find her name. In 1868, he gave a certificate for an old man said to be 110 years old, but the age was not made out as clearly as in the other case. In about five other cases which he investigated carefully, in all of which the persons were said to have been, and were registered as, over 100, he found errors. One, said to have been 110, was really only 87. In the churchyard of Baneterre, St. Kitts, is the tombstone of a lady of good family, who died at the age of 107. This can be depended on, as the date of the birth of such a person would be well known, and is only one example out of many showing that the lives of white creoles of the West Indies are as valuable as, if not more so than, those of people in the same condition of life at home.

ST. THOMAS'S HOSPITAL.

THE Court of Common Council propose to inquire under what circumstances part of the *corpus* of the estates of St. Thomas's Hospital is proposed to be applied to purposes of current expenditure, and whether such proposed alienation of part of the endowments of the hospital is legal, reporting thereon to the Court.

BRAIN-FORCE AND BLOOD-SUPPLY.

DR. W. B. CARPENTER has recently given two lectures on the functions of the brain, chiefly based upon the recent researches of Dr. Ferrier, reported in the last volume of the *West Riding Asylum Reports*. He drew particular attention to the intimate dependence of nerve-force upon an active blood-circulation; for which reason, the brain of man, although it weighs no more than one-fortieth part of the weight of the entire body, receives about one-fifth of the whole blood-supply. And of this fifth part, the greater portion goes to the grey cortical substance and to the ganglionic centres at the base. In ordinary, the nervous system resembles a moderately charged galvanic battery, which is ready to send a current when the circuit is completed. When excessive blood-supply exists, the tension of the battery is discharged spontaneously, as in tetanic convulsions; and when the blood-supply is lessened, the functions of the brain are diminished. Sleep is accompanied, if not induced, by reduction of the circulating blood-current through the brain; and total insensibility immediately follows complete stoppage of the blood-supply. When the intense faradic current of an induction-coil is applied, as in Dr. Ferrier's experiments, to the cortical substance of the brain, a visible afflux of blood to the stimulated part is in all cases produced; and to the excessive nervous tension thereby caused (resembling that of an over-charged Leyden jar), rather than to the direct stimulation of the nerve-substance itself, Dr. Carpenter attributes the discharges of nerve-force that produce the lately discovered movements in muscles. In support of this view, he cites the fact that time is required (especially when the electrodes are far apart) to call forth the action; also the fact that the action frequently continues after the stimulation has ceased. Application of the electrodes to parts of the cortical layer lying far apart causes general convulsions; whilst the excitement of one convolution alone, or

of part of a convolution, calls forth co-ordinated movements of particular groups of muscles, which may now be generally foretold by experimenters with unerring accuracy. Movements, however, are only produced when the anterior lobes or front parts of the middle lobes are stimulated; these being the parts of the cerebrum which are first discovered when the gradual development of the brain is traced upwards through the different races of inferior animals to man. No movements are elicited by application of the stimulus either to the posterior parts of the middle lobes of the cat or dog, or to the posterior lobes or forward prolongation of the anterior lobes of the monkey. The lecturer considers that these experiments still warrant the inference, sketched years ago upon other evidence by himself, that "the posterior lobes are the instruments of those higher cerebral operations resulting in ideas, which do not prompt to motion." Dr. Ferrier has found that the application of faradic electricity to the corpora striata calls forth almost universal muscular movement, especially, however, amongst the flexor muscles; that similar stimulation of the corpora quadrigemina produces violent contraction of the extensors; and that the cerebellum largely controls the movements of the eye-balls, by virtue of which power it probably exercises its special influence on the balancing movements of the body.

RATING HOSPITALS.

WE learn from the *Local Government Chronicle*, that the Governors of St. Thomas's Hospital are resisting strenuously the assessment of their hospital to the poor-rate. They appealed unsuccessfully to the General Court of Assessment Sessions; and although the liability of charities to assessment to local rates, notwithstanding there is no "beneficial occupation," has been clearly laid down in several cases, they have since carried their appeal to the Court of Queen's Bench. Sir J. Karslake, who appeared for the hospital authorities, admitted that the case could not be distinguished from those previously decided, and judgment was given for the respondents. These proceedings, it would appear, were only with the object of enabling the Governors to take the case into error, in order that the decisions of the Court of Queen's Bench on the question of the liability of charities to be rated may be reviewed.

HOSPITAL OUT-PATIENTS.

THE following is an extract from a report which has recently been made by the Paddington District Committee of the Charity Organisation Society to the Central Council. It confirms, in a remarkable manner, the results of the investigation which has lately been carried on at the Queen's Hospital, Birmingham, and it bears out the opinions which have often been expressed in these columns with regard to the social condition of many of our hospital out-patients.

The subject of gratuitous out-door medical relief having attracted some attention, twenty-six out-patients of the St. Mary's Hospital were selected for inquiry, as being likely to prove able to pay for their own medical attendance. The result showed that, of these, five were cases of persons not suitable for hospital treatment; *i.e.*, they were persons not at all in distress, and who could afford to pay a medical man; twelve were cases who could well afford to pay for the benefits of the provident dispensaries; two gave false addresses; and seven were considered proper objects. It became known among the out-patients that inquiry was being made, and although a look-out has been kept, only two such cases have applied since. One of these acknowledged he was not in distress, and was quite willing to subscribe a guinea to the funds of the hospital; the other belonged to a respectable family, but has had much sickness, and paid many doctors' bills.

AUTO-MICROSCOPY.

AT one of the meetings of the Microscopical Society of Illinois, Dr. Adams read a letter from Professor Sanborn, of Boston, Massachusetts, on a new form of microscope, to be used for the examination of parts of the observer's own face. The instrument (*Monthly Microscopical Journal*) consists of an ordinary microscope tube bent twice at right angles, forming thereby a body and two arms. Inside the tube at the angles are affixed prisms or mirrors. The objective being adjusted in one arm, and the eye-piece in the other, the light traversing the axis of

the objective is reflected by the mirror or prism in the first angle and thrown on the mirror in the other angle, whence it passes through the eye-piece. The instrument is held in position by a clamp fixed to the middle of the body, and firmly screwed to a table or rest. The observer assumes the reclining position, and, adjusting the eye to the eye-piece, brings the objective to bear on the part of the face under examination. Sunlight is used for illumination, and the objectives are, of course, low. It is the purpose of the Professor to study in this way the pathological processes involved in vesication, etc. Anyone possessing a microscope can, at slight expense in procuring a tube and mirrors, avail himself of this means of study, by using his own objectives and oculars.

CHOLERA AT THE LONDON HOSPITAL.

THE man who was admitted into this hospital last week suffering from well marked symptoms of Asiatic cholera, died so shortly after admission, that there was no time to try any mode of treatment. At the necropsy, which was made by Dr. Sutton, the intestines, from the stomach to the upper part of the rectum, were distended with an opaque blood-stained serous fluid; the lungs were very light, and the other viscera congested. The man died in the reaction from collapse. No fresh cases have occurred.

A PUBLIC HEALTH BILL IN AUSTRALIA.

A BILL has been submitted by the Government to invest local bodies with the necessary powers for conserving and improving the public health. Its provisions are comprehensive. It is declared that the Bill shall apply to all towns—that is to say, to all municipalities in the colony, as well as to such other places as the Governor may direct. The mode of control provided is twofold—central and local. The central authority is to consist of a Board, comprising not more than seven nor fewer than four members, the appointment of whom is to rest with the Executive. The Chairman, or rather President of this body, who is to have a deliberative as well as a casting vote, is to be a salaried officer appointed by the Governor, his position being tenable during good behaviour.

THE PROGRESS OF MEDICINE AND SURGERY.

DR. WYNTER'S well known and very interesting article on the Progress of Medicine and Surgery is being reprinted from the *Edinburgh Review*, with many other essays from the same skilful pen, and is to be issued under the title of *Peeps into the Human Hive*. There is so much in this essay that is true, and so many ordinary readers are likely to gain from it their views of modern medical and surgical progress, that we regret to see it reissued without correction of some important and rather serious errors. The whole article is more or less loose and inaccurate—much more so than is explicable on the score that it is intended for popular reading. But it is, as we pointed out before, inexcusably inaccurate and untrue to inform anxious readers, in respect to albumen in the urine, that “a little coagulation of the contents of the test-tube, and the physician knows that the days of the patient are numbered.” We may confess to extreme incredulity as to the “new instrument just discovered, the diaphanoscope, by which the internal organs are made visible through the walls of the abdomen by means of very powerful lights, which render the body to a certain degree transparent, and the outlines of the abdominal viscera are thereby mapped out to the eye.” We fear medical science will be unable to satisfy any reader of the *Edinburgh Review* who might desire to have his abdominal viscera so mapped out. The eulogy of Marshall Hall is unjust to Prochaska; and the account of the “revival” of ovariectomy by Mr. Spencer Wells is simply absurd. The splendid achievements of Mr. Wells have been often and cordially recognised in these columns; but an historical sketch which deals with him as the solitary British figure concerned in the “revival” of ovariectomy, and which omits all mention of his predecessors, Warne, Samuel Lane, Baker Brown, Clay, is deficient in a very important point. Baker Brown was not only Spencer Wells's predecessor, and his contemporary in the ope-

ration, but to some extent his preceptor; although, for many reasons, the pupil quickly outstripped his master. Nothing is gained by a barefaced sacrifice of historical accuracy. We should complain equally of the fallacious view presented of the great question of hospitalism, but that a light sketch of the kind should not be judged too severely. We could much desire, however, that, if there be yet time, Dr. Wynter should employ it in correcting some of the errors patent in the advance sheets with which we have been favoured. The essay is very readable, the object is laudable, and the matter interesting; but the statements are throughout very loose, and commonly very inaccurate. We say this with great regret, and much desiring to do justice to the clever and industrious author, who has been napping over a good many of the pages.

ADULTERATION OF DRUGS.

CHEMISTS and druggists appear to be in some alarm as to the possible action of the Adulteration Act. We pointed out in the beginning the danger of the appointment of tradesmen to official positions as analysts, where they might be called upon to sit in judgment on the wares of their rivals; and, judging from a recent pharmaceutical address by a Mr. J. D. Savage at Brighton, the shoe is beginning to pinch. It was a characteristically erroneous interpretation of the law by the Local Government Board, which constituted local authorities the judges of what is “medical knowledge”. The consequent troubles and scandals may give the Board cause to regret their supercilious ignorance and arrogance in dealing with this, as with other medical subjects, without consulting their medical adviser.

“Many of our worthy *confidés* have been appointed analysts to large and important districts. Hitherto the duties have been exercised on the retailers of food; but we know not how soon our own stores may be overhauled, and similar scenes enacted to those of the Apothecaries' Company many years ago in London. We might find varied proportions of quinine in our citrates. Sulphur. precipitatum might not be the pure article of the *British Pharmacopœia*, neither might *conf. sennæ*. We all know the large quantity of salt in cayenne pepper, and without it the public would not recognise the article. Other things might be enumerated of a like character; and, after all, unless they are articles of home manufacture, you must greatly rely on the antecedents of the firms with whom you deal. One thing seems pretty certain, that we are getting superlatively wise in our generation; and, whilst no respectable man would object to healthy criticism on what he sells, there is the same fear of jealous rivalry and the unjust exercise of arbitrary power that existed when the Apothecaries' Company of London exercised supervision over London druggists.”

THE VOTING CHARITIES.

WE are glad to learn that an influential Committee is being formed for the purpose of bringing public opinion to bear upon the voting charities, and that a meeting is to be held at the Westminster Palace Hotel on Tuesday, December 2nd, to consider the subject. This is a matter which intimately concerns ourselves; for, though the hospitals and dispensaries are not what is generally understood by voting charities, yet the same principle of election prevails in them to a far greater extent than is desirable. At hospitals and dispensaries, no less than in orphanages and homes for incurables, the governors obtain privileges in return for their subscriptions; and these privileges are chiefly of two kinds. They secure a vote at the election of officers, and they receive letters of recommendation for patients. Though, at some medical institutions, the method of electing the physicians and surgeons by a general canvass of the governors has been abolished or has been placed under some check, yet it is still the rule at the great majority; and every now and then, notwithstanding that the feeling of the profession is strongly opposed to such contests, we see a keen canvass going on for some hospital or dispensary appointment. All who have had to go through such a degrading ordeal must desire to see this system of electing scientific men by the votes of a large mixed constituency abolished as soon as possible. And with respect to the other privilege which the governors of our hospitals and dispensaries enjoy—namely, the right of recommending patients—there is no need to point out how much this

has been abused. We all know the shifts that some of the governors practise in order to get the worth of their money—how they send their servants, their workpeople, their dependents, to the hospital, when they ought to refer them to a general practitioner. We are, therefore, prepared to welcome the movement which has been set on foot to alter the system of election at the voting charities, because it can hardly fail to act beneficially upon hospitals and dispensaries, and, through them, upon the medical profession itself.

SCOTLAND.

HEALTH OF SCOTLAND.

THE monthly return for the eight principal towns of Scotland, having about a third of its population, shows that in October 2,379 deaths were registered, being 54 under the corrected average for October during the last ten years; 695 marriages, being six under the average; and 3,514 births, being rather less than in October of last year. The annual rate of mortality ranged from 20 per 1,000 persons in Edinburgh to 45 in Greenock. Of the whole number of deaths 42 per cent. were of children under five years of age. The zymotic class of diseases caused 27 per cent. of the whole mortality. The deaths from scarlatina increased from 83 in August, and 119 in September, to 214 in October, or 9 per cent. of the whole mortality. The towns in which this epidemic is most prevalent are Glasgow, Aberdeen, Greenock, Paisley, where 10.0, 12.6, 16.5, and 24.5 per cent. of their respective mortalities resulted therefrom. Fever caused 92 deaths. Of these, 40 were tabulated as typhus and 40 as enteric. Small-pox caused 69 deaths, of which 17 occurred in Glasgow and 51 in Greenock. This disease appears steadily and markedly on the increase in the latter town, there having been 16 deaths recorded in August and 30 in September. Diarrhoea caused 68 deaths; croup, 52; diphtheria, 43; whooping-cough, 33; measles, 29; dysentery, 7; metria, 5; and cholera 4: 49 deaths were ascribed to apoplexy, 42 to paralysis, 124 to diseases of the heart, 55 to hydrocephalus, and 134 to premature birth debility. The deaths from inflammatory affections of the respiratory organs (not including consumption, whooping-cough, or croup) amounted to 383, or 16.1 per cent. of the whole mortality. Those from consumption alone numbered 218, or 9.2 per cent. From violent causes 89 deaths resulted, of which 3 were suicides. One death was caused by *delirium tremens*, and 4 by the direct effects of intemperance.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

ON Monday, the 24th instant, the election for the Examinership of Surgery, vacant by the promotion of Mr. Joliffe Tufnell as Vice-President, took place. Dr. Robert M'Donnell, F.R.S., one of the Council, resigned his seat in order to compete for the post, and was successful. The other candidates were Mr. Perseé White, Mr. Tyrrell, Mr. Smyly, and Mr. Hamilton. The vacancy on the Council, occasioned by Dr. M'Donnell's resignation, was filled up by the selection of Mr. John Hamilton.

UNIVERSITY OF DUBLIN.

MR. EVELYN LITTLE, whose name we lately mentioned as most likely to be successful for the post of Lecturer on Anatomy in the School of Physic, Trinity College, has been elected to that vacancy. In right of this appointment, he will act as one of the clinical surgeons to Sir Patrick Dun's Hospital.

DUBLIN SANITARY ASSOCIATION.

AN important communication in a sanitary point of view, has been addressed by this body to the Public Health Committee of the Corporation, relative to the cabs for removal of patients affected with con-

tagious disease. It seems that these cabs are three in number, but the horses for them are kept nearly two miles distant from the vehicles. The charge also is excessive, being from six to ten shillings, according to distance, for each patient. These cabs, strange to say, are not disinfected after the removal of patients to hospital. The caretakers are on duty from 11 to 5 P.M., so that should a patient require a cab in the evening it would not be available. The Association are compelled to state that the Public Health Committee have not provided suitable or adequate accommodation for the removal of the sick to hospital, a statement which will be endorsed by all unprejudiced persons; and they suggest that properly appointed ambulances should be provided in lieu of the existing cabs, which should be distributed in easily accessible places; and that the public should be informed by means of notices posted up in conspicuous places throughout the city, and particularly outside dispensaries and hospitals, of the places where they may be obtained; which vehicles should be available at all hours without any charge, and that each should be thoroughly disinfected after every journey. These hints are common sense and to the purpose, and it is to be hoped that the Corporation will adopt them.

HEALTH OF IRELAND.

THE Registrar-General for Ireland has issued his return for the second quarter of the year 1873. The births registered were 39,544, being in the annual ratio of 29.6 per 1,000 of the estimated population; and the deaths registered were 26,128, or in the annual ratio of 19.6 per 1,000. Only 13.5 per cent. of the registered deaths were of children under one year old; and 41.1 per cent. of the deaths in Ireland were of persons aged 60 years or more. The death of a woman said to be 127 years old was registered at Lisburn. The Registrar of Skull says that "one woman died aged 105; she never troubled a doctor, or took his physic." In neither of these cases is there any account of evidence of the age. The Registrar of Cross Roads, Dunfanaghy, says that "the death was registered there of a woman upwards of 100 years old, which would seem to be well authenticated." The deaths in the quarter from small-pox, measles, scarlet fever, diphtheria, whooping-cough, fever, diarrhoea, and simple cholera, amounted together to only 11.2 per cent. of all the deaths, or 0.55 in every 1,000 of the estimated population. The emigration return shows the large number of 47,414, or 9,352 more than in the same quarter of 1872. The local registrars complain of the sanitary state of many districts. The Registrar of Ballyward, Banbridge, says—"As soon as the people clear out their manure-heaps in the spring, which are generally situated within a few feet of their doors, so soon does typhoid fever make its appearance." The Registrar of Ely, Enniskillen, reports eight cases of typhus in two adjoining houses, and attributes the outbreak to overcrowding and filth. The Registrar of Cong, Ballinrobe, reports that filthy cesspools of large dimensions are kept in many villages close to the doors of the dwelling-houses. These have been the foci from which fever and scarlatina radiated to a considerable extent during the past quarter. One-third of the deaths have been caused by these preventable diseases. The Registrar of Athenry, Loughrea, reports typhus and typhoid fevers exceedingly prevalent during the quarter, and attributes the alarming illness only to the very bad water which the people are obliged to drink; and the Registrar of Athy, having attended three cases of enteric fever in one house in March, learnt that the drinking-water used from a pump was occasionally offensive, and he adds, "I took measures to bring this fact under the notice of the town commissioners, but nothing has been done in consequence." The Registrar of Skull says: "The sanitary state of this district is grossly neglected; it is dreadful to compel people to drink the water, it is so dirty." The Registrar of Dromore, Omagh, reports that since last autumn, a large main drain has been made through all the streets, and he says: "Heretofore fever was very prevalent, but since this drainage it has almost ceased to exist;" but manure-heaps and cesspools close to the dwellings of the small farmers still tempt some fever to remain in the district.

MEMORIAL TO THE LATE DR. JOHN MURRAY.

THE following gentlemen are the Committee for instituting Medical foundations in the University of Aberdeen, in memory of Dr. John Murray: William Leslie, Esq., Lord Provost of Aberdeen; the Very Reverend P. C. Campbell, D.D., Principal of the University of Aberdeen; W. D. Fordyce, Esq., of Brucklay, M.P. for East Aberdeenshire; W. M'Combie, Esq., of Tillyford, M.P. for West Aberdeenshire; J. F. Leith, Esq., Q.C., M.P. for Aberdeen; John Webster, Esq., Advocate, Assessor to the University Court; A. Walker, Esq. Dean of Guild; J. Macrobin, M.D., Dean of the Faculty of Medicine, University of Aberdeen; W. Pirrie, M.D., Professor of Surgery; J. Nicol, Esq., Professor of Natural History; G. Ogilvie, M.D., Professor of the Institutes of Medicine; J. S. Brazier, Esq., Professor of Chemistry; J. Struthers, M.D., Professor of Anatomy; A. Harvey, M.D., Professor of Materia Medica; F. Ogston, M.D., Professor of Medical Jurisprudence; G. Dickie, M.D., Professor of Botany; J. W. F. Smith Shand, M.D., Physician to the Royal Infirmary, Aberdeen; R. Beveridge, M.B., ditto; A. Fraser, M.D., ditto; A. Ogston, M.D., Surgeon to the Royal Infirmary; A. D. Davidson, M.D., Ophthalmic Surgeon to the Infirmary; John Urquhart, M.D., Aberdeen; Archibald Reith, M.D., Aberdeen; Rev. A. Anderson, Old Aberdeen; James B. Nicolson, Esq., of Glenbervie; W. Littlejohn, Esq., Aberdeen Town and County Bank; W. McCombie, Esq., of Easterslane; R. Lumsden, Esq., North of Scotland Bank; J. F. White, Esq., merchant, Aberdeen; W. Yeats, Esq., of Anquharney; F. Ogston, jun., M.B., Aberdeen; F. M. Moir, M.B., Aberdeen; J. B. McCombie, advocate, Aberdeen, treasurer; Patrick Blaikie Smith, M.B., Aberdeen, secretary. The following are the subscriptions, in addition to those already intimated:

£ s. d.		£ s. d.	
Andrew Murray, Esq., advocate	105 0 0	Dr. J. W. F. Smith Shand	3 3 0
J. M. McCombie, Esq., advocate	10 10 0	Dr. Ogilvie	3 3 0
Dr. Macrobin	5 5 0	Dr. Struthers	3 3 0
W. Littlejohn, Esq. ...	5 5 0	R. Lumsden, Esq.	2 2 0
A. Walker, Esq., Dean of Guild	5 5 0	Dr. P. Blaikie Smith ...	2 2 0
W. Yeats, Esq., Anquharney	5 5 0	Dr. Urquhart	2 2 0
Dr. Reith	5 5 0	Dr. Angus Fraser	2 2 0
Alexander Watt, Esq. ...	5 5 0	J. S. Brazier, Esq.	2 2 0
Dr. F. Ogston	5 5 0	Dr. Pirrie	2 2 0
James Nicol, Esq.	3 3 0	John Manson, Esq.	2 2 0
Dr. Harvey	3 3 0	Dr. Patrick Manson ...	2 2 0
		Dr. Beveridge	2 2 0
		J. W. Langmore, Esq. ...	1 1 0

The following subscriptions to the London Memorial have been received and promised since the publication of the former lists.

£ s. d.		£ s. d.	
Senior Students, Mid- dlesex Hospital	2 12 6	Jas. Worthington, Esq. ...	1 1 0
Dr. Henry Rayner	2 2 0	Mrs. Heckstall Smith... 1 1 0	
Sir T. Watson, Bt., M.D. ...	2 2 0	Dr. J. C. Steele	1 1 0
Miss Cath. Jane Wood. ...	2 2 0	Dr. Macpherson	1 1 0
George Critchett, Esq. ...	2 2 0	Claude Rogers, Esq.	1 1 0
James S. Turner, Esq. ...	2 2 0	G. Anderson Critchett, Esq.	1 1 0
Dr. W. R. Sanders	2 2 0	Wm. Mac Cormac, Esq. ...	1 1 0
G. Lawson, Esq.	2 2 0	Dr. T. Henry Green ...	1 1 0
Dr. Alexander Steven... 1 1 0		H. Harris, Esq.	1 1 0
Horace Basan, Esq.	1 1 0	Miss Johnston	1 1 0
Wm. Johnstone Smith, Esq.	1 1 0	W. Stamford, Esq.	1 1 0
H. Royes Bell, Esq. ... 1 1 0		John R. Morrison, Esq. ...	0 10 6
		C. J. Pyle, Esq.	0 10 6

Those gentlemen who have already promised, but have not yet sent in their subscriptions, will oblige by doing so shortly, as it is proposed to close the list before Christmas.

Subscriptions for the Scholarship or Annual Prize will still be received by the London Treasurer and Secretaries; or they may be forwarded direct to James B. M'Combie, Esq., Advocate, 103, Union Street, Aberdeen, N.B., who is the Local Treasurer.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE second meeting of the Session will be held at the General Hospital, Maidstone, on Friday, December 5th, at 5 P.M.; GEORGE HENRY FURBER, Esq., in the Chair.

Dinner will be provided at the Mitre Hotel, at 7 P.M.

Papers have been promised by John M. Burton, Esq., on Aneurism and on Empyema; by Matthew A. Adams, Esq., on Dewar's and McKendrick's Experiments Demonstrating the Correlation of the Function of the Retina and Galvanic Electricity; by Dr. Monckton, Cases and Commentaries; by William Hoar, Esq., Cases and Commentaries.

A proposition will be made to hold an united meeting of the West Kent and East Sussex Districts, annually, at Tunbridge Wells.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.
Rochester, November 17th, 1873.

MIDLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at Leicester, on Tuesday, November 11th; the President, H. LANKESTER, Esq., in the Chair.

Papers.—The following papers were read and discussed.

1. The President. Notes of an interesting and peculiar case of Rheumatism.

2. Dr. Barclay. On Cases of Diabetes treated successfully by Arsenic.

3. Mr. Marriott. On a case of Fibroid Disease of the Uterus interfering with Parturition.

4. Mr. Denton. A Case of Uterine Hæmorrhage.

5. Dr. Blunt. Notes on Cases of Small-pox treated by Tepid Baths for the reduction of high temperature.

After the meeting, the members partook of supper at the President's home, and spent a very pleasant and agreeable evening.

READING BRANCH: ANNUAL MEETING.

THE eighteenth annual meeting of the Reading Branch of the British Medical Association was held on Wednesday, October 8th, 1873; present, Dr. FLAYNE, President, in the Chair, and fifteen members. The President delivered a very able address.

Officers.—The following officers were elected. *President-elect*: O. C. Maurice, Esq. *Council*: I. Harrison, Esq.; G. May, jun., Esq.; R. C. Shettle, M.D.; T. L. Walford, Esq.; E. Wells, M.D.; R. T. Woodhouse, M.D.; J. W. Workman, Esq.; W. B. Young, Esq. *Secretary*: R. C. Shettle, M.D.

Dr. Bateman, M.B. Lond., was elected a member of the Branch.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE fiftieth meeting was held at the Fountain Hotel, Canterbury, on Thursday, November 6th; Mr. H. G. SADLER in the Chair. Eighteen members and visitors were present.

The Secretary.—DR. PARSONS, the Honorary Secretary, tendered his resignation. He regretted being obliged to sever his connection with the district; but, having been elected Secretary to the South-Eastern Branch, no other course was open to him.

It was proposed by Mr. REID, seconded by Dr. KERSEY—"That the members of the East Kent District of the British Medical Association, as represented by this meeting, desire to tender to Dr. Parsons their most cordial thanks for the kind and zealous services he has so persistently rendered to the Society, and which have so materially promoted the scientific character and pleasure of the meetings. They cannot but regret the loss of these services, but at the same time they desire to congratulate Dr. Parsons, that, in consequence of the extensive appreciation of them by other members of the South-Eastern Branch, he has been elected to a wider and more useful sphere of action, where he will enjoy a still larger share of the confidence of his medical brethren."

This was carried unanimously.

It was proposed by Mr. RIGDEN, seconded by Dr. LOCHÉZ, and carried unanimously—"That Mr. Thurston of Ashford be elected Honorary Secretary of the East Kent District, in the room of Dr. Parsons."

Communications.—1. Dr. KERSEY exhibited a new-born infant pre-

senting features of Insufficient and Irregular Development of the Upper Extremities.

2. Mr. CLEMENT WALTER (Dover) related a case of Ligature of the External Iliac Artery for Femoral Aneurism. The patient was a dissipated man, aged 42. The aneurism was distinctly produced by violent exertion. Proximal and distal pressure by the tourniquet were tried, but both had to be relinquished; flexion also had a good trial, at first with apparent success, but after six weeks it was found necessary to ligature the external iliac artery, as hæmorrhage was hourly expected. All did well till the third day, when symptoms of gangrene supervened, and the patient sank on the following day. At the *post mortem* examination, the kidneys and liver were both found to be enlarged and nodulated. The author considered the want of success in this case to be due to delay in the operation, and considered that the case forced upon him a strong hint as to the discretionary use of conservative surgery.

3. Mr. RIDGEN brought forward some statistics to prove the advantage of the Obstetric Forceps in some cases in which they are not considered absolutely necessary. This produced a warm discussion, and the subject was ultimately adjourned to a future meeting.

4. Dr. ROBINSON, the Medical Officer for East Kent, read a paper on the Carriers of the Contagium of Enteric Fever.

SHROPSHIRE SCIENTIFIC BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Natural History and Antiquarian Museum, Shrewsbury, on Wednesday, October 8th; GREVILLE THURSFIELD, M.D., President, in the Chair.

Papers.—Several papers were received.

Dr. NEALOR THURSFIELD read a paper on the question "Does Diphtheria originate *per se*, or does it depend on deficient sanitary arrangements?" A very animated discussion, which lasted the greater part of an hour, arose, after reading this paper, and much useful information was elicited.

Officers, etc.—The Council for the Branch and the Representatives on the General Council were then elected. Mr. William Eddowes, jun., was unanimously elected Vice-President for the ensuing year. Mr. J. D. Harries was re-elected the Representative for this Branch on the Parliamentary Committee. Mr. Samuel Wood, F.S.A., was re-elected Secretary.

Four New Members were added to the Branch.

After a vote of thanks to the President and retiring President, the members adjourned to the George Hotel, where thirty-five dined.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE first meeting of the session took place in Queen's College, Birmingham, on November 11th; Dr. WADE in the Chair.

Osseous Spicular Tumour of the Brain.—Dr. HINDS read a paper on osseous cerebral tumours, which he believed to be very rare. One case he had found recorded in Reynolds's *System of Medicine* as having occurred to Dr. Bristowe. This tumour occupied the position of the infundibulum and corpora albicantia. It was of the size of a horse-bean, and presented the characters of true osseous tissue, with perfect lacunæ and canaliculi. The small tumour of bone found by Dr. Hinds was loosely connected at one end with the internal surface of a thickened portion of the cerebral membranes. The membranes at this part were matted together by chronic or subacute inflammation. The tumour was about four-tenths of an inch in length, and its free end was in contact with the brain at the vertex and at the longitudinal fissure. The subject whence it was taken had been a confirmed drinker, and was an epileptic of seventeen years' duration. A very curious epileptic he was; for, when the attacks occurred in the street, he had a habit of at once undressing on the spot, in order to go to bed so soon as the paroxysm subsided. He did the same thing when he happened to be at the house of any friend. He died of coma and convulsions in June last. From the tumour a thin section was made and exhibited, and it showed with great distinctness the Haversian canals, as well as the lacunæ and canaliculi. Dr. Hinds discussed the relation of these growths with the epileptic habit, and mentioned a case of death from epilepsy in a young girl of twenty, in whom a bony process projected from the upper border of the petrous portion of the temporal bone. He referred also to a case of depressed bone, mentioned in the BRITISH MEDICAL JOURNAL of November 8th, as being the cause of epilepsy. The case appears to have occurred to Dr. Quinlan of St. Vincent's Hospital, Dublin, and it was proposed to trephine the skull. Dr. Hinds referred to the process of calcification in such unusual situations

as the brain, and considered that the intermediary process of cartilagification must be assumed to be in all probability absent in such cases.

Dr. HINDS also exhibited to the members several beautiful transparent sections of some of the Viscera.

Tumour of the Breast.—Mr. LAWSON TAIT showed sections of a tumour of the breast which he had removed from a patient under the care of Dr. Norris, and which had been diagnosed as non-malignant, and was probably proliferating adenoma. The microscopic examination of it confirmed the diagnosis, for it was seen to consist of abortive gland-tissue—loculi which were sections of imperfect tubules lined with epithelium.

Mr. TAIT showed also a series of Gynæcological Preparations for the Microscope made by Dr. Otto Barth of Leipzig, which were of extreme beauty and interest.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE November meeting was held at the White Hart Hotel, Lewes, on Friday, November 14th; R. GRAVELY, Esq., of Newick, in the Chair. Eighteen members and three visitors were present.

After lunch, hospitably provided by the Chairman, had been partaken of, the treasures of the Museum of the Sussex Archaeological Society at the Castle were duly inspected.

Papers.—The following were read.

1. Dr. H. MOON (Brighton) read a paper on Typhoid, or, as he preferred to call it, Pythogenic Fever. The paper was founded on seventy cases of the disease under Dr. Moon's care during the last four years in the Brighton Hospital; and, besides alluding to the origin, progress, diagnosis, and general features of the disease in question, contained some valuable hints on prophylaxis and treatment.

2. Mr. R. GRAVELY (Chairman) detailed the particulars of a Case of Stricture successfully treated by Holt's Method. A discussion followed, shared in by Mr. W. Harris of Worthing and others.

3. Dr. WITHERS MOORE related the history of a case now under his care at the Brighton Hospital, in which the Urinary Secretion presented most anomalous characteristics.

New Members.—The following were nominated for membership of the Association and of this Branch: J. G. Braden, Esq., Lewes; D. J. Sherrard, Esq., Hurst Green; S. Brown, Esq., Fletching; G. Lucas, Esq., Uckfield; H. J. Hall, Esq., Mayfield.

The Dinner took place at the White Hart, under the presidency of Mr. Gravelly, twenty being present.

Next Meeting.—It was decided to hold the next meeting at Tunbridge Wells, in March 1874; Dr. Wardell to be invited to take the Chair.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE second general meeting of the present session was held at the Midland Institute, Birmingham, on Thursday, November 13th, at 3 P.M.; present, FURNEAUX JORDAN, Esq., President, in the Chair, and forty-five members.

New Members.—The following members of the Association were elected members of the Branch: Dr. Gould (Halesowen), Dr. Somerville (Bloxwich), and Mr. Herbert Page (Birmingham).

Medical Education.—It was proposed by Mr. OAKES, seconded by Dr. FOWLER BODINGTON, and resolved—"That a Committee be appointed to consider the subject of Medical Education, especially with reference to present Parliamentary legislation, and that the Committee be requested to present a report during the present session." The nomination of the committee was postponed to the next meeting.

Hour of Meeting.—It was carried that for the future the Branch meeting be held at 3.30 P.M. instead of 3 P.M.

Communications.—The following communications were made.

1. *Pseudo hypertrophic Paralysis (Duchenne's Paralysis).*—Dr. R. FOSTER brought before the Branch a boy, aged 13, in the third stage of this affection. Early in 1869, he was exhibited at a meeting of the Pathological Section of the Branch, and was at that time a remarkably typical example of the second stage of the disease. His calves and the muscles of his thighs and buttocks were then enormously large, while their muscular power was in striking contrast with their bulk; the boy being unable to walk more than a few yards, and almost unable to raise himself from the ground when on his back. During the four years since, the enlarged muscles have all wasted, the gastrocnemii

alone retaining a little of their former development. The boy is now perfectly unable to stand, and can only sit or lie; the upper extremities, which are greatly wasted, can be but slightly raised from the bed, and he finds the greatest difficulty in conveying his food to his mouth. The extensor surfaces of the limbs have generally suffered less loss of bulk. At present, the boy's position is generally sitting with the legs flexed on the thighs, and the thighs flexed on the trunk. There is most marked talipes equino-varus. The limbs cannot be straightened. The surface of the lower extremities is remarkably mottled and dusky from congestion. Dr. Foster, after speaking of the natural history of the disease as illustrated by this case, pointed out that even now the temperature of the surface of the lower extremities over the affected muscles was higher than normal, as had also been observed four years ago when the boy was in the second stage of the disease. These observations, originally made by Griesinger, Dr. Foster had confirmed in 1869. The electro-muscular contractility was still retained.

2. *Aveling's Midwifery Forceps*.—Dr. BASSETT exhibited the midwifery forceps recently designed by Dr. Aveling, the peculiarity of which is that the handles are curved instead of straight. It was hoped that this would supply an increased tractive power, a want which every one accustomed to the use of the forceps had felt. He also showed the transfusion-apparatus of Dr. Aveling, which had been pronounced to be the best instrument yet invented for this operation.

3. *Sponge-Tents*.—Mr. LAWSON TAIT showed some sponge-tents charged with a 5 per cent. solution of oil of cloves, by which addition they are completely prevented from becoming putrid after remaining in the uterus for twenty-four hours. Mr. Tait stated that he had recently had a fatal case of septic peritonitis from the use of a sponge-tent; and he had little doubt that such accidents were more common than was believed. He had not found that tents charged with any other disinfectant remained free from putridity. He had no doubt that tents which did not become stinking would be safer for the patients, and certainly were more agreeable to the practitioner. The tents were made, according to his formula, by Messrs. Krohne and Sesemann.

4. *Amputation at the Ankle*.—Mr. BARTLETT exhibited a cast, and also the living specimen, of a stump after an amputation at the ankle by Jules Roux's operation. Mr. Bartlett called attention to the advantages of the operation, and stated that an experience of five cases justified him in stating that the stumps were quite as useful and satisfactory as after Syme's amputation.

5. *Post Partum Hemorrhage*.—Dr. BASSETT read a paper on *post partum hæmorrhage*, in which he dwelt upon the causes, prevention, and treatment of this formidable complication of labour.

6. *Apoplectic Effusion into Placenta*.—Mr. TAIT also showed the placenta from a lady whom he had seen in consultation with Dr. Haynes of Malvern. It was an instance of apoplectic effusion into the placenta, resulting in death of the child and its premature birth. In that patient's case, it had occurred many times at a late period of gestation, and he contrasted it with another specimen, which he also showed, of a similar occurrence at a very early period.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

NOVEMBER 5TH, 1873.

E. J. TILT, M.D., President, in the Chair.

Malignant Sarcoma.—Dr. PLAYFAIR exhibited a specimen of malignant sarcoma, apparently originating in the right broad ligament, but which at death nearly filled the whole abdominal cavity. There was great difficulty and obscurity of diagnosis during pregnancy. The extremely rapid growth of the tumour after delivery pointed to the probability of it having been kept in abeyance, as it were, possibly by the presence of the gravid uterus.

Necrosis of the Pelvic Bones.—Dr. PLAYFAIR exhibited a specimen of necrosis of the pubic bones following delivery, which, he said, was a form of puerperal disease of extreme rarity. Three weeks after labour, an abscess burst at the anterior portion of the left labium and a highly offensive discharge came from the vagina. The upper part of the thigh became oedematous. An incision was made, from which bad smelling pus was evacuated. The patient soon after died from exhaustion. The ossa pubis were found necrosed, and the symphysis destroyed. Dr. Playfair thought the disease originated in some obscure form of septicæmia rather than in a purely mechanical cause. There was no history of a blow having been received by the patient.

Loop-Saw.—Dr. AVELING exhibited a new instrument which he called a "loop-saw," which he believed might be used with ease and

advantage in some cases where the *écraseur* was at present employed. It consisted of two tubes with pulleys at the upper end, over which a loop of whipcord or chain worked. The two tubes were united by a hinge at the handle, and the tumour was divided by drawing alternately upon the ends of the cord. As the loop divided the tissues from below upward, there was no passing of the cord over the tumour as was the case with the *écraseur*.

Note on the Cure of Flexions of the Uterus by Flexible Stems.—Dr. C. E. SQUAREY said that he had been induced to try the curative effects of flexible stems, in consequence of his belief that inflammation was sometimes set up by stems which were rigid. His stem speedily cured pain resulting from the retention of the catamenial discharge, and the removal of this pain had a curative effect upon flexions. There seemed a natural tendency to recovery when the most troublesome symptoms were removed.—Dr. AVELING stated that he had exhibited to the Society, in 1866, a flexible intra-uterine stem of coiled wire, and suggested that Dr. Squarey's instrument might be improved by the introduction of a coil inside the india-rubber. It would then have the power of straightening in the uterus, which it at present lacked.—Dr. ROGERS and Dr. GODSON had found great use from the employment of flexible stems.—Dr. PLAYFAIR could not understand how a stem which adapted itself to flexed conditions of the uterus could have a curative effect.

Case of Spontaneous Salivation Associated with Pregnancy.—Dr. BLACK communicated for Dr. A. FARRE the case of a mother of four children, pregnant for the fifth time, who suffered from such excessive salivation that it was considered necessary to propose the induction of premature labour. The symptoms, however, suddenly abated upon the occurrence of quickening, and the patient speedily regained strength and required no further medical treatment.

Dr. ALFRED WILTSHIRE read a paper on the Common Skin-diseases of Children.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

NOVEMBER 5TH, 1873.

P. D. HANDYSIDE, M.D., President, in the Chair.

Glioma of the Eyeball.—Dr. ARGYLL ROBERTSON showed a specimen. The patient was eighteen months old, and, with the exception of a yellow reflection from the pupil soon after birth observed by the mother, nothing was noticed till two months before Dr. Robertson saw the case, when the eye was inflamed and a small projection was noticed at the inferior margin of the cornea. This projection rapidly enlarged; the ocular tension was increased; the pupil was occluded with lymph, and was pushed forwards so as almost to touch the inner surface of the cornea. Enucleation was at once recommended and performed. During the operation, the nerve appeared affected, and was excised quite up to the entrance of the orbit. The patient was seen two months afterwards, and a tumour, evidently a return of the disease, was already visible. The tumour had the structure of a glioma, and numerous particles of calcareous deposit organised its centre. This calcareous degeneration is very rare in so young a subject.

Exostosis of the Great Toe.—Mr. JOSEPH BELL showed a specimen of exostosis of the proximal phalanx of the great toe, as large as a small apple, which he had removed by an operation which he had not seen described in any surgical work. It was of four years' standing, but had grown rapidly of late; its neck involved the whole outer side of the phalanx, including both its articulating ends; therefore, instead of merely dividing the neck, Mr. Bell made a longitudinal section of the bone and both its joints, leaving the distal phalanx attached. After three weeks, the movements of both joints were perfect, and the wound had nearly healed.

Pneumonia in Children.—Dr. STEPHENSON read a paper on pneumonia as observed in children. The author regarded the clinical chart, i.e. the record of temperature, pulse, and respiration, as the true representative of the disease and of higher value, practically and scientifically, than the physical signs. By its means, the different forms of pneumonia could be more readily differentiated, and diagnosis was greatly facilitated. The latter point was of special value in children from the greater frequency of the cases where the physical signs remained latent for a longer period than was usual in adults; the occurrence of cases where the physical signs were very slight, and the greater frequency of the affection attacking and limited to the apex. The acute primary pneumonia was only dealt with in the present paper. It presented in children the same typical chart as in the adult. Cases, the author believed, frequently occurred in which there was absence of chest-symptoms till late in the disease, and such were often mistaken

for fever. The immediate development of a high pyrexial state, with delirium, should always direct attention to the chest. By careful watching in such cases, the author had frequently detected a very limited amount of lung-lesion, which might readily have been overlooked. The early delirium he considered a very important symptom. In pneumonia limited to the apex, the physical signs were, as a rule, latent till the fifth day. To this there was an exception of a very fatal class, where the consolidation was complete from the first. This class the author separated entirely from the others. When the febrile state was prolonged beyond the natural period, an effort at a crisis could always be detected about the fifth or sixth day. Whilst the course of temperature and pulse was typical and constant, no relation was perceptible between it and the occurrence of the physical signs, either in time or in degree. The severity or favourable character of a case was not to be estimated by the height of the temperature; a higher range was met with in some of the favourable cases than in the fatal. It was less by the height of the temperature than by the relation of the pulse to the temperature, that an opinion as to prognosis was to be formed. A temperature of 104 deg. in the fatal cases was associated with a pulse from 144 to 150; in the favourable with 130 to 136. The evidence of success in treatment could never be represented by an aggregate mortality, and no true result could be obtained by grouping together a large number of cases with only the one connecting link of the physical signs of pneumonia. There could be no true cutting short of the disease; where such a term was used, it could only apply to the prolongation out of due limit of the affection. The test of treatment should be the closeness with which the fever accorded to the normal type. It was not necessary to show any material lowering of the temperature or pulse so long as these were within the normal range; but it was essential, whether the range was affected or not, that the typical course should be retained. Active treatment tended to alter the course, especially prolonging the stage of convalescence. The complex nature of fevers was recognised in the science but very little in the art of medicine. The tendency of the present day was to take the temperature and pulse as the sole constituents, or representatives, and to estimate treatment by them alone. But there was another element which we could as yet only inferentially estimate and could not record. This element the author called tension; the degree of tension made up the difference between two cases which presented the same average temperature. Treatment might be directed towards it, and we might succeed in lowering the tension without affecting the temperature. An estimation of the tension might be obtained by the relation between the temperature and pulse, and the amount of oscillation between the morning and evening temperature. Treatment directed to lower tension might be represented by an actual rise in the pulse. These several points were illustrated by reference to the cases recorded with carefully drawn clinical charts.—The PRESIDENT, in conveying the thanks of the Society to the author, alluded especially to the value of the observations on tension, also on treatment, and its value in cutting short or modifying the disease.—Dr. MATTHEWS DUNCAN had been especially struck by the uniformity of the clinical charts of acute primary pneumonia, illustrating, as they did, the sudden rise of temperature at the outset, which was followed by a sort of table-land of high temperatures lasting from five to seven days, and followed by an equally sudden fall. He thought Dr. Stephenson's data gave him a right to isolate these cases from the rest under a special head. The other sets of cases did not appear to him to be so distinct or characteristic.—Dr. G. W. BAILEY was rather disposed to agree with Wunderlich in thinking that in pneumonia temperature was not of much consequence. After excluding catarrhal pneumonia and broncho-pneumonia, he recognised three types of pneumonia in adults differing in the following temperature characteristics:—1. Cases in which the temperature rose suddenly, and after a day or two fell with equal suddenness; in this embolic or oedematous form no treatment was possible or required: 2. Cases in which a sudden rise was followed by five to seven days of high temperature, and then an equally sudden fall; these might be improved or cut short by treatment: 3. Cases in which a gradual rise was followed by three or four days of high temperature, and then by an equally gradual decline. He was much interested in the question of tension.—Dr. JAMES CARMICHAEL alluded to a remarkable hyperæsthesia of the skin over the inflamed part of the lung which he had recently noticed in three cases in children; and also alluded to the interesting question as to the future history of cases of apical pneumonia in relation to phthisis.—Dr. STEPHENSON, in reply, alluded to the way in which treatment often caused variation in the clinical charts of pneumonia cases, specially in the direction of retarding the fall in temperature at the end.

Bulbous Bougies.—Dr. MILLER read a paper on the employment of

bulbous bougies. He described them as useless in (a) retention due to a tight stricture; (b) in the dilatation of strictures, except under certain conditions, from the irregular way in which the bulbs are graduated. He found them useful in aiding in the dilatation of strictures already dilated to Nos. 6 or 7; and he thought that a bulb passed through a stricture more easily than a cylinder of the same size. They were also useful and easy to pass at long intervals in the maintaining of old strictures patent. Again, they were useful in prostatic affections, to be given to the patient, who was soon taught to pass them for himself. These bulbous instruments, being also catheters as well as bougies, possessed additional value in the treatment of those cases of stricture in which the bladder was not well evacuated by the patient's own efforts.—Mr. SPENCE did not think the form of the instrument so important as the manner in which it was used. He described and showed a probe-pointed bougie, which so long ago as 1843 he had made for himself, from having observed how easy it was in dissections of bad strictures to pass the ordinary surgical probe. The ordinary No. 1 bougie had too sharp a point, and was too flexible, to be safe or useful. In so far as Dr. Miller had not said much in favour of soft bougies, Mr. Spence agreed with him.—Mr. JOSEPH BELL was not a great admirer of soft instruments, except in easy cases of retention, and for the use of patients themselves. He called the attention of the Society to a recent lecture by M. Demarquay (of which he had given an abstract in the *Edinburgh Medical Journal* for November) on the subject of the risks of breakage and injury to the urethra from these soft catheters. For his own part, he regarded these bulbous catheters rather as means of diagnosing the position and size of a stricture than for purposes of treatment.—A somewhat desultory discussion ensued, in which Drs. Carmichael and Chiene, Mr. Spence, and the author of the paper joined.

CORRESPONDENCE.

THE ADULTERATION OF BREAD.

SIR,—Will you allow me to make the following remarks on your leading article upon the above subject in the *BRITISH MEDICAL JOURNAL* of the 15th instant?

I have not returned a doubtful verdict in the instance of a bread of undoubted purity. The "pure" bread sent to me by Mr. Butler is admitted by that gentleman to be made in part from potatoes. With respect to the loaf mixed with alum by Mr. Butler, and, as he states, certified by me as not adulterated, I will remark (1) that satisfactory evidence is as yet not forthcoming to prove that the alumed loaf ever came into my hands; (2) that the alum was not mixed with the loaf till after the dough was completely made, and hence could not be evenly mixed with all parts of the loaf; (3) that the loaf was divided into four portions, one only of which I had for analysis, and that I protested against being called upon to make an analysis of such an insignificant quantity of bread; and I asked that, on all future occasions, a sufficient quantity of bread might be sent to enable me to make a satisfactory analysis.

My analyses of the breads referred to in your article—as indeed all my analyses for the detection of alum have been—were quantitative. The amounts of impurity in the reagents employed were determined, and weighed quantities of the reagents were employed in the analyses. If the "lamentable failures" and the "blundering" of which you speak did occur, they were certainly not due to any of the causes of fallacy which you point out. Till Mr. Butler's *ex parte* statements have been confirmed, I refuse to admit that a blunder has been committed by me. Permit me to remark that the difficulties met with in the detection of alum in bread are not, as you state, "perfectly well ascertained, and have been overcome." As proof of this, I may state that, not long ago, a mode of detecting alum in bread, devised by a skilful chemist, was published in your columns, and that this process overlooked what is in the opinion of many eminent chemists a most important source of error—the volatility of aluminium chloride.

According to the reasoning of your editorial article, a quantity of alum less than sixty grains in a 2 lb. loaf could not be deemed an adulteration under the Adulteration Acts. Under the Act of 1872, an adulteration of an article of food must be either an admixture to increase weight or bulk, or an addition of something injurious to health. A smaller proportion of alum than the above would not, you surmise, be injurious to health, and such an addition could scarcely be said to increase the weight or bulk of the bread.

Pending the publication of the report of the Select Committee of the Shoreditch Vestry, I am not permitted to disclose details of my analytical results. I must, however, protest against any assumption of the

truth of statements made *ex parte*, and admittedly published in an incorrect form.

In conclusion, I have to deny that I am, as you state, examiner in toxicology in the University of London.

I am, etc.,

THOMAS STEVENSON.

November 19th, 1873.

. Not much of this letter calls for comment. If Dr. Stevenson did not take care to have enough of the bread to make a satisfactory analysis, it is, as we pointed out, not surprising if his analysis was unsatisfactory; but, in such a case, a chemist would best consult his own and the public interest by declining to make an unsatisfactory analysis. As to the chemical point raised, we must say that it is surprising that a gentleman holding an official position as a chemist should appear to be ignorant of the fact that chloride of aluminium cannot exist in presence of water or of most substances such as bread (which contains 40 per cent. of moisture).

SPASMODIC ASTHMA.

SIR,—Will you allow me to point out that the experiments of Paul Bert, to which Dr. Thorowgood referred in the last number of the JOURNAL, and upon which he bases his theory of the nature of true spasmodic asthma, are incorrectly quoted?

Bert differs from Traube, Bernard, and Rosenthal with regard to the results obtained from the irritation of the pneumogastric and superior laryngeal nerves. Nor does Bert state that this arrest is much more easily produced during expiration than during inspiration, in consequence of what Dr. Thorowgood considers a fit of coughing or laughing as exciting causes of spasmodic asthma. Bert's identical words are, "L'arrêt en expiration est plus facile à obtenir que l'arrêt en inspiration; il y a même des animaux sur lesquels il est impossible d'obtenir celui-ci." (*Leçons sur la Physiologie comparée de la Respiration*. Par Paul Bert. Paris, 1870, page 490.) That is, the arrest of respiration with the diaphragm relaxed, is much more easily obtained than the arrest of respiration with the diaphragm, etc., contracted.

I am, etc.,

I. B. BERKART.

33, Harley Street, November 23rd, 1873.

HOMŒOPATHIC GLOBULES.

SIR,—The following will confirm Mr. Brudenell Carter's statement, made at the meeting of the Clinical Society of London, respecting homœopathic globules.

For many years, I attended the principal traveller for one of the London wholesale druggists, lozenge, and homœopathic globule manufacturers, and he repeatedly told me that all the globules consisted of sugar, starch, and gum only, without the admixture of any drug whatever; that, by whatever names the globules were called, they were all composed alike, but sorted into variously labelled bottles by the dispensing chemist.

I am, etc.,

FREDERICK MASON.

20, Belmont, Bath, November 22nd, 1873.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DR. GOURLEY, Medical Officer of Health (Rural District) and Public Vaccinator, West Hartlepool, has received from the Local Government the extra premium of £36:14 for efficient vaccination.

MR. H. CECIL SMITH, Public Vaccinator to the No. 1 District of the Maidstone Union, has received a Government gratuity of £53:5 for successful vaccination in his district.

DR. ACLAND'S ADDRESS AT EXETER.

THE *Local Government Chronicle* has recently published a report of a paper on Sanitary Administration, read by Dr. Acland at an annual Conference of the Poor-law Union authorities of the South Western Counties, held at Exeter, under the presidency of Sir Stafford Northcote.

As Dr. Acland's line of thought and action has been very distinct from that taken by the greater number of sanitary reformers out of Parliament, especially by those represented in this JOURNAL, we have thought it right to examine carefully his remarks. While indicating our agreement with him on certain undeniable principles, we have to point out some fallacies in his view of the subject, and to show how in-

applicable his criticism is to the present state of medical opinion and public proceedings.

He commences with an assertion of truths, some of which may, without disrespect, be called truisms; and these seem to be generally brought forward to illustrate his notion of the statements and arguments of those who have the misfortune to differ from him. For instance, in asserting the fact, which we admit with some necessary reservations, that "public-health administration is far more advanced in England than in any other country," and sanitary laws more intelligently progressive now than at any previous period of history," he uses it to confute those who, as he puts it, teach "that the arrangements for the public health in England are the worst, the laws the most mischievous, and the administration the most benighted." Whether this describes correctly the censure to which Dr. Acland's friends on the Local Government Board have fairly exposed themselves, we may leave to the decision of any well-informed and impartial person. But when he goes on to express his doubt whether there is any good reason for the discontent prevailing with regard to existing public arrangements for the working of sanitary law, we do not hesitate to say we regret his misunderstanding of the points in debate, for we are unwilling for a moment to suppose that he designedly misrepresents those who strongly object to the course taken by the Government, in endeavouring to effect the objects which all sanitary reformers desire to promote.

Dr. Acland puts very well, as he has done before, the circumstances of the present popular reaction in favour of public health.

"How came this reaction? The truth was, that neither public men nor the average medical practitioner appreciated until the second quarter of this century the importance of preventing disease. They were so intent on curing by drugs as to omit the consideration of the basis of all cure—healthy surroundings. For this reason hospitals were often the cause of the death of patients, and from neglect, houses became choked with filth, and wells foul and poisonous. Doctors of that day were, however, not much in the favour of statesmen; and when a younger generation began to clamour for State help, their unaccustomed voice was not always welcome. Physical science, however, began to revolutionise ideas; notably the science of organic chemistry shed a new light on the functions of animal and vegetable life. It drew attention to the principles at work in the feeding and breeding of cattle and raising of crops; and to such an extent was agriculture pervaded by these new ideas, that we seemed at one time almost to have forgotten that man too was an animal, and that his dwelling and food were subjects of importance. That period, however, had passed away, and now steps were taken to guarantee a healthy dwelling to all."

In showing the difficulty and complexity of the questions which were started when the necessity for legislation became apparent—such as central or local action, imperial or local taxation, spheres of liability and administration, etc., he adds:

"And then men took different views as to the way of accomplishing sanitary improvements. Some looked to legal enactments, some rested on a complete Napoleonic 'Système d'Administration,' some trusted to engineering, some looked to scientific research, others considered that health was a peculiarly medical question, and that none but medical practitioners could handle any sanitary problem. Indeed, it had been advanced that none but a medical man could be the Minister of Public Health in the Cabinet."

No doubt, a certain amount of banter is fair in controversy; but, in caricaturing a variety of sanitary crotchets, he might have treated more considerably certain practicable and reasonable recommendations of men as conspicuous for judgment, common sense, knowledge of the world, and special information on this subject as himself. And for one who took the lead as chairman in an inquiry promoted by the General Medical Council concerning the establishment of a proper qualification for medical officers of health, it seems strange that he should have added to his list of sanitary fanatics, "others (who) said that medical men were not fit, but must be specially educated, examined, and certified."

Whether he will now support or oppose the scheme which may soon be issued by this Association for a qualification in State Medicine, we are satisfied that nothing could be more absurd than to commit the care of the public health "to the good sense and self-education of the masses, *if left to their own devices*." The italicising is ours, the words are Dr. Acland's. We commend this idea of sanitary administration to those struggling officers who daily find to their sorrow that these hitherto uneducated masses are determined opponents and impediments to all really good sanitary measures. He sums up the aims of sanitary legislation in these two principles.

"First, it should be a crime that a man, for his own advancement or profit, should injure the health of his neighbours against their will or without their knowledge; for instance, by water-companies supplying bad water. Second, it was the duty of a civilised government to secure

such rights in respect of public health as individuals could not secure for themselves—namely, sewerage towns."

And the agents, by which the evils referred to are to be remedied, "Were public men of all kinds in their different spheres; the ordinary agents might be any persons of average intelligence and good sense, but the experts should be persons of the highest authority and skill in the matters on which they arbitrated."

Here, as in many other parts of this address, Dr. Acland relies solely on experts of the highest authority and skill, commissioned by an imperial department, to regulate and correct the action of the comparatively ignorant men, to whom he would leave the working of the law. Fitness of the ordinary machinery he does not consider worth a thought. The utilisation of local science and philanthropy, and the employment of a better kind of local agents, are wholly ignored. Large numbers of the commonest people, ruled by a few central inspectors, possessing the "very highest qualifications," appear to form his ideal of local administration in matters most deeply affecting the moral, social and physical condition of the nation. We need only remind our readers how thoroughly this "Napoleonic" principle of government, glittering as it is false, had been exposed by our Joint Committee, and how successfully controverted.

Of course, the Public Health Acts, 1871-2, appear to our author best calculated for a speedy solution of the practical questions at issue. To the majority, we believe, of independent thinkers, these Acts seem simply to increase the muddle. Nor can we admit the truth of his assumption—that the Acts have placed every spot in the country under (only) one authority. For it has been clearly proved by many local conflicts that in every place there are at least two authorities which have to do with matters of health, not to mention the overlying county, which also retains certain independent functions of a sanitary nature.

Dr. Acland announced with evident satisfaction that certain omissions had been made in the Acts; and, in the first place, that they had not required the old administrative areas to be compulsorily broken up; though he might have added that they had made far more striking and obstructive the complicated overlapping and the conflicting diversity of those areas. But he does not acknowledge, that it is one thing to break up arbitrarily established areas, and quite another thing to adjust and harmonise them, to correct their unconformable boundaries, and to combine them judiciously for wider purposes of administration. He is glad also that existing counties or unions were *not* forced to appoint sanitary officers of special qualifications to discharge duties whose very nature was uncertain. Yet he sees no objection to forcing unions and small local boards to appoint such officers, for the like uncertain duties, without *any* special qualifications. Nor does he acknowledge that the distinguished Medical Officer of the Local Government Board (we wish we could properly describe him as he ought to be, the Medical Adviser of the Government) had long ago plainly described those duties and qualifications, so that no real uncertainty belonged to the question, except that which the framers and administrators of the Act have created, for the public confusion. We are told that the present arrangements are only temporary and provisional, in order that experience might be gained as to the kind of area, authority and officer required. The Guardians, it seems, are to educate themselves at an enormous public sacrifice, "to an understanding of the wants of the country."

Dr. Acland thus justifies a charge recently made against Government, viz., that "the present embroilment has been encouraged as a great national experiment, to be tried at the cost and inconvenience of the several localities, in order to obtain data for the future orderly reconstruction of their system;" but, as the critic now quoted said: "the provincial districts may not like to be made the victims of political empiricism." Now all these perplexities might have been avoided, had the Government acted upon the advice of the Memorialists in 1868, who asked "for a thorough, impartial, and comprehensive inquiry under the authority of the Royal Commission, by actual visitation of the large towns and other districts of the country, to obtain information and evidence, and to report (among other things) upon 'the extent of the areas or districts most convenient for sanitary or medico-legal purposes, and the organisation, existing and required, including a complete account of the several authorities and officers.'"

Is it likely that, after years of inconvenient and expensive self-education, the Guardians and members of local boards will know as much about the principles and methods of sanitary organisation as gentlemen who have devoted their laborious lives and their cultivated minds to the solution of questions intimately connected with the physical well-being of the people, but whose recommendations have been contemptuously disregarded by the Sanitary Commission and the Local Government Board?

Surely Dr. Acland must see the distinction between principles of

local administration and specific theories or methods of carrying reforms into effect. Yet, because among scientific engineers he hears "disputants loudly asserting that local authorities should be compelled to adopt this or that method of cleansing," he seems to conclude that Government should not attempt to organise a uniform system of authorities and officers. Is this Oxford logic?

The tendency of scientific experts, emanating from a Central Board, is to enforce selected methods of action, whether as to engineering (and this was the cause of the suppression of the General Board of Health in 1858) or as to scientific theories of causation and disinfection.

The powerful inspectors, therefore, whom Dr. Acland prefers—men "of the highest authority and skill"—coming from a central office and inspired by a single chief, would be almost sure to compel the adoption of favoured methods and theories, to the great disadvantage of local freedom of inquiry and action, and to the manifest injury of real scientific progress. Thus Dr. Acland's plan is specially open to the charge which he brings against that of others; viz, that it rests upon a Napoleonic *système d'administration*. We do not hesitate to express our distrust of "imperial experts of the highest professional character," knowing *how* they are often selected. According to the wiser plan of the Joint Committee, "if chief officers of health, highly trained in all the departments of Public Medicine, were resident in their districts, each one would become a centre of instruction whence sound views on all sanitary matters would emanate, so as gradually to enlighten the public mind, stimulate local action, and *reduce to a minimum the need of interference by the central authority*." And, indeed, such seems practically the conclusion at which the Local Government Board is trying to arrive, in opposition to Dr. Acland's opinions. Bungling as are the methods which that Board and its inspectors are adopting in most counties of England to remedy (were that possible) the original blunders of the Act, they recognise remarkably the wisdom of the suggestion, that chief health-officers of scientific eminence, debarred from private practice, should be appointed by intelligent authorities acting over large, if not county, areas.

If Dr. Acland considers as unjust and ungenerous a certain objection to the original Government scheme, viz., that local practitioners dislike the disagreeable duty of initiating proceedings against nuisances created by their private patients, and are on that account not the fittest persons for *sole* health-officers, he must be reminded that this objection was made by a large majority of the very practitioners themselves who were appealed to on this point in 1872. So far from wishing to "cut off" the local practitioners "from all interest in the scientific sanitary progress of the time," the Joint Committee urged that every union medical officer should act as the deputy health-officer of his own district, and thus form an integral part of the sanitary organisation of the kingdom; while the Local Government Board has now prevented the adoption of that wise extension of sanitary employment by excluding the union medical officers from the public health organisation in half the districts of England. Verily might Dr. Acland say, "Save me from my friends!"

We regret to be obliged to write in this manner respecting an eminent gentleman who has really done much good sanitary work in the country, and who might have done much more had he protested at first against the mistaken views of the majority of his colleagues on the Sanitary Commission—adhering to his former associates in this great movement, and preferring to wait with them for the ultimate triumph of right principles, rather than to share the fleeting popularity of a scheme, ever shifting, ever blundering, and now generally regarded as having scarce a single element of order or permanence.

PAYMENT TO MEDICAL CONTRIBUTORS OF FACTS TO HEALTH OFFICERS.

DR. LAIDLAW, the Medical Officer of Health for Tranmere, is not quite satisfied with our remarks on his case (p. 531). That notice of his letter was, to our regret, unavoidably delayed for some weeks. We by no means justify the ungentlemanlike reply to his request for information respecting causes of disease which he received from some anonymous resident practitioner. But we think him fortunate, as we said before, in having only one refusal from the twenty persons to whom he applied.

There can be no question, however, that every one, who, in this manner, aids the sanitary supervision of the district is justly entitled to remuneration.

We commend to Dr. Laidlaw's consideration the excellent suggestions made by Dr. Alfred Carpenter, at Norwich, on this point, and also to the following notice of the question by Mr. T. F. Sanger of Alfriston, at a district meeting of our East Sussex Branch. Having

been called on to propose the health of Dr. Fussell of Brighton, the newly elected Officer of Health for certain districts in East Sussex, Mr. Sanger commented on the curt and uncourteous answers which had been returned to Medical Officers of Health (such as that received by Dr. Laidlaw), which he considered a great mistake. For his part, he intended loyally to afford every information, and all the assistance in his power to the Medical Officer of Health for the next six months. If, at the expiration of that time, he found the performance of this duty very onerous, he meant to invite a discussion on the subject at the district meeting in May, and to propose that the Poor-law Medical Officers take action thereon, and apply individually to their respective Boards of Guardians, and collectively to the Local Government Board on the subject. As a Poor-law Surgeon of long standing, and having had considerable experience in sanitary matters, he was satisfied "that the Act could not be effectually administered in large districts, such as that in East Sussex which includes several unions, unless the Poor-law Surgeons were appointed Deputy Medical Officers of Health, their status recognised, and their services remunerated."

ENGLISH EPIDEMICS.

THE official reports of the Local Government Inspectors afford instructive details of some local epidemics due to neglect of sanitary precautions.

EDMONDSLEY.—Scarlet fever has recently been prevalent and very fatal at Edmondsley, in the district of the rural sanitary authority of Chester-le-Street, its prevalence being associated with conditions of house-accommodation of the most disgraceful character. The village belongs to three colliery companies, who have clearly not spent any of their recent gains in providing decent cottages for their workmen. There is hardly a single dwelling which has any through-ventilation, although in most instances it could be procured without the slightest difficulty, and some of the most modern houses are built back-to-back. Out of a total of 266 inhabited houses, as many as 99 were found to be absolutely destitute of privy-accommodation or refuse-bins, conditions which of themselves ensured a filthiness which needs no description. Some of these sanitary defects could be at once dealt with by the authority concerned; but, as no medical officer of health has as yet been appointed, it is natural to presume that the matter is not one which has been deemed worthy of notice. Other defects, however, especially those relating to the construction of houses, must almost necessarily remain, unless the owners of property choose themselves to remedy them, or until proper bye-laws are in force in every sanitary district in the country, whether urban or rural.

GUISBOROUGH.—The late Dr. Gwynne Harries has reported that, since the beginning of last winter, about 200 cases of enteric fever have occurred in the small market town of Guisborough, in the North Riding of York, and, in some marked instances, a polluted water has evidently been the means of spreading the disease. Numerous shallow wells are scattered about the town, and they are clearly a source of considerable danger to the health of the inhabitants. Recently, a supply of excellent water from the moors has been brought by a company into the town; but, in the absence of some legislation which will enable the sanitary authority to deal with polluted wells as nuisances, it must be a long time before the present dangerous water-supply can be superseded. Privies prevail throughout Guisborough, and they only vary in the degree to which they must be regarded as nuisances. The sewers are in many places inefficient in point of construction, and, though provided with means of flushing, yet, in the dry weather, when flushing is most needed, the necessary supply of water is wanting. Added to the above-named sanitary evils, which are everywhere intimately associated with the prevalence of enteric fever, mention is also made of ill-constructed houses, dwellings so overcrowded as to be injurious to health, and general evidence to show a want of proper inspection of the district and of proper enforcement of the law relating to nuisances. The report concludes with a series of recommendations and detailed advice as to their mode of application.

LITTLEPORT.—The parish of Littleport, in the Isle of Ely, has been inspected by Dr. Thorne Thorne, a prevalence of enteric fever and a fatal outbreak of whooping-cough being the more immediate causes of the inspection. The death-rate of the parish has ranged from 15.9 to 30.1 per 1000 inhabitants during the past ten years; enteric fever has never long been absent from the place, and a large infantile mortality has been all but constant. During the first six months of the present year, the deaths were at the high rate of 35.4 per 1000 per annum, and 17 deaths were due to whooping-cough. Littleport lies in the fen country, many portions of the parish being without artificial drainage

and having no water, except such as is procurable from the dykes. In the village itself, the drains are of a very rudimentary character, and they become a source of great nuisance and danger to those for whose supposed benefit they were provided. The main water-supply is derived from the Ouse, after it has been fouled by the sewage of Cambridge and Ely; but, in that portion of the village where enteric fever had been most prevalent, the people drink from a stream which is so notoriously polluted as to be locally designated "the drain." Excremental nuisances are stated to be numerous, and descriptions are given of cottage property which is quite unfit for human habitation. On one dairyman's premises, the inspector found that the water, which was used for all purposes connected with the sale of milk, was loaded with filth which had escaped from a drain into the well; and he very properly calls attention to the necessity for a strict inspection of all dairies within the district. After describing how the spread of enteric fever may be stayed by the efficient disinfection of the bowel-discharges, Dr. Thorne points out that, in any future prevalence of whooping-cough, special means should be adopted to prevent its spread through the agency of schools. But, in an earlier part of the report, it is stated that the salaries of the medical officers of health in this district vary from £22s. to £55s. per annum; and, under such circumstances, we are forced to the conclusion, that the adoption of any remedial measures which are in any way of a medical character has never been entertained by the sanitary authority concerned.

VALENTINE VOX presses rather hardly on our good nature in asking for advice on a matter so detailed and technical, which belongs really to his own ordinary duties. We may say, however, that, judging from his diagrams and statements, and in our opinion—r. It is certainly a mistake for the school to send patients to No. 1. 2. The S. H., etc., in such a position, requires frequent careful inspection: the drain in question should be ventilated at its highest point. The cottages are too near to the S. H.; but you would find it difficult to prove anything with reference to the villas, especially if they have been built since the establishment of the S. H., etc. No accumulation of offal, manure, etc., should be allowed to remain in the vicinity.

MEDICAL OFFICERS OF HEALTH AND INSPECTORS OF NUISANCES. A MEDICAL Officer of Health asks us: "Can you inform me what is my duty with regard to the Inspector of Nuisances? I inform him of certain nuisances, and recommend their immediate removal. He writes to say that, after his report is presented to the Sanitary Authority, he will proceed to enforce the law. I wrote him a month or more since about the same nuisance, and he has taken no action, though in the meantime I have spoken with him: it is simply concerning some ash-pits, in a foul and offensive condition. Will you kindly let me know my position with regard to the Inspector of Nuisances, or say where I can gain the information? I have read a book by Dr. E. Smith—very excellent in its way—but it does not inform the medical officer of health concerning his duties compared with those of the Inspector of Nuisances."

* * We have referred this question to Mr. W. H. Michael, who is so kind as to furnish us with the following reply:—"The medical officer of health is not the inspector of nuisances, and should be careful not to arrogate to himself functions which belong to another officer, and which could only be exercised in derogation of his own proper status and authority. He should, I think, be especially careful not to assume a power over other officers in excess of his own lawful prerogative, lest by so doing he create a feeling of antagonism, in place of that support upon which he must rely, and which he has every reason to expect. If in the discharge of his own duty of investigating the causes of disease, he should discover an existing nuisance, he should address a written letter to the Inspector of Nuisances, directing his attention to the matter, in order that an entry might be made on the premises to examine into the existence or cause of the nuisance before the next meeting of the Local Authority. The proper course for the Inspector of Nuisances would be to bring up a report on the matter to the Local Authority. The duty of the medical officer of health would be to mention, in his report to the Local Authority, that he had inspected certain premises owing to an outbreak of disease; that he had found certain nuisances there calling for removal; that he had directed the attention of the Inspector of Nuisances to their existence, and urging their removal. In this way he would prevent any irritation on the part of another officer at being treated as the direct servant of the medical officer of health, and would at the same time have insured proper attention being paid to his statements."

OBITUARY.

ROBERT WATTS, M.R.C.S. & L.S.A.

MR. WATTS was born at Bath in 1802. His father was a solicitor of that city. After serving for some years in the Honourable East India Company's Navy, Mr. Watts commenced his medical curriculum in his native city, and subsequently attended St. George's Hospital, London, and also the Paris hospitals, under Barons Larrey and Dupuytren. After several years of private practice in Bristol, he was elected on January 1st, 1850, the Resident Medical Officer of the Clifton Dispensary. This appointment he held with the universal esteem of all who knew him for over twelve years, until increasing age led him to seek retire-

ment in the neighbourhood of London, where he resided for upwards of eleven years until his decease. Mr. Watts, who had been in failing health for some years prior to his death, was on November 10th seized with apoplexy, and died on the 14th at West Hackney.

JAMES MAC MUNN, L.R.C.S.L., WOLVERHAMPTON.

MR. MAC MUNN died at Wolverhampton, on November 16th, aged 62 years. He was born in the county Sligo, Ireland, and at an early age was apprenticed to Mr. Macnamara, father of the present Dr. Rawdon Macnamara. He studied at the Medical School of the Dublin University, and obtained the license of the Royal College of Surgeons, Ireland, 1832. Three years of his student-life were spent as resident surgical pupil in the Meath Hospital, where Drs. Graves and Stokes were then physicians, and the former being at the zenith of his fame, and the surgeons were no less distinguished. The year after his degree was taken, he was elected house-surgeon and pathologist to the hospital. In 1832 he came to Brewod, where he practised for ten years. He then removed to Wolverhampton, and shortly after was unanimously elected honorary surgeon to the South Staffordshire General Hospital, a post which he held for nine years. He was also honorary surgeon to the Wolverhampton Orphan Asylum, up to the time of his death. He was a successful operator, a sound practitioner, and a benevolent and generous friend. He had a high sense of the importance of medical ethics, and never wilfully injured a brother practitioner.

MEDICAL NEWS.

DR. CHURCHILL'S SECRET REMEDIES, AND THE PROPOSED COMPANY TO PURCHASE THEM.

It is clear, from the generally angry tone of a letter which we have received from Mr. Bowes, that the proposal to form a company to purchase from Dr. Churchill some secret remedy or remedies, described as his "inhalants," is seriously put forward. Dr. Churchill, the prospectus states, "has asked £20000 cash for the remedy, if it be given to the public absolutely; or, in case a company is formed for the purchase of the remedy and sale of the medicine, he is willing to take £5000 in paid-up shares and £15000 in cash." Mr. Bowes, a gentleman of great respectability and of obviously good motives, assures us that he and others have received great benefit from the "inhalants," and he thinks that our recent observations (BRITISH MEDICAL JOURNAL, November 22nd, page 621) involve "terrorism" and "unwarrantable interference." We are content to request that it may be reperused. We have only to add, that we learn with grief and surprise that any legally qualified medical practitioner is willing to become the proprietor of a secret remedy for disease, and to be a party to the formation of a company which proposes to vend it. To do the first, is to violate the Hippocratic oath; to do the second, is to incur the most fearful responsibilities of injuring ignorant purchasers. Dr. Churchill must know so well in what light the conduct of a medical man who is a proprietor and vendor of secret remedies is regarded by his profession, that it is unnecessary that we should re-state it. Thus much for Dr. Churchill's part of the affair. For that of Mr. Bowes and his copartners, who are, no doubt, as respectable and well-intentioned as he states, we have only to say that, if they choose to throw away any sum of money in the purchase of a secret remedy and to make known its composition and uses, there is no one who will claim any right to interfere with them. They run a great risk, according to the past experience of secret remedies, of egregiously wasting their money; but they may possibly contribute to useful knowledge. If they place themselves in the position of purchasers and vendors of a secret remedy, they place themselves in a very different position. They enter into a very unsatisfactory category of public traders; and we must tell them that, in our profession, their trade is a very objectionable one, and one which almost inevitably inflicts considerable public injury, no one can say how much. It might be well if Mr. Bowes, whose motives we believe to be really honourable and generous, would ponder over this aspect of the question and bring it under the consideration of his copartners in the business.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, November 20th, 1873.

Verden, Henry Walter, Manchester

The following gentlemen also on the same day passed their primary professional examination.

Hay, William Alfred Edward, Guy's Hospital
Richardson, Joseph Berridge, Guy's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

- AMPHILL RURAL SANITARY DISTRICT**—Medical Officer of Health: £70 for one year. Applications, 3rd December, to John Wright, Clerk.
- BALLYMENA UNION**, co. Antrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ahoghill Dispensary District: £90 per annum, and fees. Applications, 1st Dec., to Wm. Millar, Hon. Sec.
- BARNET UNION**—Medical Officer for District No. 3: £60: 10 per annum.
- BEDFORD GENERAL INFIRMARY**—House-Surgeon: £100 per annum, board, rooms, etc. Applications, 10th December, to the Chairman of the Weekly Board.
- BIRKENHEAD BOROUGH HOSPITAL**—Surgeon.
- BIRKENHEAD**—Certifying Factory Surgeon.
- BIRMINGHAM**—Surgeon to the Borough Prison: £200 per annum. Applications, 29th instant, to Messrs. Gem and Hebbert.
- BIRMINGHAM AND MIDLAND EYE HOSPITAL**—House-Surgeon: £100 per annum, apartments, board, and attendance.
- BRISTOL ROYAL INFIRMARY**—Assistant House-Surgeon.
- CENTRAL LONDON OPHTHALMIC HOSPITAL**—Two Assistant Surgeons. Applications, 9th Dec.
- CITY OF DUBLIN HOSPITAL**—Surgeon.
- CLUTTON RURAL SANITARY DISTRICT**—Medical Officer of Health: £20 per annum for three years. Applications, 11th December, to E. H. Perrin, Clerk, Temple-Cloud, Bristol.
- CONWAY UNION**—Medical Officer for the Creuddyn District: £75 per annum, and fees. Applications, 10th Dec., to Wm. Hughes, Clerk.
- DROITWICH UNION**—Medical Officer and Public Vaccinator, Droitwich District: £85 per annum, and fees. Applications, 2nd December, to Henry Bearcroft, Clerk.
- DURHAM**—Public Analyst: £10: 10 per annum, and 2rs. per analysis for first hundred, 10s. 6d. per analysis for second hundred, and 6s. per analysis beyond, in each year.
- FROME UNION**—Medical Officer for District No. 2: £90: 5 per annum.
- GAINSBOROUGH RURAL SANITARY DISTRICT**—Medical Officer of Health: £150 for one year. Applications, 8th Dec., to T. H. Oldman, Clerk.
- HOSPITAL FOR WOMEN**, Soho Square—House-Physician. Applications, 29th instant, to John Ray, R.N., Sec.
- KENT COUNTY LUNATIC ASYLUM**—Two Assistant Medical Officers: £130 per annum each, furnished apartments, etc. Applications, 10th December, to Messrs. Beale and Hoar, Maidstone.
- MANCHESTER ROYAL EYE HOSPITAL**—Three Assistant-Surgeons. Applications, 15th December, to P. Goldschmidt, Chairman of the Board.
- METROPOLITAN FREE HOSPITAL**—Physician.
- MOUNTMELLICK UNION**, Queen's County—Medical Officer and Public Vaccinator for the Maryborough Dispensary District: £100 per annum, and fees. Applications, 1st Dec., to John Gaze, Hon. Sec.
- NAVAL MEDICAL DEPARTMENT**—Assistant-Surgeons.
- NEWTON ABBOTT UNION**—Medical Officers for the Manaton and Moreton Districts: £17 and £24 per annum.
- QUEEN ADELAIDE DISPENSARY**, Bethnal Green Road—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 5th Dec., to Rev. Thos. Peckston, 260, Cambridge Road.
- RIPON DISPENSARY AND HOUSE OF RECOVERY**—Resident Medical Officer: £100 per annum, furnished apartments, etc. Applications, 5th Dec., to the Honorary Secretaries.
- SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN**—Surgeon to Out-department. Applications, 2nd Dec., to G. Scudamore, Sec.
- SOUTH SHIELDS**—Medical Officer to the Borough Police.
- SUNDERLAND AND BISHOP WEARMOUTH INFIRMARY AND DISPENSARY**—Senior House-Surgeon: £80 per annum, board and residence. Applications, 25th December, to John Kitts, Secretary.
- TEWKESBURY UNION**—Medical Officer and Public Vaccinator for the Northampton District: £55 per annum, and fees. Applications, 16th Dec., to George Badham, Clerk.
- THEFTFORD URBAN SANITARY DISTRICT**—Medical Officer of Health: £10 for one year. Applications, 4th December, to John Houchen, Town Clerk.
- TIPPERARY COUNTY GAOL**, Nenagh—Surgeon: £53 per annum.
- UNIVERSITY OF DUBLIN**—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny M.B. or Joseph Carson, D.D.
- WYCOMBE UNION**—Medical Officer for District No. 8: £50 per annum, and fees. Applications, 29th inst., to T. J. Reynolds, Clerk, High Wycombe.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- *BRAINE, Woodhouse, Esq., appointed Chloroformist to Charing Cross Hospital
- EDDOWES, Alfred, M.B., C.M. Edin., appointed House-Surgeon to the Salop Infirmary, vice H. J. Rope, Esq., resigned.
- *SPENCER, W. H., M.B. Cantab., elected Physician to the Bristol Royal Infirmary, vice *F. Brittan, M.D., resigned.
- WALDO, Henry, M.D., appointed Assistant Physician to the Bristol Royal Infirmary, vice *W. H. Spencer, M.B., promoted.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

- ADAMS.—On November 23rd, at North Lodge, St. Matthew's Infirmary, Victoria Park, the wife of E. J. Adams, M.R.C.S.E., L.M., L.S.A., L.R.C.P.E., L.M., Coll. Phys., of a son.
- ELLISTON.—At Ipswich, on November 11th, the wife of *W. A. Elliston, M.D., of a daughter.

DEATHS.

- NOSWORTHY, John Ley, Esq., Surgeon, at Moretonhamstead, Devon, on Nov. 16.
- TAYLOR, A. D., M.D., Deputy Inspector-General of Hospitals, at Bootle, aged 62, on November 19th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Malcolm M. Hardy, "Preparation of Double Intussusception"; Mr. W. D. Napier, "Instruments for the Detection and Removal of Calculus"; Mr. Cripps Lawrence, "A Case of Intestinal Obstruction from Fecal Accumulation"; Dr. Habershon (the President) will make some remarks on "Some Complications met with during the recent Prevalence of Rheumatism"; Dr. Wiltshire, "Particulars of a Case of Inflammation of the Sciatic and Tracheal Plexuses, associated with Articular and other Communications."

TUESDAY.—Pathological Society of London, 8 P.M. Report on Dr. Dowse's Specimen of Foreign Body in the Crico-thyroid Pouch. Dr. Moxon: Two Cases of Osteoid Cancer of Lung. Mr. Andrew Clark: Lymphoma infiltrating Trachea: Tracheotomy performed twice. Dr. Payne: Pouches in Peritoneum giving occasion to Hernia. Dr. Payne: Thickening of Pulmonary Artery. Dr. Lockhart Clarke: Sclerosis of the Spinal Cord. Dr. R. King: Large Abscess of Liver without Ulceration of Intestine. Dr. Arnott: Sarcoma of Omentum in a Child. Mr. Morrant Baker: Rare form of Oxalate of Lime Calculus. Mr. Tay: Necrosis of Lower Jaw. Mr. Coupland: Disseminated Nodular Growths in Liver, with Tuberculosis of the Lungs. Dr. Fred. Taylor: Leucocythæmia, with Lymphadenoma. Dr. Crisp: Imperforate Anus. Mr. Godlee: Ossifying Enchondroma. Dr. Dowse: Renal Calculi.

WEDNESDAY.—Obstetrical Society of London, 7 P.M.: Meeting of Council. 8 P.M.: Mr. Tapson, "Note on the Removal of Intrauterine Tumours"; Dr. M'Callum, "On a Case of Extrauterine Foetation"; Dr. Routh, "On the Use of Intrauterine Pessaries in Uterine Disease"; and other papers.—Royal Microscopical Society, 8 P.M.

THURSDAY.—Harveian Society of London. 7.15 P.M.: Special Meeting of Council. 8 P.M.: Mr. Balmanno Squire, "On Lupus and its Treatment."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE can give Mr. Lawson Tait no promise which will fetter our discretion. He may naturally feel inclined to question our impartiality: we as confidently maintain it.

DR. ELLIOTT.—Duly received; and will be published, if possible.

DR. H. F. PARSONS (Beckington).—Next week.

DR. BROWN (Sheffield).—We should like to know a little more of the circumstances.

THE fee named by "A Country Practitioner" seems to us quite moderate. He cannot, however, when called upon, refuse to give particulars of the dates and number of his visits.

SIR JAMES SIMPSON'S STATISTICS.

DR. LAUCHLAN AITKEN (Rome).—We think the particulars which Dr. Aitken could furnish with regard to Simpson's schedules might be interesting; but as they seem to take up, at any rate partly, the same ground as Mr. Lawson Tait, it would be better for Dr. Aitken to communicate with the latter gentleman, and combine their information.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

THE LONDON HOSPITAL.

MR. NIXON writes to us to say that the income of the London Hospital is £14,600. Its expenditure is, we believe, £30,000.

HOMŒOPATHY.

SIR,—*Apologies* of your recent article upon Homœopathy, the following anecdote, narrated to me many years since by an Edinburgh physician, is amusing. Professor Henderson of the Edinburgh University, who had become a convert to the then new faith, was continually trying to win over his brother professor, Christison, and at length made him a present of a handsome case of globules, wherewith to experiment. Christison, after leaving the case for some weeks in a lumber-room, sent it back to his friend with the intimation that he could not bring his mind to make use of its contents. Some time afterwards, at a dinner party, Dr. and Mrs. Christison, Professor Henderson, and my friend, were amongst the guests. Henderson alluded to the return of the globules, at the same time stating that he had since used up the whole of them. Christison asked, "With what result?" "Oh, the usual success, the usual success," was the prompt reply. At this Mrs. Christison, an interested listener, unable to restrain her feelings, to the surprise of the company, burst into a fit of laughter. An explanation was demanded, when it was elicited that the elegant case had been used as a nursery plaything, and that every morning the children had been accustomed to empty all the globules out on a tray, and when they were well mixed, fill the bottles up again. Henderson failed of his "usual success" for that evening.

I am, etc.,

Faversham, November 1873.

EDWARD GARRAWAY.

T. D. S.—We cannot concur in considering the *Pharmaceutical Journal* as an "obscure trade journal", or that the editor cannot be expected to be cognisant of the feeling which happily subsists.

HIBERNICUS.—All our accredited correspondents are, we believe, careful to inquire into the accuracy of the information which they forward to our columns. They are of course not free from ordinary human fallibility, but the imputation of personal malice is one which we shall always be very loth to credit; it is not uncommonly found to represent the subjective mental condition of the person who makes it; it is a charge which should never be made, except with the gravest sense of responsibility and ample evidence, which certainly does not exist in this case.

J. R. B.—We have received your enclosure relating to the prosecution of McDermott, and consider the statements therein contained are completely disposed of in our number of November 8th.

DR. McEWEN (Chester) is reminded that all communications relating to the business department of the JOURNAL should be addressed to Mr. Francis Fowke, the Manager, and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Manchester Examiner and Times; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Temperance Record; The Bath Express and County Herald; The Birmingham Gazette; The Dublin Morning Mail; The Derbyshire Journal; Saunders's News-Letter; The Glasgow News; The Derby and Chesterfield Reporter; The City Press; The Southampton Times, and Winchester, Portsmouth, Isle of Wight, and Hampshire Express; The Lincoln Gazette; The Stroud News; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Nov. 19th; The Anti-Game-Law Circular, Nov. 15th; The Northern Echo, Nov. 21st; The Daily Post, Nov. 24th; The Bedfordshire Mercury, Nov. 22nd; The Eastern Daily Press, Nov. 22nd; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; The Aberdeen Times; The Dublin Express; The Aberdeen Free Press; The Belfast Evening Telegraph; The Carlisle Journal; The Daily Courier; The Melbourne Age; The Malton Messenger; The Altrincham and Bowden Guardian; The Stafford and Gloucester Advertiser; The Edinburgh Courant, Nov. 15th; The Gloucester Mercury, Nov. 11th; The Carlisle Express and Examiner, Nov. 18th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Rumsey, Cheltenham; Dr. Charlton Bastian, London; Dr. Dobell, London; Mr. W. H. Michael, London; Mr. G. E. Norton, London; Dr. Young, Malton; Mr. Vincent Jackson, Wolverhampton; Mr. G. W. Callender, London; Dr. Thorowgood, London; Dr. Crichton Browne, Wakefield; Mr. H. C. Smith, Maidstone; Mr. J. T. Jones, Llanfyllin; Dr. C. Radclyffe Hall, Torquay; Dr. R. Payne Cotton, London; Mr. Bradley, Manchester; Dr. McEwen, Chester; Dr. Munro, Cupar Fife; Dr. George Johnson, London; Dr. C. Bell Taylor, Nottingham; Mr. Eastes, London; An Associate; Dr. Althaus, London; Dr. R. Barnes, London; Mr. Holmes, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Edis, London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Dr. King, Camberwell; Dr. Spencer, Bristol; The Secretary of the Harveian Society; Mr. Braine, London; Mr. G. S. Payne, Plymouth; Dr. Bodington, Sutton Coldfield; Dr. Elliott, Bristol; Dr. Joseph Bell, Edinburgh; Mr. Okell, Winsford; Mr. Walter Reeves, London; Mr. T. E. Jones, London; Mr. Garraway, Faversham; Mr. Nelson Hardy, London; Dr. Bigelow, Boston; Mr. J. Quicke, Birmingham; Dr. Swaby Smith, Seaford; Dr. H. F. Parsons, Beckington; Dr. J. Brown, Sheffield; Mr. Warren Tait, London; Dr. Carl Bott, Boston; Mr. Trestrail, Houston; Mr. Ashburton Thompson, London; Dr. A. B. Steele, Liverpool; Dr. Trollope, St. Leonards-on-Sea; Mr. H. J. Knight, Rotherham; Dr. Crichton Browne, Wakefield; Our Dublin Correspondent; Dr. Lombe Athill, Dublin; Mr. Woodman, Exeter; Mr. Lawson Tait, Birmingham; Dr. Handyside, Edinburgh; Mr. Wheelhouse, Leeds; etc.

REMARKS ON ONYCHIA MALIGNA.

By WILLIAM MAC CORMAC, Esq.,

Surgeon to and Lecturer on Surgery at St. Thomas's Hospital.

A FEW years ago, I had many opportunities of observing cases of onychia maligna. The name, by no means an inappropriate one, was given to the disease by Wardrop, and I do not think any better one has since been invented.

I was impressed by the inveterate nature of the malady, the almost intolerable pain usually experienced by the sufferers, frequently depriving them of natural rest, and the precise similarity, amongst the patients coming under my observation, of one case to another. Local applications, or the evulsion of the nail, for the most part, produced but temporary good effects. The diseased condition would reappear after the patient resumed work, or the nail became reproduced. The only treatment which proved effectual in my hands, whilst it restored the patient soonest to work, was the complete excision of the secreting structure at the root of the nail. This is a severe operation. One must cut widely and pretty deeply, especially at the base and angles, to eradicate the matrix, and a large wound is the result. Anæsthesia, either local or general, is required; and one of the earliest deaths from chloroform was caused in this way, whilst at least two others occurred, one of them in St. Thomas's Hospital, many years ago.

If, however, the operation be thoroughly performed, the disease cannot be reproduced in that toe or finger. The ulcerated surface speedily assumes a healthy appearance; and a horny cicatrix, which forms an imperfect substitute for the nail, covers the part after a time.

I possess notes of a good many cases, and the history of most of them is so similar in all essential matters, that to relate one is pretty much to relate all.

I found the disease very prevalent amongst the young girls working in flax-spinning mills. They attend the spinning frames barefooted, and the toes are in consequence much exposed to accidental injury; while the warm water, mixed with oil and the rust of the brass and iron work which drips from the frames, has a very irritating influence. In the great majority of the cases, the great toe was the part affected; and the origin of the disease was attributed to a bruise or a blow.

The duration of the malady before admission to hospital varied from five weeks to eighteen months, and in a few instances even a much longer time. I will shortly give the details of one or two of these cases.

CASE I.—Margaret McKnight, aged 21, a millworker, bruised her right great toe fourteen weeks before her admission into the General Hospital of Belfast under my care. She continued at work. The toe became gradually more and more painful and swollen. The nail became loosened from its bed, which ulcerated, as also the folds of skin around the nail. The nail itself became discoloured, irregular in shape, and sodden, the portions still attached, sticking almost vertically from the surface. In a few weeks, she became completely disabled. When I first saw the patient, the dorsal aspect of the last phalanx was occupied by an ulcer larger in size than the original nail, greyish and sloughy-looking, and secreting thin dirty pus, horribly offensive in smell. The edges of the sore were much swollen, and its margins very sharply defined. The extremity of the toe was bulbous, dark red in colour, and three times its natural size. Towards the proximal part of the ulcer, the remnants of nail, shrivelled, shreddy, and dark coloured, were projecting at a right angle from the surface; but they were still firmly attached. The patient stated that she could not sleep at night, so great was the pain. The surface having been frozen with ether-spray, I freely excised the soft parts around the matrix of the nail. For the first few days, water-dressing was applied. The toe was subsequently regularly strapped, to reduce more quickly its unnatural bulk; and, thirty-one days after the operation, the patient was dismissed with the toe soundly healed.

CASE II.—A mill-girl, fifteen years old, stated that about six months before she had noticed the great toe-nail of the right foot gradually discolouring. She did not remember injuring the toe. The nail, however, fell off, and what she aptly termed a "wrong nail" grew in its place. The toe became increased in size, very painful, and ulcerated beneath the nail. While in this condition, a medical man removed the nail by evulsion, and the girl recovered sufficiently to return to her work; but in two weeks the disease reappeared, and she came into

hospital. The toe was then much enlarged, bulbous, dark red in colour, greatly inflamed, the upper surface covered with an ulcer which looked more like a sloughy soft chancre than anything else with which I can compare it. From the upper part of this sore, but quite surrounded by ulceration, portions of nail projected, softened and discoloured, but firmly attached to the matrix. The girl was worn out with suffering, and stated, I am convinced with truth, "that she had not gone to bed for five weeks," as the pain was then more severe. This case was treated like the last; and, twenty-two days after the operation, the patient was discharged quite cured.

I have notes of several cases where the nail had been evulsed two or three times, the disease recurring each time when the nail began to grow.

CASE III.—In a mill-girl of 14, several months ill, I found the great toe of the right foot bulbous, red, and much inflamed; the upper surface of the last phalanx occupied by a large and most unhealthy ulcer. Running transversely across the middle of the sore, were the fragments of nail, still firmly attached. On examination, I found that the last phalangeal bone was involved by the disease, and quite carious. Amputation was performed through the proximal joint, and a rapid and satisfactory recovery followed.

It is but seldom, however, that the disease implicates the bone.

The history most commonly given is, that the toe was injured by a blow or bruise. If the injury be severe, the toe-nail probably drops off in a short time; but perhaps oftener an abrasion is found at the part injured; an ulcer forms, which spreads underneath the nail and along its borders, furnishing a horribly foul smelling pus. The distal part of the nail softens, and is broken, or clipped, off. It becomes dark yellow or black in colour; and finally an irregular jagged fringe of nail, directed straight up from the surface, is all that remains of it; while its bed, and the folds of skin surrounding and overlapping its borders, ulcerate also. If the nail drop off in the first instance, a deformed irregular nail grows in its place, and assumes an appearance similar to that described. All this time, the toe increases in size, and becomes bulbous in shape. It is dark red in colour, and the skin is often tense and shining.

The appearance of the ulcer is something quite peculiar. It has an ashy-coloured surface, with shreds of tissue attached to it; often red points dot it here and there, and the discharge has an intolerable smell. The edges, owing to the inflammatory swelling, are much elevated, and are often as sharply defined as possible. The pain is usually continuous, and very severe, of a gnawing character, aggravated by warmth, and preventing sleep in many cases.

The malady, if not interfered with, continues for years, there being little or no tendency to spontaneous cure. There is a great tendency to relapse after simple evulsion of the nail, while complete excision of the matrix ensures a permanent cure.

It is the opinion of some eminent surgeons, that the disease is often the extension of hereditary syphilis; but I could never satisfy myself that there was any such connexion. I believe it, at all events, to be rare. In the many cases I observed, the affection seemed always clearly traceable to local conditions. Often it would arise in persons of otherwise unimpaired health; but very frequently it was observed amongst the indifferently fed overworked factory hands.

From what I have been able to learn, it is in most places a rare disease. Mr. T. Smith, in vol. v of Holmes's *Surgery*, states that it is almost confined to children under ten years of age, and is usually observed on the fingers. Amongst seven thousand surgical out-patients under twelve years, he noticed only nine cases, and these occurred between the ages of one year and seven.

In Dr. McCall Anderson's tables of eleven thousand consecutive cases of skin-disease, ten instances of onychia are recorded.

During ten years from June 1863 to June 1873, amongst 9,462 surgical in-patients in the Belfast Hospital, 217 cases of onychia maligna were admitted, or 2.2 per cent. of the total number of cases.

The ages of these patients were as follows:—Under 10 years, 9 cases; between 10 and 15 years, 115 cases; between 15 and 20 years, 63 cases; between 20 and 30 years, 22 cases; above 30 years, 8 cases—217.

The occupations were: mill-workers, 184 cases; all other occupations, 33 cases—217.

Of males, there were 30; of females, 187, or nearly 86 per cent.

The part affected is seen in the following:—Various fingers, 5; the great toe, 170, or 78.34 per cent.; other toes, 42 cases.

My attention was recently recalled to the subject of onychia by reading an elaborate monograph on the disease by Professor Vanzetti, of the University of Padua. After giving many most interesting historical and other details, he recites the particulars of twelve cases of onychia maligna treated by the application of powdered nitrate of lead to the surface of the ulcer. The result seems to have been simply marvellous

In each case, a speedy and permanent cure rapidly followed, with the reproduction of a perfectly healthy nail. Dr. Vanzetti's antecedent experience had been somewhat similar to my own; he had exhausted, without satisfaction, all sorts of remedies, and relied on excision for a cure—a means which, on account of its severity, he very reluctantly employed.

The credit of the discovery is due to Dr. Moerloose, physician to the hospital for children in Ghent, who read a communication to the Medical Society of that town in 1864, commending the marvellous powers of this application, and stating that he had used it with uniform success for several years previously. The communication was subsequently published in the *Abeille Médicale*. He there states that the simple application of powdered nitrate of lead to the whole of the ulcerated surface will procure the rapid healing of the usually intractable ulcer. Often, he says, patients have been brought to the hospital for the purpose of having the affected part amputated. Usually, in eight to ten days, in from three to four weeks at the outside, Dr. Moerloose has, without exception, been able to cure the most severe cases.

Very shortly after the first application, all pain ceases; the swelling soon begins to diminish; also the suppuration, which loses its fetor; and it is not rare, at the end of five or six days, to see a perfectly healthy healing sore.

Professor Vanzetti was much impressed with these statements, and determined to give the remedy a trial at the earliest opportunity. After a time, a boy of seven presented himself in his *clique* with onychia of the middle finger of one year's duration. The pain was so excessive as to cause a species of convulsion every night. No form of treatment had produced the slightest benefit. The last phalanx was double its natural size, livid red in colour, ulcerated along the sides and upper edge of the nail. The loose portion of nail was removed by scissors, so that the powder might be freely applied to every part of the diseased surface. Considerable pain was complained of until evening, but then the child slept soundly all night. On removing the hard crust which formed over it, the ulcer was seen, two days afterwards, to be looking well. Three applications in all were made, and in eleven days the sore completely healed up. A year afterwards, the little patient was seen by Dr. Vanzetti, who found that a new and perfectly well formed healthy nail had grown, only differing from that on the opposite hand in being a trifle larger.

All Dr. Vanzetti's cases save one were on the fingers. The age varied from six to twenty-four years, and the duration of the disease from three months to four years. In the remaining eleven cases, one application of the nitrate of lead sufficed to ensure complete recovery, with perfect reproduction of the nail. In every instance, the author was able to verify the fact after the interval of a year or two. After the nitrate of lead had been applied a few hours, the pain previously complained of completely subsided in all the cases. Eleven chromolithographic plates illustrate the work; they show the appearance of the disease, and the results obtained by the nitrate of lead treatment.

Being accustomed to the disheartening obstinacy of this painful complaint, and averse from what appears to me the severe remedy of complete excision of the matrix, I was naturally anxious to verify these conclusions for myself. Unluckily, no case presented itself, nor have I seen a single one amongst the out-patients at St. Thomas's. I am, therefore, indebted to a friend and former pupil, now Surgeon to the Skin Hospital in Belfast, for trying the plan for me. Dr. Johnstone Scott has employed the nitrate of lead in powder in fifteen cases. I need not trouble the meeting with details, but merely report his conclusions. "The effects," he says, "are most wonderful. From fourteen days to a month is the time required for a complete cure. All pain ceases from one to three days after the first application, and the swollen irritable margins of the greenish-black ulcer gradually disappear; and, at the end of a week, we find a clean granulating sore with healthy edges. No cutting of the nail or matrix is required. The nitrate of lead may be relied on implicitly."

These conclusions positively confirm those of Drs. Moerloose and Vanzetti.

In no instance was any specific treatment employed. Tonics in various forms, and good food, were often required. The cure by local measures is a further argument against the specific character of the disease. In syphilitic onychia, the nails appear liable to separate and drop off from the root towards the tip; more than one nail is usually affected; there are fissures or ulcers in the interdigital folds; and there is other evidence of syphilis usually present. In the cases I have seen, however, much as the nail may have disintegrated, the proximal portion remains as firmly imbedded as ever in the root-matrix; and, if it be evulsed, which it is often difficult or impossible to do, from the softened character of the portion left, the root presents a healthy opalescent appearance.

No doubt the fragmentary stump of nail projecting from the surface, and liable to constant knocks and twists, is a very likely source of irritation, and acts much like a foreign body; but the results of the nitrate of lead treatment appear to prove that it is not the nail-secreting structure at the root which is the seat of the disease, but the soft tissues on which the body of the nail rests. If this be true, the excision or evulsion of the nail cannot be necessary to ensure the cure of the disease.

Possibly, this mode of treatment may be known to many surgeons, but so far I have seen no published record of their experience; and I trust I may be excused, therefore, for thus far trespassing on the time of the meeting.

ON THE USE OF RESIN-CLOTH, IN THE PLACE OF CERE-CLOTH, IN THE TREATMENT OF WOUNDS.

By EDWARD LUND, F.R.C.S.,

Surgeon to the Manchester Royal Infirmary.

To those who practise the system of dressing wounds advocated by Professor Lister, the use of the carbolised gauze which he employs, as far merely as expense is concerned, is a matter for consideration. This, perhaps, is the case more in hospital than in private practice; because in the former, at the present time, the gauze is largely used to test the value of the antiseptic method, and economy should be observed as far as possible. Moreover, beyond the cost, there is a difficulty in the preparation of the gauze, for the mixture of paraffin and acid with which the fabric is saturated, must be applied to it in a heated liquid state; and, unless a certain temperature be maintained during the whole process, the gauze will be of unequal thickness, and imperfectly porous.

I have tried to make the gauze myself, according to Professor Lister's recipe. I have often failed to do so in these particulars. In the paper in which he first described this dressing in the *BRITISH MEDICAL JOURNAL* (January 1871, p. 30), Professor Lister refers to a very curious property possessed by carbolic acid—namely, that it can be combined with resin, and resinous matters generally, with great facility; and, when so blended, nearly all its irritating acid properties are neutralised, while the compound so formed retains the power of evolving an antiseptic vapour at the temperature of the body. It is well known that to touch the mucous membrane, or even the skin of the lips, with a fragment of pure carbolic acid, occasions pain and excoriation, in some subjects more than in others; but when we experiment in the same way, on a mixture of the acid with five parts of resin, we find all this acidity destroyed; the acid is still present, but it is stored up and rendered harmless by this new combination. Having verified this fact by numerous observations, I came to the conclusion that we have here a method of forming easily, without the aid of heat, an application for antiseptic purposes in surgical practice of great value. All that is required to carry out the idea is to saturate very thin calico gauze with such a mixture of resin and acid, dissolved in methylated spirit, press it powerfully, spread it out to dry quickly, so that it may become quite porous and absorbent, and it is ready for use. Yet the resin and acid, thus left upon the threads of the calico after the complete evaporation of the spirit, would be too brittle and adhesive to the skin for a wound-cover and air-filter if something else were not added to impart flexibility. The substance which I employ for this purpose is castor-oil, because it is the only fixed oil easily accessible, which is quite miscible with spirits of wine. All samples of castor-oil, by reason of adulteration, do not show this property of perfect solubility in alcohol, as stated by Pereira (*Materia Medica and Therapeutics*, 1865, p. 251); and, therefore, I am content to use the oil, if it will unite perfectly with twice its bulk of rectified spirit. The exact composition of the solution is as follows:—Carbolic acid crystals, melted, two fluid-ounces; castor-oil, two-fluid ounces; purified resin, sixteen ounces by weight; methylated spirit, forty fluid-ounces: mix. To dissolve these ingredients easily, we must add them together in a certain order. To the resin, liquefied by heat and removed from the fire, add one-third part of the spirit; when these are well mixed, put in another third of the spirit, in which the oil has been previously dissolved; and, lastly, the acid in the remaining portion of the spirit must be slowly added to complete the mixture. The whole must be agitated until all the constituents are thoroughly incorporated, and afterwards passed through a muslin filter to get rid of any extraneous matters. If this plan be not adopted, the resin will concrete into a mass at the bottom of the vessel, and it will be extremely difficult afterwards to get it perfectly mixed. When thus prepared, the solution is of a dark colour, clear and free from any deposit; and it can be kept unchanged, in a

well corked bottle, for a long time. It is, in fact, a kind of thick varnish. To make the resin-cloth, as I term it, for the sake of distinguishing it from the cere-cloth dressing for wounds, which I described in a paper read at the Leeds meeting of the British Medical Association in 1869, it is needful to select a very thin, cheap, porous calico, or calico-muslin, known in the trade as "mulls", which costs at wholesale price about four shillings per piece of twenty yards. This, divided into strips, each about nine inches wide and six yards long, is reduced to a convenient form for general use. The calico should be unbleached and free from stiffening, and each of the strips should be carefully folded up, so as just to lie flatly in the press, as I am about to explain.

An ordinary square tincture press may be used to press the cloth, or such a press as is sold for copying letters, to which a tin box has been adapted, so that the plates of the press can work in it; and into this box the folded calico is placed, the solution being poured over each successive layer, so as to wet perfectly every part of it. There should be an aperture at the bottom of the box, with a tap by which the superfluous fluid can be removed, collected, and used a second time. The press being brought into action, the pile of calico should be squeezed as dry as possible, all the fluid drained off, the resin-cloth taken out, laid over a few lines of string in a warm room with a good ventilation; and in an hour or two, when all traces of smell of the methylated spirit have departed, the cloth may be rolled up and kept in tin cases ready for use.

It is difficult for me to state the exact cost of resin-cloth made by this process, for I have not yet bought the materials for its preparation at such prices as could be had if it were to be manufactured in large quantities; but, allowing for some slight reduction, where six or eight twenty-yard pieces of calico are bought at a time, and the solution made by the gallon, I find it comes to a fraction less than threepence per yard of average width of 44 inches. In using it as a dressing for wounds, I deal with it precisely as I would do with Mr. Lister's antiseptic gauze, for which it must be taken as a cheap and ready substitute. I generally apply ten folds of it over the face of a wound, as in an amputation, and perhaps six folds higher up the limb for some distance, and I cover it with the macintosh hat-lining, so as to distribute the serous discharges through the breadth of the resin-cloth thus covered. I have never found it to irritate the skin in any degree beyond what the oiled silk (protective), liberally used, could control; except once, when, in the hurry of preparing the resin-cloth, I had neglected to dry it thoroughly, and it was applied, still moist with the methylated spirit, the naphtha in it seeming to be the chief cause of the skin-irritation. But if this precaution be observed, I believe this resin-cloth will be found a very useful addendum to our means of treating wounds and abscesses on antiseptic principles.

A CASE OF TUBERCULAR LEPROSY.

By GEORGE GASKOIN, Esq.,

Surgeon to the British Hospital for Diseases of the Skin.

J. M., aged 29, native of Herefordshire, a stonemason by trade, eighteen months since migrated to Sussex, where he has not stayed very long in any one place. The last four months he has been in town, much of the time in a general hospital. He is a married man, not of the lowest class or necessitous; his general health is not bad; he is tall, pale, and of phlegmatic complexion, sluggish in manner, with intellect at present rather dull. According to his relation, about nine months since he had very severe shiverings, immediately followed by swelling and inflammation in the right leg and foot, with some attendant fever. After three or four days, the swelling in part subsided, but the same circumstance was many times repeated; whenever there occurred a swelling of the leg, this had been preceded by a shivering. "Very red it was"; at last much thickening remained. Since being in town, the patient has ceased to have these shiverings; when they first came on, there was a fortnight or so of interval. He left off work last Christmas. The appearance of the leg is scarred or scabious, somewhat dark and rough, a case of elephantiasis Arabum, which one might even suppose of older date, and of no insignificant dimensions. Besides this, a red brand is very conspicuous on the left cheek. It crosses from mouth to temple; it is hard and tubercular, all of one piece. It came on when he was in hospital. On the right side of the neck are old scars from glandular ulcerations. These have recently become red and to some extent the seat of tubercular deposit, extending to the cheek and back of the neck. On the right shin, half-way down, there is a considerable projecting tubercle, the size of a small walnut, retaining the colour of the surrounding skin. On the opposite limb are smaller but corresponding tubercles. The four outer toes of the

affected foot display on their dorsal surface a projecting tubercular mass distinct from the general swelling. On this part there was previously a scar or trace from an injury received when a boy. Also in the affected cheek there is seen a small scar, with the history of a blow of more recent date. The tendency of the disease, as it would seem, is to fall on parts where vitality is impaired or the circulation low. The voice is not affected.

This case serves to confute the idea that elephantiasis Arabum is a local disease. The present condition of the patient comes very near to elephantiasis Græcorum, if not already merged into this. It has not seemed sufficient, however, for modern pathologists to distinguish the two diseases; the difference has been strained to the uttermost, but, being a mere idol of the theatre, the conclusion can have no permanency.

THE CONNECTION OF DIPHTHERIA WITH LOCAL UNSANITARY CONDITIONS.*

By W. N. THURSFIELD, M.D.,

Medical Officer of Health for the Shropshire Combined Sanitary District.

My object in this paper is to endeavour to elicit an opinion from you as to the exact connection between diphtheria and local unsanitary conditions, as this is a point about which there is much uncertainty, and on which members of a society constituted as yours is to a large extent are particularly well qualified to speak with authority. There are many points connected with the etiology of disease, especially as to the origin of certain diseases *de novo*, about which the observations of practitioners in country districts are of much more value than those of their brethren in large towns. They have a more intimate acquaintance with the habits, movements, and surroundings of their patients, and often they have a complete knowledge of all probable sources of infection in a district, and can thus eliminate various sources of error in a way not possible under more crowded conditions of life.

As the term diphtheria is occasionally somewhat loosely applied, I will define it to mean a systemic contagious disease, characterised by a tendency to membranous exudation, chiefly affecting the pharynx, and having these peculiarities, that, during its course, albumen is frequently present in the urine, and that the disease is liable to be followed by obscure local nervous affections. Another peculiarity of the disease is the remarkable and now well proved influence of hereditary predisposition; in determining personal susceptibility, this, in conjunction with the tenacity with which the contagion element in this disease is liable to remain in a room, unless great precautions be taken, may explain some of the cases where diphtheria has been noticed as recurring several times in the same house.

The medical practitioners with whom I come into contact in this country almost invariably connect diphtheria with local unsanitary conditions, and many of them are of opinion that such conditions not unfrequently originate the disease. On looking through the systematic works on medicine, both English and foreign, I have been struck by the almost complete absence of any reference to a connection between this disease and local influences. In the collection of monographs on the subject published by the New Sydenham Society, one author only, M. Empis, refers to it, and only so far as this, that "the disease is most obstinate, and relapses of the local symptoms most common, in weakly children surrounded by sanitary deficiencies." M. Trousseau states that "he has seen the disease raging on salubrious heights, whilst villages situated in marshy districts have escaped, and *vice versa*." In this country it has also been observed in several epidemics that the disease has prevailed with great fatality on elevated and exposed tracts of country; those of us, however, who are in the habit of making sanitary investigations in country districts know that many localities with the greatest natural advantages of site and air often exhibit, both inside and outside the houses, the worst forms of sanitary neglect, with which the pure winds in vain battle. The elaborate series of investigations, extending to upwards of seventy localities, made for the Medical Department of the Privy Council by Drs. Sanderson and Greenhow on the subject of this disease, and published in the second report (1859) of the medical officer to the Privy Council, do not seem to justify any definite conclusion on this particular point; but, in reporting a subsequent investigation, published in the eighth report (1865) of the medical officer to the Privy Council, Dr. Sanderson states, in reference to an outbreak of diphtheria, that "it is not possible to avoid the conclusion that it was due to local causes, and that it would have been prevented if the nuisance had been effectually abated."

* Abstract of a paper read before the Shropshire Scientific Branch of the British Medical Association.

On the other hand, statements most definitely denying any such connections are not wanting. Dr. Wood, in his large American work on the practice of medicine, states—"It is generally admitted that ordinary unhealthy hygienic influences, such as confined and vitiated air, and all the accompaniments of poverty and privation, have no effect in favouring the development or propagation of the disease, which seems to be as prevalent and destructive in healthy situations as in the most unhealthy." Sir William Jenner, in his recent monograph on the subject, is most definite: he states "that the infection element in diphtheria does not require for its development any of the ordinary considered antihygienic conditions," and "that it is very doubtful if any of those antihygienic conditions favour its development or give it a more untoward course when it occurs."

For my own part, I must say that, in several outbreaks of diphtheria which I have investigated, I do not think that the presence of that disease in conjunction with prominent sanitary deficiencies could be fairly explained as a coincidence.

To aid in settling this important question, I venture to propose to the members of this society two questions.

1. Does diphtheria ever arise in consequence of sanitary deficiencies?
2. Are sporadic cases of diphtheria often met with?

In the discussion which followed the reading of this paper—

Mr. GILL (Wem) was decidedly of opinion that bad hygienic conditions could produce diphtheria, and stated that a few weeks ago he had investigated an outbreak of true diphtheria in his district, in which there was evident connection with various nuisances; and, from inquiry and personal knowledge, he was in a position to state positively that there had not been for a length of time any other cases in the neighbourhood.

Mr. S. WOOD (Shrewsbury) said that some years ago a remarkable series of cases came under his notice. The epidemic extended to several hamlets in one district, and in each locality he ascertained that the disease had first attacked the children attending one national school, and commenced immediately after the holidays. On investigation, he found that, during the holidays, the contents of a ditch receiving the overflow from some privies had been mixed with ashes and spread over the playground; on the reassembling of the school, this formed a ready material for making ovens and dirt-pies, and, as a matter of fact, the children had so amused themselves. It was impossible not to connect this circumstance with the outbreak of diphtheria.

Mr. MATHEWS (Nantwich) referred to an epidemic in which the cases were almost entirely confined to farm-houses, to which a quantity of night-soil had recently been removed from a neighbouring town.

The opinion of the meeting seemed decidedly to favour the theory of a definite connection between diphtheria and bad hygienic local conditions.

THE OBSTETRIC BINDER IN *POST PARTUM* HÆMORRHAGE.

By A. B. STEELE, L.K.Q.C.P.,

Lecturer on Midwifery in the Liverpool Royal Infirmary School of Medicine.

My views as to the true value of the obstetric binder differ so materially from those of Dr. Boulton, that I feel bound to state them during the present discussion on the important question of the means of anti-cipating flooding.

I find it difficult to believe that the use of the binder in the way suggested, or, indeed, under any circumstances, can have much to do with the prevention of flooding, because I have never used it with that object myself; and my experience includes the observation of a very large number of cases of unassisted labour, and those attended by other practitioners and also by midwives, in all or nearly all of which the practice has been not to apply the binder until *after the uterus has contracted*. Its proper use is, in my opinion, to give moderate support to the relaxed condition of the abdominal parietes following labour. As a means of compressing the uterus, in anticipation of and during the presence of flooding, it is vastly inferior to the hand, and less trustworthy. In natural labour, if the last stage be either uninterfered with by "meddlesome midwifery," or judiciously managed, the uterus contracts and no flooding occurs, even although the patient may be subjected to reasonable movement. Such, at least, is my experience; and I regard flooding as an extremely rare accident, and, when it does occur, as due to a constitutional cause—to inertia from protracted labour; to errors in the management of labour, a common one being too great haste in emptying the uterus and removing the placenta; and in no case that I have met with could it be attributed to the want of

attention to the binder. If it were otherwise, surely those who, like myself, do not trust to it, and especially those, and they are not a few, who never use it, must have discovered their mistake long ago. Nothing, I imagined, had been more generally understood and agreed upon by experienced obstetricians, than that the essential point in the management of the third stage, where interference of any kind was called for (and this, I suspect, is more seldom than is often supposed), was to compress and follow down with the hand the uterus during the expulsion of the child, and to maintain such pressure until the uterus has firmly contracted. This manœuvre, I conceive, would be in no way assisted, but, on the contrary, somewhat embarrassed, by the application of a binder. I am aware that, in the Dublin school of obstetrics, great importance is attached to the value of the binder and compress as a means of sustaining contraction; but I have always preferred sustained hand-pressure until firm contraction is secured; and then, so far as my experience goes, the danger is over. In those extreme exceptional cases which I have ventured to call recurring hæmorrhage, in which, in spite of due compression, the uterus, after having once contracted, melts away under the hand again and again, I know no more effectual remedy than the intrauterine injection of perchloride of iron, as recommended by Dr. Barnes.

ELECTROLYSIS OF EXOSTOSIS OF THE EAR.

By THOMAS E. CLARK, M.D., C.M., Surgeon to the Bristol Royal Infirmary.

THE following case of exostosis, blocking up the meatus of the right ear, causing total deafness of that side, and its removal and cure by the continuous current, may be of interest. The patient was M. D., a girl aged 15. In the early part of 1869, a discharge from the right ear was noticed; some simple remedies were used, but without any good effect. In April, I saw her; and, upon examination, there appeared a mucous polypus filling up the meatus, and bathed in a thin purulent discharge. Tannic acid was ordered; and, under this treatment, the mucous polypus disappeared, leaving a hard substance, which proved to be an exostosis.

January 1871. I examined the ear, and found a bony growth nearly filling up the cavity of the meatus, allowing only the end of a director to be passed with difficulty and pain between it and the anterior wall. An application of tincture of iodine and liquor belladonnæ was locally used, and iodide of potassium and citrate of iron internally; and this was continued for some weeks without any beneficial result. I again examined the ear in July, when a director could not be introduced, and only a very small fissure existed between the exostosis and the anterior wall, the largest parts of the fissure being above and below the centre. The hearing was very indistinct and uncertain, the slightest moisture causing entire deafness.

I suggested the application of the continuous current to the exostosis, to promote its absorption and arrest its growth by blocking up the vessels of the periosteum. This was found too painful, and was given up, except under the influence of chloroform.

August 29th. The whole meatus was entirely blocked up by the exostosis; its surface was pinkish, and it felt of stony hardness. No probe could be passed in any direction by the side of the growth. She was totally deaf in this ear. She was placed under chloroform. I introduced three needles, two at the base, close to its attachment to the posterior wall, and one at its anterior edge. The former were attached to the negative pole, and the latter to the positive; and the application was continued for three minutes. This produced a large coagulum at the point of entrance of the needles, and rendered the whole tumour white. There was no subsequent irritation or pain produced. The battery used was Dr. E. Stöhrer's (six pairs of plates).

September 12th. Two needles were introduced while she was under chloroform; and in introducing them the resistance was very slight, whereas at the first application one of the needle-points broke on account of the great hardness of the growth. The connections were similar to the last, but were continued for five minutes. No ill effect followed.

September 26th. There appeared some diminution in the size of the growth.

October 4th. She was again placed under chloroform; and, upon examining the exostosis, it gave the idea of being loose; and with a closed scissors I pressed against its base, and it came away entire. Only a few drops of blood followed. There was no subsequent pain.

On examination of the growth, the front, or part facing the anterior wall of the meatus, was seen to be convex, with slight depressions above and below, covered with periosteum. The posterior part, or its

attached surface, was hollowed out corresponding to where the needles had passed or absorbed to a mere point; and thus it was that it broke away so readily.

October 9th. I syringed the ear. The tympanum was perfect. Hearing was also perfect.

THE MECHANISM OF THE ACCOMMODATION OF THE EYE.

BY PRIESTLEY SMITH, Esq.,

Resident Surgeon to the Birmingham and Midland Eye Hospital.

IN spite of much elaborate investigation, the mechanism of accommodation in the eye still remains, to some extent, a matter of speculation. At the recent annual meeting of the British Medical Association, a novel and ingenious theory was brought forward by Mr. A. T. Norton of St. Mary's Hospital, and to test the truth of this theory the experiment described below has been undertaken. I shall venture, however, before discussing the uncertain points, to state briefly the facts which are already established in connection with the subject.

1. Parallel rays of light proceeding from a distant point and striking the eye can be brought to a focus upon the retina. Divergent rays of light proceeding from a point only four inches distant from the eye can also be focussed upon the retina. The eye, then, has the power of changing its refraction as it views objects at different distances.

2. This power of accommodation depends solely upon changes of form in the crystalline lens. This fact is proved by the catoptrical examination of an eye during accommodation. A flame is placed towards one side of the observed eye, at a certain angle with the axis of the cornea; the observer's eye is placed towards the other side, at a similar angle. Three reflections or images of the flame are seen; the first being reflected from the cornea, the second from the anterior lens-surface, the third from the posterior lens-surface, or, more strictly, from the anterior surface of the vitreous body. If these images be viewed through a microscope, and if the person whose eye is under observation be directed to look first at a distant object, and then at a nearer object placed in the same line of vision, the second image is seen to move towards the first image, and also to become smaller. The movement indicates an advance of the anterior lens-surface; and the diminution of size indicates, in accordance with optical laws, an increased convexity of this surface.

3. Accommodation for near objects is produced and maintained by voluntary effort.

4. Accommodation for distant objects is a purely passive condition; and to this condition the eye always returns when the voluntary effort above-mentioned ceases.

5. The mechanism by which accommodation for near objects is produced is actuated through the third nerve. So far, no room for doubt remains: all is definitely proved. The next statement is almost as certainly true—viz.:

6. The chief agent in the mechanism is the ciliary muscle.

Now, in what manner does contraction of the ciliary muscle effect a change in the form of the lens? Several different explanations of its action are given by the best authorities; but it is proposed here to examine only the ingenious theory brought forward by Mr. Norton. It is briefly this. The veins through which the blood returns from the ciliary processes pass through the substance of the ciliary muscle; hence, when the muscle contracts, these venous trunks are compressed, and the highly vascular ciliary processes are thrown into a state of turgescence and enlargement, producing an increase of pressure around the periphery of the lens, and a consequent change of form in that body. In direct opposition to this view is Mr. Bader's description of these parts. At page 215 of his work on *The Human Eye*, he says: "The arrangement of the blood-vessels of the ciliary region renders it probable that, during contraction of the ciliary muscle, the influx of blood into the ciliary processes is impeded, and that they contain less blood. The efflux of venous blood from the processes is supposed not to be impeded, since these veins do not pass through the muscle."

While such opposite descriptions are given of the minute anatomy of the region, it appeared to me that the turgescence theory could be conclusively tested only by ascertaining whether the circulation of blood in the vessels is necessary to the production of accommodation in the lens. To ascertain this, a galvanic current was passed through the enucleated eye of a rabbit, while, by means of a phacoidoscope, the effect produced upon the image of a flame reflected from the lens-surface was observed. In overcoming the difficulties of this experiment, I received much valuable help from Mr. Lloyd Owen, surgeon to this hospital, and from Mr.

Frederick Maberley; and, before attempting to carry it into execution, I was careful to make myself familiar, by numerous observations with the phacoidoscope, with the accommodation-movements of the flame image in the living human eye.

The phacoidoscope consisted simply of a black wooden stage, upon which a quadrant was figured; a microscope of simple construction, magnifying eight diameters, and having a micrometer eye-piece; a gas jet travelling in a groove, and capable of being placed at any desired point of the quadrant; and a point of attachment at the centre of the quadrant for the apparatus containing the rabbit's eye. This latter apparatus (Fig. 1) consisted of two small brass cups, each soldered to an



Fig. 1.

upright support, and of such size that, when containing the eye, their rims did not quite lie in contact. One of the uprights being made of watch-spring, the cup could be drawn back when the eye was introduced. The wires from a Gaiffe's battery, producing a gentle interrupted current, were connected, one with each upright, so that the circuit was completed by the passage of the current through the eyeball. A rabbit, weighing 29 ounces, was stupefied with chloroform, and then received a hypodermic injection of 20 grains of hydrate of chloral. During profound anaesthesia, the left eyeball was excised, and at once dipped in olive oil heated to 100 degs., before being placed in the cups. This point is important, for, if it be neglected, evaporation quickly changes the tension of the globe and dims the cornea. By means of a heated brick, the temperature of the air around the holding apparatus was maintained above 90 degs. Fahr.

When the microscope and the flame were placed, each at an angle of 35 degs. with the axis of the cornea, the reflexions from the cornea and anterior lens-surface were admirably seen. To prove that these were the images required, and that neither was produced by the posterior lens-surface, it was only necessary to observe that both travelled in the same direction when the flame was moved. During the first minute or two after the removal of the globe, the galvanic current produced no movement either in pupil or image. Doubtless, the division of the ciliary nerves, during the operation, had caused a spasmodic contraction both of iris and ciliary muscle, for the pupil was small, and the lens-image occupied that position which it afterwards assumed only during galvanic irritation. The pupil recovered its mobility a little while, perhaps a quarter of a minute, before the image did so. Very soon, however, both became responsive to the current. Figs. 2 and 3 show the

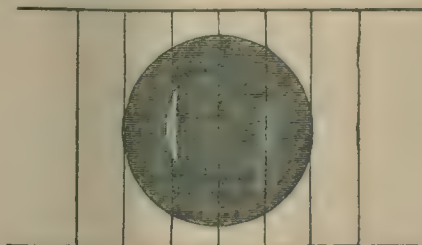


Fig. 2.

positions assumed by pupil and images during non-stimulation and during stimulation. The reflection from the cornea is fixed, and brighter than that from the lens-surface. The vertical lines in the diagram show

the divisions of the micrometer, each space corresponding exactly to $\frac{1}{32}$ of an inch. The whole is shown magnified eight diameters, as it actually appeared.

It will be seen that, during non-stimulation, the two images stood exactly two spaces distant from each other, and that, during stimulation,

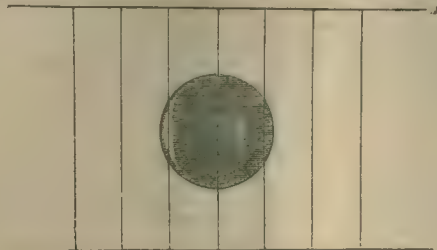


Fig. 3.

the lens-image travelled towards the corneal image through exactly half a space. The observation of this movement was made very many times, during a period of an hour and three-quarters, and it appeared to be invariable in every way. The image occupied an appreciable time in its journey; it always assumed the same positions, so far as the eye could discern. The primary, the secondary, and the combined currents were successively employed, and each current was employed in varying intensity; but in every case the result appeared to be the same. The weakest current appeared sufficient to cause the image to perform its whole journey, while a much stronger one could not drive it further. When an hour and three-quarters had elapsed, and the surrounding temperature had fallen to 80 degs., all action ceased.

The influence of the current upon the iris was also carefully observed throughout, and is worthy of note, although not bearing upon the question at issue, namely, the turgescence theory of accommodation. The movements of the pupil showed, in several particulars, a want of correspondence with those of the flame-image. At the commencement of the experiment, as before stated, mobility was observed in the pupil before it occurred in the image. On breaking the current, the position of relaxation was resumed more quickly by the image than by the pupil. This was observed several times, but not invariably. On breaking the current, the pupil dilated to rather more than its permanent size, then again contracted slightly within it, thus performing several minute oscillations before assuming the size shown in the figure. This movement contrasted with the steady unoscillatory journey of the image. At the close of the experiment, when the image became permanently fixed in its position of relaxation, the pupil began very slowly to dilate, and ultimately assumed a fixed diameter of $\frac{5}{16}$ of the micrometer spaces, a greater size than it had hitherto ever obtained. It continued to be slightly influenced by the current for several minutes after the image had become completely fixed.

Accommodation, then, is proved to occur without help from vascular turgescence. It might still be urged, that, without turgescence, only a portion of the accommodation changes in the lens are obtained. Apart from the improbability of a second, and very different, agent being employed in an action, which is apparently admirably performed by muscular contractility alone, the following consideration is, I think, almost conclusive, that we have, in this experiment, obtained the whole amount. The lens-image has been shown to travel in the plane of the microscope about $\frac{1}{32}$ of an inch. Now, under the angle of 35 degs., at which the microscope stood, this distance will be found, on calculation, to correspond with an advance of the lens-surface of $\frac{1}{160}$ of an inch. In the human eye, the lens-surface advances, according to Professor Donders, only .4 millimetre, or about $\frac{1}{25}$ of an inch. It appears, then, that, in the eye of the rabbit, which is smaller than the human eye, the advance of the lens-surface, during accommodation produced by galvanism, is considerably greater than that occurring naturally in the human eye; hence it would be unreasonable to suppose that a still greater movement occurs in the former when it is in its natural condition. The foregoing result, showing an excess of movement in the smaller eye, may seem, at first sight, to throw doubt on the accuracy of the calculation, but will, on the contrary, tend to corroborate it, when we consider that the range of accommodation is probably much greater in the rabbit than in man. The rabbit, equally with ourselves, has need of distinct vision for distant objects, whilst his near point—as when feeding, for example—must be considerably nearer than ours.

Finally, the minute structure of the rabbit's eye so closely resembles that of the human eye, that it is impossible to suppose a different me-

chanism in the two cases: it may, consequently, be asserted as proved, that the act of accommodation is in no way dependent upon vascular turgescence.

CLINICAL MEMORANDA.

SUCCESSFUL VACCINATION, WITHOUT ILL-EFFECT, OF FOUR PERSONS FROM A CHILD SUFFERING FROM SMALL-POX.

THE contribution of Mr. Gayton on the limit of prophylaxis by vaccination, in the clinical memoranda of the BRITISH MEDICAL JOURNAL, recalls to my remembrance having vaccinated a child in the incubating stage of variola, and the vaccination being very successful. I vaccinated from this child, who was suffering from small-pox, although I did not recognise it, two children and re-vaccinated two adults. The particulars of the case are as follows, and, perhaps, are worthy of record; for it is also interesting, inasmuch as the small-pox was not communicable to those whom I had vaccinated with lymph from the infected child.

I vaccinated Thomas H. S. Scott at three months, on Monday, May 29th, 1871. He was brought to my surgery for inspection the Monday following. Every puncture had taken; and there were five well-developed vesicles well distended with clear lymph, and a sufficient, but not excessive, areola. Knowing the child's parents to be healthy, and believing the child to be so, the vesicles perfect and full of lymph, I selected this infant in preference to one or two others from whom to vaccinate two children and re-vaccinate two adults. The mother remarked to me that he had a slight rash of a few pimples on his chest and back, but this I mistook to be merely a rash due to the vaccination, which every now and then I had known to follow it. The next day, I was sent for to visit him, and was surprised to find him very ill and covered with a thick vesicular eruption, accompanied by considerable fever, which, upon hearing a lodger in the same house had died from small-pox the previous week, as also two or three persons in the same street, I felt sure would prove to be, as it did, an attack of confluent small-pox from which the child was suffering. The vaccine pustules looked healthy; the areola increased, and was of a deeper red than yesterday, but, up to the present time, in no way different from the usual appearance on the ninth day. The next morning, the child was much worse. There was no mistaking now the disease; each vesicle had the characteristic central depression and several of them coalesced; the areola of the vaccinated arm had suddenly failed; the scabs were dry, and the arm unusually pale; the child was soon unable to take the breast, and died on Monday, June 12th, the fifteenth day of vaccination and the eighth day of the eruption.

On discovering that the child was suffering from small-pox, I was anxious to know how those adults and children were whom I had vaccinated (arm to arm) with lymph from this infant. I called to see them the next day on the ostensible plea of knowing if the vaccination had taken, but really to see if they were suffering from any premonitory symptoms of variola, and was relieved to find them all well, and their arms taking. I saw them again on the eighth day and afterwards; all had perfect vesicles and were in excellent health. The only difference or effect of having been vaccinated from a child suffering from small-pox was the early appearance of the vaccine vesicles, and in the adults unusually successful re-vaccination, and are probably more than usually protected against an attack of small-pox.

FREDK. H. ALDERSON, M.R.C.S., L.S.A., Hammersmith.

SURGICAL MEMORANDA.

THE ELASTIC LIGATURE.

ONE use of the elastic ligature not mentioned in the JOURNAL of November 29th is for the closure of wounds. The late Mr. Alexander Edwards, lecturing in 1860, recommended its employment with safety pins or hare-lip needles for fastening wounds likely to swell or gape. For this purpose he employed thread similar to that used in elastic-sided boots. As a wound or its edges swell the sutures yield, so that there can be no injurious dragging on the skin-apertures, and when the turgescence disappears, the surfaces become closely approximated. An advantage of this plan, over unyielding sutures, is that it is unnecessary to remove any of the fastenings until the edges are united.

STANLEY HAYNES, M.D., Malvern.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

PIECE OF STEEL FOR TWENTY-TWO YEARS IN THE INTERIOR OF THE
EYE: EXTRACTION.

(Under the care of Mr. LIEBREICH.)

[Reported by Mr. CHARLES W. OWEN, Ophthalmic Dresser.]

GEORGE W. SIMONDS, aged 40, a mechanic, twenty-two years ago, whilst working in a railway-machine shop boring a car-wheel, struck the borer with a hammer, detaching a small piece of steel. It flew into his left eye, causing him at the time intense pain, which soon abated, but returned in a few days with increased violence. The inflammation lasted for four or five weeks. When the patient recovered from this, he noticed that his sight was lost in his left eye, and was told at the time that a cataract had formed. Several times since then, he had attacks of inflammation varying in duration from two or three days to two or three weeks.

On April 7th, 1873, this patient came to the eye department of St. Thomas's Hospital, when he was seen by Mr. Liebreich. He was suffering acute pain in his left eye. He was found, on examination, to have a cataract; and, on closer inspection, a foreign body was discovered in the interior of the eye, fixed by a pedicle to the margin of the iris, and lying loose in the anterior chamber. He was treated with atropia three times a day, which speedily gave him relief.

In October, he again applied for a letter, as the iritis had returned. On October 27th, he was admitted and was operated on the same day by Mr. Liebreich. An iridectomy was first performed, so as to remove the foreign body, together with that portion of iris to which it was fixed. After the excision of iris, the peripheral part of the secondary cataract became visible and showed itself much thicker than would have been expected according to the central part visible in the pupil. Mr. Liebreich introduced his rotating iris-forceps, and extracted all the capsule, including the remnant of the cortical substance. A very small portion of this latter remained in the lower part of the anterior chamber, and, a short time after the operation, was completely absorbed. The pupil a week afterwards, still dilated by atropia, appeared absolutely black. The foreign body proved, on examination, to be a square-shaped piece of steel about one millimeter in diameter, encysted by organic substance without any oxidation of the surface.

GUY'S HOSPITAL.

PREGNANCY ENSUING ON AMENORRHOEA OF EIGHT MONTHS: EXCES-
SIVE PAIN DURING THE NORMAL UTERINE CONTRACTIONS.

(Under the care of Dr. J. BRAXTON HICKS.)

[Reported by C. H. GOLDING BIRD, M.B.]

F. H., aged 20, was admitted on January 9th, 1873, for very severe pains of an intermittent kind in the centre of the lower part of the abdomen. These pains were at times so distressing as to cause violent hysterical symptoms. The patient appeared in excellent health, but she was of a hysterical temperament. Her history was this. She was married at sixteen, and had been twice delivered at full term. Her last labour was fifteen months before admission; she suckled the child for three months, when, owing to a fright, she flooded for nearly a week, which affected her severely. On her recovery, the milk had ceased. From that date she never menstruated nor lost any blood up to the date of admission; namely, for twelve months. Three months before admission, she noticed that she was becoming large, and began to experience severe abdominal and bearing-down pains, which continued off and on, day and night, and quite prevented her from sleeping for long together. These pains frequently brought on paroxysms of hysteria.

It was in consequence of these pains that she applied for admission. They were felt intermittently in the centre just above the pubes. The hand placed upon this position detected a hard ovoid swelling extending nearly to the umbilicus. It was quite centrally placed; was somewhat movable; but it never became soft, even during the cessation of the pains. It was tender at all times.

An examination *per vaginam* showed that the swelling was the uterus itself, and that the os and cervix were enlarged, soft, and velvety. This latter condition, Dr. Hicks remarked, was so like that of pregnancy

that, notwithstanding the absence of any of the usual secondary symptoms, he felt confident that the enlargement of the uterus was owing to that state. But a difficulty here arose. What was the date of the pregnancy when the flooding above mentioned occurred; was she then pregnant, but retained the ovum in the form of a carneous mole? This was a surmise not improbable; for continuous hardness of the uterus is its character, and it is sometimes retained as long *in utero*. Or, had she again conceived normally? and if so, judging by the size of the uterus, about four months? Careful stethoscopic examination was made, but without result as to the foetal or the uterine sound. As the pains were evidently the uterine contractions which have been before pointed out by Dr. Hicks as occurring during the whole of pregnancy, but rendered apparent by a highly sensitive condition of the organ, the treatment was directed to the removal of this condition by complete rest, opiates, and warm fomentations. About three weeks after admission, the condition was as follows. The uterus was increased as much as in an equal period of normal pregnancy; it was more flaccid; the uterine *souffle* was very loud at the umbilicus; the foetal heart was not audible, though it was thought once that the movement was heard. A week later, Dr. Hicks felt the foetal movement *per vaginam*. The symptoms, of course, proved that she was now pregnant, that the pregnancy was normal, and that, as the increase was at the usual rapidity, she was on admission about four months advanced. She, however, suffered much from the sensitive state of the uterus during its intermittent action, which was by this time recognisable by the hand. Gradually the uterus rose, and by the end of March it touched the ribs, which height corresponds with the seventh month. Gradually the foetal sounds became audible. The uterus, though still highly sensitive during the contractions, became less tender, and more flaccid in the relaxed state. The whole case being now quite free from any complication, she went home to be delivered.

Dr. Hicks pointed out the interest in the diagnosis which the case presented on admission—namely, as to whether it were one of pregnancy at all. Then, as the case cleared up on this point, there was the question of its duration. He remarked that the cases where pregnancy ensues on amenorrhoea of some standing are not very uncommon; they are apt to lead to great mistakes, and, where legal questions are concerned, may, unless well recognised, cause much injustice. It was also pointed out that a physiological question was involved; namely, as to the concurrence of ovulation with menstruation. Dr. Hicks thought the former was not necessarily associated with the latter. He had known a person who at twenty-two years of age had never menstruated, but who, having married, became at once pregnant. He also considered the pains were not the exaggerated pains of impending abortion, but were rather due to a preternatural sensitiveness of the nerves of the uterus.

INCONTINENCE OF URINE AFTER LABOUR, PRODUCED BY
CELLULITIS AROUND THE URETHRA.

(Under the care of Dr. BRAXTON HICKS.)

[Reported by C. H. GOLDING BIRD, M.B.]

L. C., aged 32, was admitted under Dr. Braxton Hicks in February 1873. She had been confined three weeks before. The labour was tedious, and forceps were applied. Incontinence of urine had continued from that date, producing severe excoriation on the vulva and part of the vagina and thighs. The escape of urine was constant. She was mentally depressed, and suffered much distress from pain. The first point which had to be cleared up was, whether the urine flowed from the urethra only, or from a fistula in the vagina. This was settled by injecting the bladder with coloured fluid; and, because the fluid came back by the side of the catheter, a thick ring of India-rubber was put on the catheter at the position of the meatus, which it effectually stopped up. No urine then returned by the vagina. On examination *per vaginam*, there was found plastic effusion round the urethra, the base of the bladder, and lower part of the uterus, fixing the parts completely; and thus the sphincter vesicae was prevented from closing. On this point, Dr. Hicks remarked that he had seen a case of syphilitic infiltration produce the same result.

The bladder was found very contracted; it could only contain an ounce, and that with much distress. Control over the flow of the urine could not be expected to be gained till the cellulitic deposit was absorbed; but, pending this change, Dr. Hicks endeavoured to lessen the irritability of the bladder by injecting it with one to two grains of morphia in about half an ounce of water. This operation was preceded by a slightly forcible injection of water, to increase mechanically the capacity of the organ. After this was done, the water was allowed to flow; and the morphia, being injected, was retained as long as possible. The quantity used for distension depended on the distress pro-

duced; it was never carried beyond slight pain. By these means, the bladder was enabled to hold, first two, then three ounces; and, as the power of the sphincter increased, she was able to hold fluid better, until, in about three weeks, she could voluntarily retain her urine for half an hour. She continued to improve, with a short remission for two days, which seemed to be caused by the detachment of a slight exfoliation from the neck of the bladder. The thickening gradually passed off. She was obliged to leave the hospital after six weeks; but by that time the bladder could hold eight ounces.

Dr. Hicks said that these cases were apt to be allowed to run on without attention, whereby patients were for many years afflicted with constant micturition—suffering, after the first inflammatory symptoms have gone off, from an irritable indistensible bladder, which the power of the sphincter is not able to overcome.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

CASES OF NECROSIS AND AMPUTATION: ESMARCH'S
BLOODLESS METHOD.

(Under the care of Mr. SQUARE.)

MR. SQUARE has operated in three cases by Esmarch's method.

R. D., aged 15, was operated on some weeks ago for necrosis of the tibia, and then lost a considerable quantity of blood. A second operation being requisite, Esmarch's method was adopted, when not one drop was lost at any part of the procedure; although the granulations were very vascular, no blood came from them, or from the bottom of the wound. Three large pieces of bone were removed.

The second case was also one of necrosis of the tibia in a boy, and, like the first, was perfectly successful.

The third was a case of gun-shot wound of the wrist, requiring amputation of the forearm. When the boy was admitted, he was suffering from shock and loss of blood, and was not in a fit state to undergo the operation. Under the usual remedies, he recovered sufficiently in about five hours. The bandage was tightly applied from the fingers upwards, the wound in the wrist being plugged with cotton-wool. *The amputation was absolutely bloodless*, the brachial artery being afterwards controlled by the hand only, and the vessels picked up as they spurted. He has done perfectly well since. Mr. G. S. Payne, house-surgeon, to whom we are indebted for these notes, remarks: "These cases are, I think, excellent ones for Esmarch's plan; the absence of hæmorrhage in the first two being a great boon to the operator, while in the last it was perhaps of vital importance to the patient."

REVIEWS AND NOTICES.

DEAFNESS AND DISEASES OF THE EAR: THE CAUSES AND TREATMENT. By J. T. PENNEFATHER, L.K.Q.C.P., L.R.C.S.I., L.M., Surgeon to the Royal Dispensary for Ear Diseases.

THE author prefaces this book (which contains 172 pages of printed matter and ten illustrations) by saying that his object has been to produce a concise and readable book on the subject of which it treats. How far he has succeeded, may be judged by a very short notice.

Mr. PENNEFATHER considers the tendency of all affections of the tympanic membrane is to cause a thickening of its walls; and when the tonicity of its fibres is diminished, he recommends that the whole membrane be lightly painted over with a solid stick of nitrate of silver, attention being also paid to the catarrhal affection which has caused such changes in the membrane. On the subject of polypi, the view held by Mr. Hinton and others, that the most usual position from which they arise is the mucous membrane lining the tympanum, is briefly dismissed as "incorrect;" and the difficulties generally met with in effectually eradicating these growths have not been experienced by the author. He uses forceps for their removal, and adds, "the method I advocate will rarely require, when properly performed, more than one application of a caustic."

In addition to the ordinary methods of treatment in cases of perforation of the tympanic membrane attended with a discharge from the ear, the following caution is enjoined. "Should it be considered, as I am aware it sometimes is, that the ear-discharge is a safety-valve for preventing the development of cerebral or nervous disease, if the tendency to those affections cannot be removed or kept in abeyance by other means, and that such a derivative for the relief of the system is required, establish a drain elsewhere, more comfortable to the patient, less disgusting to his friends; and, in the desire to avoid Scylla, drift not into Charybdis, by allowing the continuation of otorrhœa to produce incurable disease in one of the most delicate structures of the human

organism, impairing the efficiency if not entirely annihilating a sense so thoroughly essential to the wants and happiness of mankind." The tone of the book is the same throughout. The illustrations are of the rudest kind, and bear but the very faintest resemblance to the structures they are supposed to represent.

THE CAUSES AND TREATMENT OF DEAFNESS, BEING A MANUAL OF AURAL SURGERY FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By JAMES KEENE, F.R.C.S., M.R.C.P., Assistant-Surgeon to the Central London Ophthalmic Hospital.

It is to be regretted that "the treatment of deafness," instead of the treatment of the diseases which produce this symptom, should be a part of the title chosen for what professes to be a manual of aural surgery; neither does it seem quite necessary when addressing "students and practitioners of medicine," to enunciate the truism which we find at page 3, that "those who have always enjoyed good vision and hearing can with difficulty comprehend the sacrifice which the loss of either entails."

The book is divided into two parts. The first contains a description of the "methods and apparatus employed in the practice of aural surgery," and the second deals with "special diseases." The plans of treatment in general use for diseases of the middle ear are for the most part mentioned, and here and there a special form of instrument is recommended: at one place, a knife for making incisions into the tympanic membrane; at another, forceps for the removal of polypi. The greatest vagueness prevails throughout as to the details of treatment adapted for cases which are common enough in everyday practice. To take an example: it certainly cannot be desirable that the young practitioner should act solely upon the advice given by Mr. KEENE on the subject of bougies to be passed through the Eustachian tube.

After describing briefly the method of passing the bougie, the reader is informed that it is often made to enter the cavity of the tympanum, and that the passage of bougies is, "though occasionally very useful, not frequently required;" and this is all we are told on this matter. What are the particular cases in which bougies should be employed, how frequently they should be used, when their employment should be discontinued, what sort of results the author has met with after using them, or what generally they may be expected to accomplish—all this the reader is left to find out for himself; for neither here nor later in the book will there be found anything to guide him in these respects. It is, however, but just to the author to state, that in no way does he endeavour to convey the impression that he is possessed of any large experience in the treatment of affections of the ear. The subject-matter is chiefly second-hand, and would appear to be gathered from the late Mr. Toynbee's book, the article on Ear-disease in *Holmes's System of Surgery*, *Guy's Hospital Reports*, and papers which have appeared in the weekly journals. After all, it is quite open to question how far any good purpose is being served by this class of literature, and whether the student will not be doing better by seeking information from the original sources.

NEW BOOKS AND NEW EDITIONS.

DR. ALTHAUS'S *Treatise on Medical Electricity* (Longman, London, 1873) has reached a third edition, and appears enlarged, revised, and with many additional illustrations, more than ever worthy of the marked and well deserved favour with which this treatise has been received by the profession. Of a very great number of people who talk and write about medical electricity, there are few who know much and definitely about it. Dr. Althaus has an extended and a precise knowledge, and this book establishes his title to be considered as the first English authority on the subject of which it treats.

Le Congrès Médical de Londres en 1873, par Dr. TH. DE VALCOURT (Delahaye, Paris, 1873), is an interesting account of the impressions of a French physician of what he saw at the last annual meeting of the British Medical Association in London. It is a very careful and accurate report, and concludes by expressing the desire that the Association Générale des Médecins of France should adopt the model of the British Medical Association in becoming the centre of medical and hygienic progress, in diffusing scientific information, and maintaining professional interests. We believe that many of our associates may be interested in reading Dr. de Valcourt's report, although it contains, of course, nothing which to them is new. It is a warm and generous tribute of admiration, and in its details singularly accurate. It appeared first in the form of letters in the *Gazette Médicale de Paris*.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 11TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

A SUCCESSFUL CASE OF ABDOMINAL SECTION FOR INTUSSUSCEPTION, WITH REMARKS ON THIS AND OTHER METHODS OF TREATMENT. BY JONATHAN HUTCHINSON, F.R.C.S.

The author first narrated the particulars of a successful case in which he had opened the abdomen for the relief of intussusception. The patient was a child aged two years. The intussusception had commenced at the cæcum, and was of such length that its extremity, presenting the inverted ileo-cæcal valve, was extruded several inches at the child's anus. The condition had been one month in course of development; latterly the case had been treated as one of prolapsus, and attempts had been made to keep the bowel in place by means of a cork pad. The child was very ill; and the author, having failed in attempts to effect reduction by enemata, etc., and having had experience of several similar cases which had ended fatally, determined to operate. The child was put under chloroform, and the abdomen was opened in the middle line below the umbilicus. The intussusception was then easily found, and as easily reduced. The after-treatment consisted only in the administration of a few mild opiates, and the child made a rapid recovery.

The author next narrated briefly the particulars of three somewhat similar cases in which he had been consulted, and in which the intussuscepted bowel could be easily felt by the finger in the rectum. In all three, in spite of persevering treatment by injections, bougies, etc., the patients had died unrelieved.

Without attempting anything like a statistical analysis of recorded cases, the author appended to his paper, in tabular form, the notes of a very considerable number of cases bearing upon the diagnosis and treatment of similar lesions.

From the consideration of these the following conclusions were suggested. 1. It is by no means very uncommon for intussusception to begin at the ileo-cæcal valve, and to progress to such a length that the invaginated part is within reach from the anal orifice, or even extruded. 2. It is of great importance in all cases of suspected intussusception to examine carefully by the anus. 3. In almost all cases of intussusception in children, and probably in most of those in adults, the diagnosis may be made certain by handling the invaginated part through the abdominal wall. 4. The prognosis of cases of intussusception varies much; first, in ratio with the age of the patient, and secondly, with the tightness of the constriction. 5. In a large proportion of the cases in which children under one year are the patients, death must be expected within from one to four or six days from the commencement. 6. In the fatal cases death is usually caused by shock, or by collapse from irritation, and not by peritonitis. 7. In many cases it is easy, by estimating the severity of the symptoms (vomiting, constipation, etc.), to form an opinion as to whether the intestine is strangulated or simply irreducible. 8. In cases of strangulated intussusception, whilst there is great risk of speedy death, there is also some hope that gangrene may be produced, and spontaneous cure result. 9. In cases in which the intussuscepted part is incarcerated and not strangulated, there is very little hope of the occurrence of gangrene, and it is probable that the patient will, after some weeks or months, die, worn out by irritation and pain. 10. The chances of successful treatment, whether by the use of bougies or by the injection of air or water, are exceedingly small, excepting in quite recent cases, and if the surgeon does not succeed by them promptly, it is not likely that he will succeed at all. 11. The cases best suited for operation are those which have persisted for some considerable time, and in which the intestine is only incarcerated, and these cases are also precisely those least likely to be relieved by any other method. 12. In the cases just referred to, after failure by injections, bougies, etc., an operation is to be strongly recommended. 13. The records of *post mortem* examinations justify the belief that, in a considerable number of the cases referred to, the surgeon will encounter no material difficulty after opening the abdomen. 14. The circumstances which might cause difficulty are—(1) the tightness of the impaction of the parts; (2) the existence of adhesions; and (3) the presence of gangrene. 15. In selecting cases suitable for operation, the surgeon should be guided by the severity of the symptoms to an estimate of the tightness of the strangulation, and as to the probability of gangrene having already set in. 16. In cases in which the patient's symptoms are very severe, or the stage greatly advanced, it may be wiser to de-

cline the operation, and trust to the use of opiates. 17. The operation is best performed by an incision in the median line below the umbilicus. 18. In cases of intussusception in young infants (under one year of age) the prognosis is very desperate, scarcely any recovering excepting the few in whom injection treatment is immediately successful, whilst a large majority die very quickly. 19. The fact just mentioned may be held to justify, in the case of young infants, very early resort to the operation. 20. It is very desirable that all who, in the future, have the opportunity for *post mortem* examination of intussusception cases should give special attention to the question as to whether an operation would have been practicable, and should record their result.

The PRESIDENT remarked that there was a great contrast with regard to operations on the abdomen between the present time and forty years ago, when the very idea of opening the peritoneum struck surgeons with horror. He believed that the introduction of anaesthesia explained in a great measure the feasibility of operations that could not be done before.—Mr. SPENCER WELLS referred to the case under his care mentioned in Mr. Hutchinson's paper. The patient was an infant ten months old; and Mr. Wells believed that the chance of success would have been much greater if he could have operated twenty-four hours sooner. He made a small incision, found the bowel easily, and reduced it with a little difficulty arising from the presence of some adhesions. He did not think that death was hastened by the operation. He agreed with Mr. Hutchinson that the operation should be performed before the patient is actually dying. Some years ago, he saw a case in which M. Nélaton secured the intestine to the wall of the abdomen, and opened it. This proceeding possibly gives time for the relief of the obstruction. Mr. Wells had done this in some cases, not with ultimate success, but with relief to the patient.—Mr. HOLMES believed that an unsuccessful case of opening the abdomen for the relief of intussusception had occurred in Mr. Athol Johnson's practice at the Children's Hospital. Mr. Hutchinson had referred to him as being opposed to the operation. If he had expressed an opinion against it, it was with reference to acute cases rather than to chronic. Mr. Hutchinson's paper had noticed an interesting point—the rareness of adhesions in chronic cases. He (Mr. Holmes) believed that further experience would confirm this. Perhaps the introduction of the hand into the rectum, as had been recently recommended, would aid in the diagnosis, especially in fat people, in whom there was difficulty in making an examination through the walls of the abdomen.—Dr. HILTON FAGGE did not quite see the application of Mr. Hutchinson's doctrine. A case was brought to him, in which the only symptoms were an intestinal tumour with occasional pain. After some time, intussusception was diagnosed. Blood at last began to pass *per anum*, and the child died two days after this first appeared. There was no sign of adhesion. Would Mr. Hutchinson advise operation where the only signs of intussusception were a tumour and pain? Last summer, a child was brought to Guy's Hospital, suffering pain in the abdomen, and passing blood. Intussusception was diagnosed. Insufflation caused the tumour to disappear; but the child continued to pass blood *per anum*, and in a week the tumour returned. Insufflation was again tried for two or three days; at first it was apparently unsuccessful, but at last the tumour disappeared, and the child recovered. The diagnosis in such cases was aided by feeling the tumour harden under the hand in examining through the abdominal wall.—Dr. THOROWGOOD had published a case of intussusception ten years ago. The patient was a child; there were a tumour in the abdomen, and passage of blood. It had been ill three days when first seen, and died forty-eight hours afterwards. On *post mortem* examination, there were no adhesions or peritonitis; the intestine could be drawn out easily.—Mr. BARWELL could confirm Dr. Fagge's remarks as to the possibility of reducing intussusception even when treatment apparently failed. About seven years ago, he had a case of intussusception in a child two years old. Insufflation and injection, as well as the introduction of a bougie, were tried without success. The child was then kept thirty-six hours under the influence of opium; an injection then nearly reduced the intussusception. Opium was again given, and a repetition of the injection was attended with complete success.—Mr. EASTES related the case of a child which he had seen with Dr. Habershon. Opium was given; and, after some hours, insufflation and manipulation were tried. So much air was passed in, that a portion escaped; but the tumour remained. In about eighteen hours, lukewarm water was poured in; faeces escaped, and the child recovered. For some hours after the relief of the intussusception, much distension remained at the lower part of the colon. He thought that not only opium should be given, but also belladonna, as advised by Dr. Brinton. He recommended that an attempt be made to remove the obstruction

by distension with air or water before operating. There would probably be an advantage in injecting milk: it might remain in the intestine a considerable time, and a portion of it might be absorbed.—Dr. SYMES THOMPSON referred to a case where intussusception was suspected to be present, though there were positive symptoms, in which belladonna was found to be less useful than opium. The patient was a child aged 12. Ten or twelve minims of laudanum were given every two hours; also chloroform, as the pain was very great. It was decided not to operate. The pain abated, and the patient was better.—Mr. HUTCHINSON, in reply, said that he had three cases in continental practice to add to his list. In one, a child aged six months was operated on without chloroform, and died in ten hours. Pirogoff had also operated in a case where there were adhesions, and the intestine was found to be gangrenous. There was also another case in which reduction was difficult, and the child died. All these cases were apparently hopeless. There were thus now five fatal and four successful cases of operation for intussusception. He agreed that insufflation should be patiently and repeatedly tried when there is any prospect of success. Some had recommended that insufflation and injection should be discontinued if not successful at first; but his own observation led him to a different opinion. If prohibited from operating, he would continue injections. He would not in any case limit himself to one injection. In Dr. Fagge's case, he would not have operated; in such a case, there was encouragement to wait another day and try the remedies again. There were two points of importance with regard to diagnosis. One was that, if the bowel were felt to be lower and lower at successive examinations, it was evident that adhesions did not exist; and the other was, that free bleeding might generally be held to indicate tight strangulation. In deciding as to the hope of success from insufflation, the length of the involved part must be attended to. In his case, it was too long to allow hope of a good result from insufflation or injection. He did not recommend that a dangerous operation should be lightly considered. Insufflation and injection should be tried as long as any good was to be expected from them. They were successful in many cases.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 12TH, 1873.

W. R. E. SMART, M.D., R.N., President, in the Chair.

President's Address.—After thanking the Society for the honour of election to the chair, Dr. SMART sketched the history of epidemic diseases prevalent during the last sessional year. As regards the chief of these, cholera, the study must commence with the outburst in Arabia in 1865, since which it has never been extinct in Europe or in Persia, into both of which the infection was then carried from the Holy places. After resting in Europe in 1868, it broke out again, in 1869, in South-Western Russia, at Kiew, and has been fitfully spreading since that time. After confining its ravages to Russia for two years, it took a reverted course into Asia through Siberia and Russian Tartary, where, in 1872, it came into close relation with a fresh invasion from Bengal. From Persia, where it had been present since 1865, it coursed westward in 1871 through North Arabia, back to the holy cities, and was conveyed from thence across to Nubia in March 1872, Egypt remaining uninfected. In 1872, a steady invasion of Central Europe began from the confines of Russia after a second outburst at Kiew, reaching to Prague and Dresden and to Sweden. It remained very active in Galicia and in Hungary last winter, and, in May 1873, it commenced to invade at Widdin, on the Danube, infecting the river towns to the Sulina mouth and upwards from Budato Vienna and Passau, and thence by the Iser to Munich, and afterwards to the Maine, infecting Nuremberg. On the Vistula, it passed from Warsaw to Dantzic in June, and spread east and west on the Baltic, reaching Bergen, on the west coast of Norway, in October. On the Elbe, after an autumnal infection of Dresden, it broke out there in May and at Hamburg in June, and was carried thence to Hull in July, and on August 16th to Havre, from which it spread to Rouen and Paris; from Havre it was carried to Southampton and Liverpool in September, without any epidemic of it arising in England to the present time. On the Danube, Vistula, and Elbe, it was present in early winter, and its outbreak in spring was accountable; but, about the same time, it appeared likewise on the Adriatic, at Venice and Treviso, unsuspectingly introduced from Hungary through Illyria, as it has been stated, but when or by whom is unknown. Certainly, its simultaneous display there with that in the old habitats is a valuable fact. Afterwards, it was present stealthily in Ravenna and Padua, and then severely in Parma, from which it spread to Genoa, and then at Naples on the shore, while Rome had hitherto escaped. In the marches of cholera from Europe back into Tartary, and from Persia to the holy

places, and from thence into Nubia, bands of exiles, bodies of troops, caravans of pilgrims or of merchants, were the distributors of the disease, showing how much cholera progress is dependent on human intercourse for its spread, these diffusions being mostly across sandy deserts devoid of subsoil water near the surface. In India, after repose through 1870-71, a fresh epidemic commenced in the spring of 1872 in Bengal, crossing through the north-west provinces, Punjab, into Cashmere and Independent Tartary, meeting the backward currents from Russia. It spread likewise eastward to Burmah in 1872, and to Singapore and Bangkok, in Siam, and to Batavia, in Java, in 1873. These eastward invasions from India have usually preceded those in a westward direction, but, on this occasion, its onward course may have been checked by the pre-existence of the disease in Russian Tartary from Europe. In America, it commenced at New Orleans in April, and extended to Cincinnati, on the Ohio, 2000 miles inland, in May, and to St. Louis, on the Mississippi, carried so far by steamboats, infecting several towns on the river banks; and was taken by railroad to Nashville, in Tennessee, from Memphis, on the river. The epidemic was followed in this region by one of yellow fever, indicating a very general epidemic constitution prevalent in it, both diseases having been considered of indigenous origin. Most remarkable contrasts of severity were observed between Louisville, a city of good, and Nashville and Cincinnati, cities of bad sanitary conditions. Two principles—quarantine and improvement of hygienic conditions—are relied on for the prevention of infection; of these, the former has been had recourse to in the Levant and in the Mediterranean since it was advocated by the Congress of 1866, and the latter, together with the isolation of the first units of the disease, is the only safeguard used in England. If we should have no outburst among us in 1874, after our several infections in 1873, our principles will have asserted their superiority. Our best grounds of reliance at present are in the excellent state of the public health in 1873, when all zymotic diseases have been greatly in abeyance and diarrhoeal forms of disease have declined, instead of increasing, since the beginning of August, according to the reliable returns of the Registrar-General. Moreover, the fullest publicity is given to the first indications of disease occurring among ourselves, while concealment prevails elsewhere. In 1873, yellow fever has raged from Monte Video to Cayenne and in the South United States. It commenced there at Shreveport, on the Red River, 400 miles from New Orleans, in August, and proceeded thence to Little Rock, in Arkansas, and to Memphis, 600 miles up the Mississippi, from which it passed east to Montgomery, in Alabama, and to Savannah, on the Atlantic shore of Georgia, extending up to the setting in of the winter frosts. Although New Orleans suffered from cholera, yet it has been free from yellow fever since 1865, owing to sanitary measures. Memphis has been ravaged by both. These two diseases in the same summer indicate some widely-spread morbid agencies at work in the region. Of Cuba we know nothing but that, late in 1872, it was quarantined at Jamaica for cholera, and is therefore likely to have infected New Orleans. Whatever may have been the regional outbursts, we may be assured that the epidemic yellow fever does not exist without the co-operation of heat and moisture on filth. Of enteric fever, there have been two remarkable outbursts in Marylebone and in Brentford—the first was traced by Dr. Murchison to the milk supplied by a reform dairy, and the other to transit of the sewage from the neighbouring town of Ealing—both having been from preventable causes. In our navy, there has been a notable outburst of this fever in two squadrons—the “Channel” and “Flying”—in both, contracted at Vigo between the 27th of January and 1st of March, at a time when the health of the town was reported “particularly good,” but enteric fever is known to prevail there at times. The surgeons of the ships imputed its causation to drinking water obtained from a stream running through lately manured vineyards and frequented by the washerwomen of the town. Out of seven ships, four suffered and three escaped, of which two were furnished with Crease's water-filters. Another naval medical incident has been publicly believed to be one of epidemic, whereas it has been one of true endemic, disease, with which navy and army surgeons are familiar in all hot, moist climates. A-body of 110 officers and men of the Royal Marines landed at Cape Coast Castle on the 9th of June, and, in the eighth week, only 4 officers and 17 men remained fit for duty. Two having already died, 87 sick were embarked, of whom 10 died on the voyage to England, where, on arrival, 18 recovered men proceeded to barracks and 59 were sent to hospital, 40 of them with remittent or intermittent fevers, and 19 with dysentery, of whom 1 of the former and 2 of the last died. The fever is the pernicious malarial remittent, that ends fatally by coma, or passes into intermittent in convalescence; the dysentery was of the ulcerative or sloughing character. In all alike, the spleen was enlarged, friable, and of deepest claret colour. Bacteria were found in the blood of the left ventricle in one of these cases of dysentery, and in another the contents of a liver-

abscess were replete with them. Of eruptive fevers, small-pox has been the only one of note this year. In England, the epidemic of it that began in 1870 is fast disappearing; but, in May and June, the Azores, far off in the Atlantic, were suffering from it, and, in the summer, at Jamaica, it was prevalent among the blacks in a very malignant form. Dengue, or broken-bone, fever, which began at Zanzibar in 1870, is purely epidemic, like influenza; after passing to Aden and from thence to Bombay and Calcutta, it visited Singapore, and is now at Shanghai, in the north of China. In conclusion, Dr. Smart referred pathetically to the deaths of those who had been fellow-workers at the meetings of the Society, specialising Dr. John Murray, as a loss to the profession at large, and Mr. W. D. Michell, late Secretary for Russia to this Society, as a man of zeal in epidemiology, possessing great means of information fitting him for his office.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 18TH, 1873.

W. H. DICKINSON, M.D., Vice-President, in the Chair.

Reflex Paralysis.—Mr. KESTEVEN showed, for Dr. Ewart, a spinal cord from a case of reflex paralysis. The patient was a lady, aged 22, a primipara, who died in the seventh month of pregnancy. When about two months pregnant, she set out for India. Soon afterwards, she complained of a weakness in the legs; this increased, and she could not stand upon one leg; then she lost power in the other leg; the right arm became affected; and the paraplegia became complete. There was no loss of sensation, and the sphincters were not affected. The temperature was at times raised (99.5 deg.); the pulse varied from 100 to 120. The paralytic symptoms increased; difficulty of swallowing came on; and it was recommended to bring on premature labour. This was attempted first by galvanism, then by a sponge-tent; she was somewhat relieved, but died about two days afterwards. The spinal cord was removed, and sent to the Society to be examined. This was done by Dr. Lockhart Clarke and Mr. Kesteven, the latter of whom read the report, which showed that there were very widespread changes in the substance of the cord.

Cancer of the Larynx.—Mr. PUGIN THORNTON showed two specimens. The first was from a woman aged 36, who had an enlarged thyroid, and a stricture of the œsophagus. She was fed for a time by enemata, but died exhausted. At the necropsy, a growth was found in the posterior wall of the trachea, extending from the third to the sixth ring; it was epitheliomatous. The other viscera were healthy. The second case was a woman aged 42. She was spitting blood without cough, had difficulty of swallowing, stridulous breathing, and was losing flesh. An abscess formed on the right side of the neck and opened, leaving a fistulous tract communicating with the œsophagus, and through which food passed. At the necropsy, a growth was found below the cricoid cartilage blocking the œsophagus for half an inch; the cervical glands were enlarged and secondarily affected; the growth was epitheliomatous.

Cancer of the Breast in a Male.—Mr. JOHN WOOD showed a cancerous breast removed from a gentleman aged 68. It had been noticed for about nine months—at first a hard lump near the nipple; this increased, and became lobulated and painful. Three weeks ago, there was hæmorrhage from the nipple, and the tumour enlarged. None of the axillary glands were affected. The growth was scirrhus, and on section a number of dilated cavities filled with blood were seen. Sir W. Fergusson had operated three times for cancer in the male breast, and Sir W. Lawrence mentioned three cases. Referred.—Mr. HULKE had seen three cases of scirrhus in the male breast during the last four years at Middlesex Hospital.—Dr. CAYLEY said that cancer occurring in the male breast had the same tendency to affect other organs, and to recur, as in the female.

Exophthalmic Goitre: Mediastinal Tumour.—Dr. GOODHART showed a mediastinal tumour from a case of exophthalmic goitre. The patient, a woman aged 26, died under anesthesia. He had no history of the patient. The thyroid gland was enlarged; the inferior thyroid veins were enlarged and dilated, and communicated with the innominate by small channels. A part of the thyroid ran down to the mass in the mediastinum, which consisted of a great overgrowth of the connective tissue. The lymphatic glands were enlarged, and the thymus gland was large. He had dissected out the large ganglia of the sympathetic, which were healthy. The capsule was thickened. The heart was slightly hypertrophied, weighing ten ounces. This condition of the thymus was rarely seen. He thought it depended upon an intracranial neurosis.—In reply to Dr. Crisp and Dr. Powell, Dr. GOODHART said the blood had not been examined. The thymus gland was

encapsuled, and not adherent to the tissues around.—Dr. CRISP referred to the enlargement of the thyroid in thorough-bred colts, and to the observations of Mr. Lord, who, travelling in South Africa, noticed that at a certain altitude all dogs had an enlarged thyroid.

Effect of Injury on the Ulnar Nerve.—Mr. BUTLIN exhibited part of the ulnar nerve, showing the effects of an injury inflicted fourteen years ago. A man was admitted into St. Bartholomew's Hospital with a broken back. A few days before he died, a scar was noticed on the left forearm. The little and the ring fingers were contracted, and the muscles of the hand wasted. Fourteen years before the left arm had been injured, and he had had numbness of the inner side of the hand for a time. At the necropsy, about six inches of the ulnar nerve was removed; the nerve three or four inches above the scar was healthy. About three-quarters of an inch above the part wounded, there was a bulbous swelling, as in stumps. The lower part of the nerve was atrophied; there appeared no connection between the two parts of the nerve; the nerve was attached by cicatricial tissue to the tendon of the flexor carpi ulnaris. On examining sections of the nerve microscopically, in the upper part the nerve-fibres were normal, or but little altered; in the lower part, here and there was an axis-cylinder; the rest was connective tissue. The interest of the case was in this, that the man had sensation in the parts supplied by the ulnar nerve, and yet no connection apparently between the two ends of the nerve.—In reply to Mr. Waren Tay, Mr. BUTLIN said no observations had been made as to any difference of temperature on the two sides of the injured finger.—The PRESIDENT asked if the upper part of the nerve ought not to have been wasted, as it is found in stumps.—Mr. JOHN WOOD asked if the connection between the median and ulnar was large, or was the dorsal branch of the ulnar enlarged?—Dr. BROADBENT said the case was not singular. There appeared some way of conveying sensation from parts to the nerve which had been divided.—Dr. GEORGE HARLEY thought that if one axis-cylinder were found (and there were said to be several), he would be satisfied that there was a communication. He asked if the cicatricial tissue had been examined for nerve-structure.—Mr. BUTLIN said that sensation returned ten or eleven weeks after the wound. He thought it was not only necessary to have axis-cylinders, but also to trace them up through the cicatricial tissue, which was exceedingly difficult.

Injury of the Brain.—Mr. KESTEVEN showed a brain which had been injured in the following way. A boy, aged 13, fell from a load of straw with a pitchfork in his hand; one of the prongs entered the skull behind the ear and went its whole length, and was bent on itself for about two inches. The boy was taken up pulseless and unconscious, and remained so for two days, when an opisthotonos set in. He lived nine days.

Disease of the Spinal Cord.—Mr. KESTEVEN brought forward two cases, and showed drawings and microscopical sections. A patient had had symptoms of paralysis for seven years. It began with loss of power in the arm; the fingers were contracted, and the muscle wasted; then there were a loss of power in the lower limbs, and pains in the arms and legs. The cord was found diseased; the left half was smaller than the right through the whole length; it was especially atrophied in the middle dorsal region. The symptoms during life did not lead him to suppose that there was any alteration in the two sides of the cord. In the second case the patient, a lady, had had puerperal mania after each confinement for two or three months. She died exhausted. On examining the cord, the posterior vesicular column was absent for one inch in the lower dorsal region. On making sections of the brain, many spots of miliary sclerosis were found. There were no symptoms during life referable to the cord.—The PRESIDENT asked if the brain had been kept in spirit or chromic acid, as spots having the same appearance as those of miliary sclerosis were found when the brain is kept in spirit, but usually crystals are then in the spots.—Mr. KESTEVEN had noticed the spots in a brain kept in chromic acid. Miliary sclerosis was a common disease of the brain and spinal cord.

Disease in Birds.—Dr. CRISP brought forward two cases. The first was a case of intestinal obstruction occurring in a young Bramapootra cock, on which he had performed œsophagotomy. The bird having been poisoned by arsenic, he washed out the crop and stitched it together, but found the wound would not heal, though he pared it several times. On killing the bird, he found there was no disease of the œsophagus below the proventriculus, but the opening was blocked up by a large piece of the ligamentum nuchæ of an ox, which the bird had swallowed. The second case was one of which he had heard no mention before—an aneurism in a bird. A young cock was killed for the table; on examining the intestines, a tumour was found projecting from the gizzard. This was an aneurismal tumour, the walls of which were made of elastic tissue; it been caused by a pin which the bird had swallowed being forced by the gizzard into the gastric artery.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 28TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Temporary Albuminuria the Result of Cold Bathing.—Dr. GEORGE JOHNSON read a paper on cases of temporary albuminuria, the result of cold bathing. The first case was that of a medical student aged 22, who, about noon on the 19th of June, after bathing for a quarter of an hour in the Marylebone Bath, had a sense of fatigue and headache. Four hours after the bath, the urine was tested, and found albuminous. In the evening, there was still a trace of albumen. The next day, the urine was normal, and continued so until June 28th, when he again bathed. The bath was again followed by headache, and in the course of the day the urine was found albuminous. From that date until July 17th, every specimen of urine passed was tested, and albumen was present at some period of the day on all but five days. Since July 17th, the urine has remained normal. The subject of these observations is in good health, and has never been seriously ill. The second case was that of a medical student aged 25, who one day in July bathed in the Lambeth Bath for an hour. He felt no inconvenience. The urine passed an hour after the bath contained a sixth of albumen. The urine was not tested again for three or four days, when it was found normal. The experiment has not been repeated. The third case was that of a medical student aged 23, who on three occasions found his urine normal before bathing in the sea in August and September; and on each occasion, after remaining in the water from a quarter to half an hour, found a moderate quantity of albumen in the urine. In a few hours, this had disappeared. He felt no inconvenience from the bathing. Four other students, after bathing from half an hour to an hour, and on one occasion for an hour and a half, found no albumen in the urine. Case IV, a boy aged 16, looking pale and feeling languid, was found to have albumen in the urine to the extent of one-eighth on June 28th. It was of pale colour, and contained no casts. On September 23rd, when next seen, only a trace of albumen remained. On October 23rd, the urine was quite normal. Until within a few days of the time when the albuminuria was first discovered, he had been bathing almost daily in the sea from half to three-quarters of an hour at a time. He had felt fatigued and chilled, and on one occasion had vomited, after coming out of the water. The only previous illness had been diphtheria ten years before. The transient albuminuria was believed to have been caused by the repeated and prolonged immersion in cold water; and it was suggested that, as acute Bright's disease is not unfrequently excited by exposure to cold and wet, there was danger lest the frequent recurrence of temporary albuminuria the result of prolonged cold bathing, and the consequent repression of the cutaneous secretion, might lead to permanent mischief and to structural degeneration of the kidney.—Dr. SOUTHEY said, that cold will produce albuminuria, was well known; that the albuminuria should be only temporary, was very interesting. The fact that albumen was in the urine was not of very great importance, as was shown by Dr. Johnson's cases. All swimmers who remained long in the water felt headache, lassitude, and depression of the circulation of the surface of the body. The co-existing engorgement of internal viscera was likely to produce albuminuria; but Dr. Southey would be inclined to believe that in such case the kidney beforehand was not quite healthy. In fact, cases of albuminuria ensuing upon cold seemed usually to have had some previous weakness of the kidney. Dr. Southey had known a great quantity of urine to be passed after a patient had bathed for a long time; which was doubtless due to increased circulation through the kidneys. He had known swimmers to remain a long time in the water without recognised harm; but the greatest swimmers were strong, and the strongest could best resist cold.—Dr. R. D. POWELL inquired if Dr. Johnson could bring any other evidence than albuminuria of lesion of the kidney in these cases—were microscopical examinations for tube-casts or deposits made? Swimmers would be the least likely to receive harm from bathing, as they were undergoing strong exercise.—Dr. T. H. GREEN asked whether Dr. Johnson thought the albuminuria was due to increased flux of blood to the kidney, or to an inflammatory process. The fact that the albuminuria lasted for some time rather favoured the idea that it was due to nervous derangement, and consequent damage of the wall of the secreting tubes in the kidney. If the albuminuria were to be repeatedly exerted, it would probably lead to chronic change in the kidney itself. Had any desquamation of the urinary tubules been discovered by the microscope?—Dr. HERMANN WEBER said that, coming lately to Grindelwald, he had found a gentleman in bed with hæmaturia, of whom it was stated that, a few days previously, when greatly fatigued, he had fallen into a river, whence he had not walked, but had been carried home. He had sat for some time in his damp clothes, dined, and

had then gone to bed. Three weeks afterwards, the gentleman came to London. His urine was no longer bloody, although albuminous; the specific gravity was normal, the quantity normal, and it contained nearly transparent casts of the tubes. The albumen remained for five or six weeks. Six months afterwards, the gentleman was quite well. Probably, therefore, before the accident, he had no albuminuria, otherwise it would not have disappeared so readily. Of four cases under Dr. Weber's care, in whom albuminuria had ensued upon exposure to wet and cold, one was fatal; in one the albuminuria remained permanent; the two others recovered. Probably the two former had previous disease of the kidney, whilst the two latter had none. Possibly, in former years, when hydrotherapeutic establishments were much abused, albuminuria might have been occasionally caused by the treatment therein adopted; all that is now, however, very much improved. The long-continued baths of other days are now very rare, and cold sitz-baths are not given, except with the greatest care. Again, in these establishments, the patient taking the bath is not fatigued at the time; directly after the bath, the skin is covered, and reaction is rendered complete by the active rubbing of the skin, and by an active walk.—Dr. GREENHOW wished to learn the specific gravity of the urine of these patients, and the presence or absence of casts of the tubes. He thought the cases were allied to cases of intermittent hæmaturia, in which the urine contains colouring matter of the blood, but not blood-corpuses, often for thirty or thirty-six hours. He thought the symptoms were traceable to some defect of the nervous system.—Dr. JOHNSON, in reply, said that no tube-casts were found in these cases; the specific gravity was not taken. In cases of albuminuria, tube-casts may not be present; their absence does not show that there is no inflammation of the kidneys. Exposure to cold and wet may induce renal disease in persons who had no such disease before. He had not, in the paper, speculated upon the exact mechanism of the albuminuria in these cases, but thought it was probably directly due to the repression of the cutaneous secretion. His opinion upon this point was fortified by the experiment, in which the hair was cut from a rabbit, and its skin varnished, with the result that the animal generally died in twenty-four hours, with albumen in its urine. A Russian physician had stated that the animal dies of cold, and that, if it be covered with cotton-wool, it does not expire. But other experimenters have not experienced the same result. Recently, Dr. Rutherford had operated upon two animals; one was then covered with cotton-wool over the varnish, the other's varnished skin was left uncovered. Both died at the same time, and with albumen in the urine. The stoppage of the cutaneous secretion acts in the same way upon the kidneys as the driving in of the rash of scarlet-fever. Similarly, in cases of jaundice, when bile is being secreted by the kidneys, you find irritation of those organs and temporary albuminuria. Dr. Johnson did not think that every one who plunges into cold water would necessarily set up albuminuria; with some persons, however, ten minutes are enough for the purpose; and, by a bath of half an hour, a severe albumuria may be produced. Not every one, however, would be conscious of it; for a man may go about with albumen in his urine without knowing anything about it until told by the doctor.

On a Case illustrating Professor Esmarch's Method of Preventing Loss of Blood during Surgical Operations by means of Elastic Bandaging.—Mr. ARNOTT narrated a case of excision of the knee-joint, in which he had employed Professor Esmarch's so-called "bloodless method," early in August of the present year. It happened to be probably the first operation of any magnitude in which this ingenious suggestion of Professor Esmarch was employed in England, although Mr. MacCormac had already used it in some cases of removal of necrosed bone; and the author therefore brought forward the case as a peg on which to hang a discussion on the merits of the proceeding by the hospital surgeons present. The case was an ordinary example of old disease of the knee, in which it was determined, on exploring the joint under chloroform, to excise it at once, the patient having refused to submit to amputation. The limb was tightly bandaged with elastic webbing from the toes to the thigh, and, before the removal of the bandage, a stout elastic cord was twisted firmly round the limb above the bandage and fastened with hooks. The compression was kept up for more than thirty minutes, with the effect of rendering the operation absolutely bloodless until the elastic tourniquet was removed. Convalescence was slow, but presented nothing unusual which could be attributed to the pressure employed during the operation. The points dwelt upon by the author in commenting on the case, had reference to—1. The possibility of sloughing following the use of the constricting band, and the length of time during which the pressure might be safely maintained; 2. The effect on the circulation of the compressed limb which ensues on removal of the elastic cord; 3. The difficulty of using the method without chloroform; and 4. Under what circumstances the

method might be wisely avoided. In briefly remarking on these heads, it was suggested that much of the pain and sudden engorgement of the vessels with blood might be prevented by gradually relaxing the constricting band; and, in enumerating the cases in which the employment of the method might be attended with danger, reference was made to instances of septic abscess, the clot-occluded veins about a compound fracture, and limbs already gangrenous. It was also suggested that a possible risk of apoplexy was incurred by suddenly overfilling the circulatory system of aged people with brittle arteries; and that, although generally beneficial in town practice, the visceral congestions caused by the subsequent plethora in cases of large amputations in robust subjects might seriously interfere with recovery.—Mr. EASTES remarked that, in seven cases of amputations under this method, recently reported from Guy's Hospital, the edges of the flaps subsequently sloughed in five; but, in all five cases, the carbolic acid spray was also used. There was, therefore, not only a deprivation of blood, but also a considerable cooling of the tissues. Doubtless, the conjoined conditions are sufficiently powerful to produce sloughing, although the elastic bandage alone does not generally appear to be chargeable with such untoward result. In cases of necrosis, etc., where a precise view of the parts included in the operation is necessary, Esmarch's method is most useful, as the wound is absolutely bloodless.—Mr. HEATH had for a long time practised a method by which the limbs may be deprived of blood. The limb being raised, the house-surgeon draws his hand gently along the surface, so as to force back the blood to the trunk. A tourniquet is next applied, and a card placed beneath the screw of the instrument. After the operation, the tourniquet is gradually loosened, when the blood returns slowly to the limb. One great advantage of this plan is, that every surgeon already possesses all that is requisite for its accomplishment.—Mr. CLOVER said that, with an ordinary bandage and band-tourniquet, bloodless operations may be performed, as he had years ago pointed out. It had been objected to all such procedures that, practically, a little too much blood might be forced into the general circulation; respecting Esmarch's method, especially, it should be remembered that the elastic cord is apt to break readily, unless it be new. He thought that a spiral bandage is more efficacious than the hand of an assistant in forcing blood out of the limb.—Mr. MAC CORMAC noticed Mr. Heath's remark, that he had not seen Esmarch's method practised. In its simplicity and readiness of application, it is superior to all other plans for restraining hæmorrhage; even one drop of blood need not be lost. It facilitates and shortens operations, as sponging is not required. The bandage had been partially adopted before, but the method of Esmarch has now come into general use. Further experience must be looked for, that we may be open to all the advantages and disadvantages of the procedure. Possibly, in certain cases, a moderate loss of blood may even be beneficial. The amount of pressure required to stop the arterial current in a limb is much less than is usually supposed. The sudden entrance of blood to the limb after the operation is very agonising; a slow return, by gradual loosening of the band, is much better. In the operation for necrosis, the living bone seems dry, as well as the dead parts; why is this? The bandage cannot compress and force the blood out of the bone. It is well to apply the bandage about two minutes before the patient is quite chloroformed; and, at the time of beginning the operation, tie the cord which acts as a tourniquet around the upper part of the limb.—Mr. BARWELL considered that, of the two methods of Clover and Esmarch, that of the latter empties the limb most thoroughly of blood. In a case in which he had adopted Esmarch's plan, he had, however, found, after the operation, a good deal of oozing for twenty-four hours, principally from the bone. In another case, a case of Syme's operation, the heel was left out of the constricting bandage; upon that part being cut into, the blood at once escaped; it had not diffused itself generally through the bloodless limb. The healing process had been rapid in Mr. Barwell's cases. He looked upon the bone as a kind of closed vessel with a small hole, from which blood cannot escape, unless fresh blood enters the limb.—Dr. KOCH (of Munich) had seen some of Esmarch's own cases, viz., an excision of the knee, an operation for necrosis of the tibia, and a little operation upon a finger. The limb was dry, and the bone was dry in each case; and Esmarch thinks that the dryness of the bone is due to the fact, that the empty veins draw or suck the blood from the bone. Esmarch has never seen sloughing of the edges of the flaps, nor any bad results in his cases.—Mr. A. WILLETT said that nothing, since the introduction of chloroform, had added so much to the comfort of the operating surgeon as Esmarch's ingenious procedure, which lends a great charm to operations. The bone is not always absolutely free from blood. After section of the bone in excision of the knee, and whilst the cord was still *in situ*, he had seen the cut surface of the bone become covered with a currant-jelly kind of clot, one-third of an inch thick. It was, of course, removed before the

bones were adjusted, but even then a little more blood escaped. In only one of many cases had he seen sloughing follow the operation, which was amputation of the leg in an elderly patient for an ulcer which had extended completely round the limb. The anterior flap sloughed, and the patient sank from pyæmia. After the application of the bandage, Mr. Willett had seen the Italian tourniquet applied; but he did not think it answered so well as an elastic tube or cord in restraining hæmorrhage during the operation.—Mr. H. MORRIS had frequently known Mr. Hilton (of Guy's) order an ordinary bandage to be applied from the foot upwards half an hour before an operation upon the limb; the tourniquet being also then loosely placed over the femoral artery, and tightened just at the commencement of the operation, immediately before the removal of the bandage; but, by that method, never was such immunity from bleeding secured as by Esmarch's plan. He had sometimes, however, seen such considerable hæmorrhage follow operations (Esmarch's), where the cord was quickly removed, that it did away with much of the benefit claimed for the procedure. He considered a combination of plans good; such as the elastic bandage with Pettit's tourniquet, or some other plan by which the blood can be gradually re-admitted to the limb. He could corroborate the fact that, in five of seven cases of amputation at Guy's Hospital, sloughing of the flaps had occurred, and that Lister's carbolic spray, which cools the tissues, had been used in all five cases. Mr. Morris had seen death occur in an old man four weeks after a Syme's operation under Esmarch's plan. There was never any attempt of union of the flaps. In old people, the driving of the blood from the limb is likely to prevent subsequent healing. He thought Mr. Arnott's case was one in which the procedure should not have been adopted; there was pus in the joint; the capsule might have been ruptured, and the pus forced into the blood-vessels.—Mr. BARWELL described the different methods by which the cord might be fastened.—Mr. ARNOTT did not think the carbolic acid spray had anything to do with the subsequent sloughing of the edges of the wound; he doubted whether it cooled down the limb. He thought that one very important point is the *newness* of the cord; old vulcanised material becomes very brittle. Gentlemen in the country who could not frequently renew their apparatus should remember this fact. He considered that an elastic tube tied round the limb is the best method for the compression of the arteries; small pressure under this plan will more effectually stop the current of blood than a larger pressure from the old tourniquet.

SELECTIONS FROM JOURNALS.

OBSTETRICS.

RAPID DILATATION OF THE UTERINE ORIFICE.—Dr. Ellenger of Stuttgart (*Archiv für Gynakologie*, vol. v, fasc. 2, 1873) insists enthusiastically on the merits of rapid dilatation of the os and cervix uteri by his instrument. He considers that it ought to supersede sponge-tents, laminaria, and all other methods of slower dilatation. His instrument is based upon those of Perrève and Holt, used in rapid dilatation of the urethra; partaking, however, of the character of a speculum. The cases which he gives as especially suitable examples of success, include examples of stricture of the cervical canal, stenoses associated with uterine flexions and deviations, menorrhagia due to softening of the parenchyma, to hypertrophy, or to uterine tumours, retention of disordered secretions in the cavity of the uterus. In one case, where the patient was suffering with hysteria and retroflexion of the uterus, forced dilatation cured a very obstinate neuralgia of the trifacial nerve.

INSTRUMENT FOR TREATING DISEASES OF THE UTERUS.—Dr. Woodbury, in the *Philadelphia Medical Times*, April 26th, 1873, recommends the following instrument for the application of remedies to diseased surfaces in the body or neck of the uterus. It consists of a glass tube, six or seven inches long, having the calibre of a No. 8 or 10 catheter, bent as desired, and drawn to a capillary opening. The large end is attached to a piece of India-rubber tubing, the extremity of which is closed air-tight. The curve at the point of the instrument should correspond with the curvature of the neck and cavity of uterus. Another curve at the large end prevents the hand from obstructing the view when the instrument is in use. To use the instrument, the India-rubber is compressed, and the pointed end introduced into the liquid desired to be injected. The tube is introduced through a speculum to the proper place, and the contents are slowly discharged by compressing the India-rubber tube. The recommendations of this instrument are: 1. The thorough manner in which applications may be made to all parts of the uterine cavity; 2. The readiness by which the hand of the

operator is kept from contact with the fluids used; 3. The precision with which the amount of fluid can be regulated, a few drops only being needed; 4. Its durability, not being liable to get out of repair, or to be acted upon by acids, etc.

PRECOCIOUS MENSTRUATION.—Dr. R. K. Clark details (*Western Lancet*, September 5) the case of a girl who, soon after completing her fifth year, complained to her mother of pelvic pain and the usual symptoms of approaching menstruation. She soon had a sanguineous show, which continued for three days and then ceased, but appeared regularly once in twenty-eight days ever since. She was not precocious in any other respect, nor large of her age; but the usual change in form suited to a young lady fifteen or sixteen years of age had taken place, so that she looked like a little woman. An aunt of this child was said to have menstruated at six years of age and continued till she was thirty-eight.

DISPLACEMENT OF THE UTERUS TREATED BY ELECTRICITY.—In an article upon this subject (*New York Medical Record*, April 15, 1873), Dr. E. C. Mann reports four cases of prolapsus uteri of the first degree cured by electrical treatment. The causes of the prolapse were loss of elasticity of the uterine ligaments, and atony of the vaginal walls and sphincter vaginae. The negative electrode was placed in the uterus, and the positive externally over the uterus and its appendages, and the faradic current employed. He gives in detail the treatment of an old case of prolapsus, as illustrating the effects of electrical currents to restore tone to the general system, and especially to the tissues in and about the pelvis. He thinks it well to combine the galvanic and faradic currents. In all cases, he says, nutrition is improved, and many nervous symptoms connected with displacements are entirely relieved.

UTERO-PLACENTAL VACUUM.—Dr. H. G. Landis, in the *Philadelphia Medical Times* (April 12th, 1873), reports a case of retained placenta which he caused to be easily delivered by simply perforating it. He did this from the consideration that the placenta resembled in one respect a boy's leather "sucker." The perforation permitted air to enter the vacuum behind the placenta, and so facilitated its escape.

USE OF PLACENTAL FORCEPS THROUGH THE SPECULUM.—Dr. H. Seaman, in the *Buffalo Medical and Surgical Journal* (April 1873), recommends the application of the placental forceps through the speculum. By this device he could readily see the part to be removed, grasp it, and bring it away. Young practitioners, at least, may profit from this hint, and be able to remove the placenta safely and certainly.

THERAPEUTICS.

TREATMENT OF DIPHThERIA BY CARBOLIC ACID.—Dr. C. G. Rothe of Altenburg, in a communication to the *Allgemeine Medicinische Central-Zeitung* for August 20, calls attention to the fact that in June 1870 he published in the *Berliner Klinische Wochenschrift* the results of sixteen cases in which he had treated diphtheria with carbolic acid. In the following year, however, it was stated in the *Deutsche Klinik* that the first attempt to treat the disease by the local application of the acid had lately been made in Leipzig. Dr. Rothe does not wish to raise the question of priority (to which he attaches little importance), but to comment on the contradictory results which have attended the treatment when followed by others and the success which it has in his hands. Some, as Schlier, Helfer, Bürger, Calligori, and Stensch, have obtained excellent results; most, including Letzerich and Lövinson, regard carbolic acid as no better or worse than other ordinary irritants; while Reeves, Hill, and others, state that it is useless or even dangerous. Dr. Rothe states that he has since 1869 treated 150 cases, all of which recovered. Does the difference of result depend on difference in the intensity of the disease, or on differences in the preparation or in the mode of its application? In his experiments, Dr. Rothe has carefully excluded all cases of catarrh of the pharynx and tonsils which were not distinctly diphtheritic, as indicated by the height of the fever, the severity of the local symptoms, and the nature of the exudation. Among his cases, there were not a few in which, from the severity of the affection (especially cases occurring during an epidemic of scarlatina), the prognosis was for days and even weeks very doubtful. But, from the time when he began to use carbolic acid, Dr. Rothe no longer met with extension of the exudation beyond the vocal cords; although the implication of the upper part of the larynx was often indicated by hoarseness and even loss of voice. In one case only, in which he was called in when the disease had lasted seven days, did he find, together with the diphtheritic layer on the palate and tonsils, all the signs of laryngeal obstruction. The patient

was a boy aged 11; he recovered perfectly at the end of eight days after the frequent application of carbolic acid to the glottis. The difference in the results can then lie only in the preparation or in the mode of its application; perhaps in both. Dr. Rothe has used a very concentrated solution (1 in 7) of pure crystallised carbolic acid; while, as far as he can learn, all others have used much weaker solutions. The solution which he uses consists of carbolic acid, spirit of wine, each 100 parts, distilled water 500 parts, tincture of iodine, 50 parts. An Italian practitioner, Saroli, has treated with this preparation 150 cases with success, and has proved, on chemical examination, that the iodine forms with the carbolic acid a compound which he calls an alcoholic hydrate of phenyl and iodine. Paper moistened with the solution is a very delicate ozonometer. Whether this combination acts on the diphtheritic growth more energetically than simple carbolic acid, Dr. Rothe does not attempt to decide. The mode of application is as follows. With a camel-hair brush (not too small), the fluid is applied abundantly to all the affected parts, every three hours in severe cases, twice or thrice daily in the milder. In larger children, the mouth is gargled every four hours with thirty drops of the mixture in a cup of water. Dr. Rothe never attempts to remove the exudation by force, but only takes away such portions as adhere to the brush; he thus does not have loss of substance and ulcers remaining for some days. When the exudation extends into the naso-pharyngeal region, the application is made through the nares. The exudation generally disappears in the course of from two to ten days, leaving sound mucous membrane beneath. Dr. Rothe has not met with more than one case of paralysis; the palate only was affected, and recovery soon followed the application of the constant current.

ANTAGONISM OF OPIUM AND BELLADONNA.—Dr. Mary C. Putnam, in the *New York Medical Record* (*Detroit Review of Medicine*), gives the following conclusions regarding the antagonism of opium and belladonna. 1. If very large doses of belladonna be given before the establishment of opium coma, the paralytic effect of both poisons may be produced. 2. When belladonna is given alone in doses sufficient to produce coma, the pupils dilate, and the pulse is accelerated, until after the most advanced stage, when it falls. When, therefore, coma persists in a patient who has taken both opium and belladonna, if there be dilatation of the pupils and rise of pulse, the coma may be attributed to the accumulated effect of both poisons. But when the pulse and respiration remain slow, and the pupils contracted, there is no proof that the belladonna has exerted any influence at all, and the coma must be ascribed exclusively to the effect of opium, not yet counteracted by medication. 3. After excessive doses of opium, symptoms of poisoning are often delayed longer than when smaller quantities have been taken; this delay is attributed to temporary paralysis of absorption. 4. The diuresis determined by atropine, favours the elimination of the opium alkaloids; and, in some cases, recovery seems to be mainly due to this cause. 5. The capillaries, paralysed and distended by opium, are directly stimulated to contract by belladonna, and at the same time the heart is quickened by being released from the action of the pneumogastric. 6. The therapeutic value of atropia must be calculated exclusively from its effect upon the pulse and kidneys. The dilatation of the pupil only shows that the system is under the influence of atropine, not that the influence is beneficial. Coma may persist, and the patient die, with dilated pupils. 7. In therapeutic doses, the pulse, slackened by morphia, is always accelerated by atropia, but the reverse is not true. In most cases of poisoning by morphia, the acceleration of the pulse is produced with difficulty, and then coincides with an amelioration of narcotic symptoms. 8. There is nothing in theory or fact to justify the enormous doses of belladonna that have been given. 9. Belladonna is no antidote to opium, nor even to the entire series of pathological phenomena determined by that poison. Practically and theoretically it modifies some of the phenomena of opium-poisoning, and may be used with advantage. The same author gives the following rules for the use of belladonna in cases of opium-poisoning. 1. It should not be given as a prophylactic, but only to combat conditions already existing, either of restlessness, nausea and vomiting, or somnolence, stupor, or coma. 2. It should only be given in small doses (fifteen minims of the tincture) frequently repeated. 3. It is safe to continue the administration, so long as the pupils are not dilated, nor the pulse accelerated. If dilatation have taken place, yet the iris remain motionless, if the pulse have become weak and rapid, and the coma still continue unabated, further use of the belladonna would increase the mischief. 4. The use of adjuvants, as emetics, coffee, and electricity, is to be recommended as much in the belladonna treatment as in any other. The prevision of the physiological effects to be expected from belladonna, enables us generally to analyse its influence, even when a complete medication has been employed.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 6TH, 1873.

MESMERISM.

WE had lately to discuss the evidences of the decadence of the noisy and pretentious form of medical superstition which was introduced by Hahnemann, and which is passing to its decay through the customary intermediate stage of a dying delusion—the stage of fraud. An analysis by M. Bouchereau, in the *Revue Médicale*, of M. Dechambre's recent account of Mesmerism,* reminds us of a curious chapter in medical and psychological history, full of interest, and not without striking resemblances to the history of the Hahnemannian delusion, which began with the doctrine of the universality of the itch, the potentiality of dilution, and the abnegation of common sense, and is ending, as we have seen it, in disguising the tatters of a worn-out dogma with the turned and dyed robes of rational medicine.

We are reminded by this article that mesmerism presented itself in the world with the ambitious pretension of opening new paths to medicine and changing the known laws of physics, just as homœopathy did. The discovery made at first numerous disciples, and created no small enthusiasm in all countries of the world before it fell into discredit. Discredited as mesmerism, it has taken new leases of existence from time to time under various changes of form and title—animal magnetism, somnambulism, spiritualism. Through all the apparent dissimilarities, the affiliated ideas may be traced, and the community of views and tendencies.

The biography of the initiator of the system presents few features of interest. Born at Mersburg, in Swabia, on the 29th of May, 1733, Mesmer terminated his long career at the same town in 1816. In him, mysticism was allied to the love of money. Not only from the vulgar herd, but from his most earnest disciples, Mesmer succeeded in extracting considerable sums. He maintained that there exists "a natural influence between the celestial bodies, the earth, and animated bodies; that this influence has as its agent a fluid universally diffused and of incomparable susceptibility, apt to receive, to propagate, to communicate, all the impressions of motion; that, thanks to this fluid, which he can manage as he wills, the physician will be enlightened on the use of medicines; he will perfect new actions, and will excite and direct salutary crises in such a manner as to become master of them."

To explain the source of animal magnetism, there have been plenty of theories. The existence has been declared of a fluid detached from the universal fluid, an electric animal fluid, the vital or nervous fluid, or simply the action of an individual on an object external to himself; or, again, a magical operation, the intervention of spirits at the call of certain men of powerful will; the momentary emancipation of the spiritual principle of man, separated from the material principle by the magnetic sleep.

The proceedings adopted in the practice of magnetism have sensibly differed. Mesmer had his *baquet*; it was a circular chest of oak wood, with a cover pierced by holes, and containing bottles disposed circularly in successive layers. The first range of bottles was arranged with

the necks to the centre and the bases to the circumference; the second range in the opposite order. These bottles, covered with and filled with water, lay upon a mixture of ground glass and iron filings. From the holes of the coverlid passed iron stems, of which one extremity was plunged in the fluid, and the other could be to the bodies of patients—as a reservoir of force, according to Mesmer. If to this apparatus be added accessories to strike the imagination: an apartment specially arranged; a group of vapourish women as subjects of the experiment; the phenomena observed, the sensations announced, and the extravagant scenes which occurred. Others, to set the fluid in motion, employed rods of iron or glass, a tree, or, more simply, passes, a gesture, a look, a single act of the will.

The effects obtained consisted in yawning, pandiculation, hiccough, tears, sobs, itching, sensations of interior effluvia spreading through the whole being, convulsions. To all these phenomena, the contemporary somnambulist added a sort of intimate communion with the magnetiser; the loss of sensation, of movement, and of consciousness; the transposition of the senses; the knowledge of diseases and their remedies; prevision; entire forgetfulness, on waking, of that which had passed in and around him during the access of somnambulism.

Magnetism did not start complete from the imagination of Mesmer. The master had had predecessors; and his disciples, like those of Hahnemann, modified his doctrine in more than one point. The magnetic theory does not rest on any scientific basis. It was easy to prove this on the occasion when the system was brought before the learned societies to induce them to recognise its existence. Those proofs were afforded in the Reports of the Commissions of the Academy of Medicine and Academy of Sciences of Paris. No magnetiser has ever been able to demonstrate that he possessed any action on certain persons, or that he communicated to them new faculties by magnetic processes. All the experiments undertaken with this view failed. It sufficed, in order to ascertain the errors or trickery involved, to follow the ordinary rules of the experimental method in the examination of all the known facts. M. Dechambre concludes on just grounds, therefore, that animal magnetism does not exist. That established, it cannot be denied that some persons, especially susceptible women, when subject to the manœuvres of magnetisers, present or experience some peculiar phenomena. Who does not know what the imagination may produce, in the absence of any agent? It is enough to recall, in this relation, the history of the possessed of the Middle Ages, of the *religieuses* of Loidun, of the recent convulsionists of Morzines, of the modern spiritualists, or, again, certain morbid symptoms presented by those having insane hallucination. It is, indeed, perhaps among the latter that, at the present date, the mesmeric doctrine makes its chief recruits. Nevertheless, just as the results obtained amongst persons subjected to the original homœopathic delusion in its honest stage of error, pointed to the propriety of studying the natural history of disease, of simplifying medication, so the phenomena observed amongst those who have been submitted to "animal magnetism" constitute a ground for an independent investigation of such phenomena from an independent point of view, more careful and serious than has yet been accorded to them. The obvious imposture and self-deception have largely repelled serious investigation; but there are psychological phenomena developed worthy of careful and systematic analysis.

THE ELECTRO-PUNCTURE TREATMENT OF ANEURISM.

II.

IT having been shown by repeated observation and experiment that electricity is capable of producing a firm and durable blood-clot, there remain for consideration the following questions: 1. In what cases is it applicable? 2. How is electrolysis to be performed? 3. What may we expect from it? 4. What are its risks?

1. Electro-puncture should, we think, be resorted to in all cases of

* *Dictionnaire Encyclopédique des Sciences Médicales*, 2e série, vol. vii. Masson.

aneurism, after a fair trial of the ordinary pressure methods, and before deciding on the severe plan of treatment by ligature; but it is especially adapted to cases of aneurism at the root of the neck and the thoracic aorta. In the orbit and abdomen, the danger of injuring the eye, or of exciting peritonitis, by the introduction of the needles and the action of the currents, may prove serious drawbacks; but even here the alternative measures—pressure and medical means having failed—are of an equally if not more serious nature. It will readily be admitted that ligature of the common carotid for orbital aneurism, or of the common iliac for large so-called inguinal aneurisms, is severe, and the latter a very fatal mode of treatment; we should therefore certainly be inclined to try electrolysis in such cases, as we believe it would be attended with less danger to life. We are aware that the cases of abdominal aneurism to which this method would be applicable must be few, as it is not very common to see the sac of an abdominal aneurism adherent to the parietes, or sufficiently near to allow the introduction of the needles without danger to the intestines or other important viscera. Still such cases do occasionally occur; and we cannot help thinking that, after the trial of ordinary means, electrolysis would not only be applicable, but also serviceable, in such cases. If it were not for the effects of the current, the mere introduction of the needles need hardly be feared in these days of aspiration. There most probably is a way open to us for the passage of the current along the needles through or between the muscles at the back of the abdomen, without doing injury to important structures; but experience is comparatively silent on this point.

But it is to aneurisms of the thoracic aorta, and of the large vessels at the root of the neck, that this method is peculiarly adapted; and it would naturally be expected that those cases most favourable for cure by spontaneous or medical means, viz., the sacculated tumours with a small aperture of communication, would be those most suitable for electrolysis. And so it is; but electricity has gone further and has been productive of benefit, sometimes permanent, in the other forms of aneurism in the regions under consideration. In such cases, what have been our resources until lately? Rest in the recumbent posture, low diet, bleedings, digitalis, lead and iodide of potassium. Nature having failed in her endeavours at cure, and the physician having followed suit in his praiseworthy attempts to aid her, surgery stepped in, and, by ligaturing the large vessels which interfered with the consolidation of the tumour, or, still better, by applying distal compression digital or instrumental, has met with an encouraging amount of success. Yet many surgeons, who can scarcely be styled timid, are of opinion that ligature is an extremely severe proceeding, if not too much so; and, seeing that we have a very much milder and more promising plan at our command, we quite agree with them, reserving the right of resorting to the ligature as a *dernier ressort*. Perhaps the best way will be to formulate what plan should be adopted in such cases. A patient, with an aneurism in one of the situations under discussion, requires treatment. What are we to do? We should first give the ordinary methods a fair but not a prolonged trial; then we should try repeated compression under chloroform; and that failing, should at once resort to electrolysis, or probably might try electrolysis before compression, and should certainly leave the ligature for the last. Circumstances having compelled us to employ electricity, we have next to consider how it is to be applied, it being understood that the conditions and relations of the tumour do not preclude it. A tumour with expansile pulsation can be seen or felt, and is uncovered by any important structure. We then proceed to the application of the current.

2. How is electrolysis to be performed? Various methods have been adopted or suggested at different times, but it would be beyond our scope to enter in detail into them; those who desire information on these points will of course refer to the numerous works on the subject. We shall confine our remarks to the experience gained from cases that we have seen and those on which we have operated. The necessary instruments consist of a constant current battery, needles, connecting wires, and electrodes, and a little water, which may be salt, to moisten

the sponge connected by means of the electrode with one of the poles of the battery. The needles that we have used are much smaller than those recommended and those which we have seen applied. The latter are unnecessarily large, answer no electrical purpose, and are painful and difficult of introduction. Those made for us by Messrs. Krohne and Sesemann are of steel gilt, of the size of an ordinary pin, but nearly three times the length, and are isolated to within an inch of the point, which should be sharp. After very slightly oiling them, we have usually introduced two into the sac, about an inch and a half to two inches apart, at its softest and most prominent part. The introduction is not always easy, and is facilitated by pressing firmly and at the same time rotating until the feeling of resistance vanishes, and the isolated portion is sufficiently buried in the cutaneous tissues. One should be sure that the needles are in the sac, although it is not necessary to insert them very deeply. They are then fixed to the conductor by means of *serres-fines*, and connected with either pole or both at the option of the operator. Local or general anæsthesia must be very rarely necessary; at any rate, we have not found it so. The battery we have used is that made by Weiss, and is Foveaux's modification of Smee's. The strength of the current should be gradually increased, commencing with five cells, and slowly adding to the number of cells up to the point at which the patient can bear it without great discomfort. The production of pain is more likely to do harm than good, both locally and generally—locally, by producing probably an eschar in the sac or cutaneous tissues; and generally, by disturbing the patient and exciting the circulation. Further, the injurious general and local effects of producing an eschar must not be forgotten. With regard to the number of cells, *i.e.*, the strength of the current to be employed, opinions differ, but the balance of experience tends to show that what is required is a current of moderate strength, which should be continued for about half an hour. On three occasions, we have found that the patient (a man) bore comfortably a current of thirty cells for the space of an hour, and the subsequent effects were certainly satisfactory. In the case of a nervous female under treatment, the introduction of the needles was borne without a murmur; the application of a current of ten cells caused pain at first, but, before the expiration of the hour, she bore fifteen without complaining. To produce the electrolytic effects, viz., decomposition of the blood and coagulation, a very strong current is not necessary; and Dr. Bastian has very recently succeeded in producing a firm, coherent, and laminated clot by the use of eight to eleven cells. During and at the end of each application, the effects on the tumour and patient must be observed, and the treatment repeated twice weekly if necessary. The needles should be gradually withdrawn, with a rotatory motion, and the puncture apertures immediately covered with lint or cotton-wool dipped in collodion. It is well also to support the sac by painting it over with three or four layers of collodion or styptic colloid.

To which pole should the needles be attached? We have tried both, and find that, as regards coagulation, there is no striking difference; but this may be otherwise, and indeed authorities state that the clot formed by the negative pole is the more durable. Failing satisfactory results with one pole, we may try the other, or even alternate them, giving ten or fifteen minutes to each. The needles having been introduced and attached to either pole, the circuit must be completed by applying the sponge of the electrode to the neighbourhood of the tumour, and its direction changed by altering the position of the electrode every ten minutes. Instead of using the electrode, we may attach one needle to the positive and the other to the negative pole; but, whichever method we employ, we must remember that a very strong current is not necessary, on the contrary, is prejudicial; and that if we attach the needle to the negative pole the sitting need not be so long, as the action of this pole is more potent. If the needle be gold, or of steel-gilt, or be attached to the positive pole, it will become oxidised, may even fuse, and in most cases is difficult of withdrawal. As in the other modes of treatment, the patient must be kept quiet in bed, and his regimen be attended to.

THE RELIEF OF INTUSSUSCEPTION BY GASTROTOMY.

A RECENT meeting of the Royal Medical and Chirurgical Society was of peculiar interest for the surgical members, in consequence of a discussion which arose on a very remarkable case which had been under Mr. Jonathan Hutchinson's care. The details of the case will be found in our report of the Society's proceedings at page 661. This remarkable case gave Mr. Hutchinson an opportunity of suggesting a revision of the opinions of surgeons on the propriety of operations for intussusception. There can be no question that they are in general opposed to operative interference. Thus, Mr. Pollock (*Holmes's System of Surgery*, iv, 619) says: "The proposal to open the abdomen should not be entertained"; Mr. Bryant (*Practice of Surgery*, p. 318): "Operation in intussusception is scarcely justifiable"; Mr. Holmes (*Surgical Treatment of Children's Diseases*, p. 570): "With regard to cutting into the peritoneal cavity, I would entirely abstain from any such proposal in a case which I regarded as one of intussusception"; and other opinions to the same effect might easily be quoted. But a perusal of the context will show that these surgeons, in condemning so decidedly the operation in cases of intussusception, were thinking of cases in which the symptoms are urgent and the intussuscepted bowel tightly strangulated; so that adhesions rapidly form between the opposed serous surfaces at the point of invagination (which is the neck of the stricture), soon followed by ulceration in the line of the stricture itself, whereby the protruded bowel is often cast off into the cavity of the intestine, and life is, comparatively often, saved.

The merit of Mr. Hutchinson's paper (and a very great merit it is) consists in calling the attention of surgeons and of surgical pathologists to the occurrence of cases which bear more resemblance to incarceration of bowel than to strangulation, and to the probability—hitherto certainly unsuspected by most pathologists—of finding the opposed serous surfaces of the invagination unadherent, even after a prolonged period of such incarceration. That this was so in Mr. Hutchinson's case, was undeniable; whether it will be found to be the general rule, or a happy exception only, cannot be decided without further experience. For the attention of pathologists seems hitherto to have been but little bestowed on these cases of chronic intussusception; and it seemed rather to take the audience by surprise to hear that, after the continuance of intussusception for a month, the gut might be as easily withdrawn as it would have been an hour after its invagination.

But, though we can hardly doubt that Mr. Hutchinson's paper marks a real advance in the treatment of a disease which is usually fatal, it would, we think, be a mistake to suppose that it has revolutionised this treatment, or was intended to do so. The opinions, quoted above, appear to us at least (and we believe to Mr. Hutchinson also) quite sound, if limited to the acute form, which their authors probably had in their mind. In this form, the natural cure is at any rate not very improbable; nor does it seem that the cure by insufflation or injection is rare—at least many instances are recorded in which the symptoms have yielded to this treatment, the invagination being presumably seated in the large intestine. And Mr. Hutchinson, far from wishing to supersede this treatment, on the contrary recommends that it should be carried on perseveringly; thinking, contrary to the opinion of most authors, that there is not the risk which has been alleged of bursting adhesions or rupturing half-ulcerated portions of bowel by repeated sudden distension. The operative treatment he would therefore reserve mainly for cases of chronic intussusception. To quote his own words: "The cases best suited for operation are those which have persisted for some considerable time, and in which the intestine is only incarcerated, and these cases are also precisely those least likely to be relieved by any other method; and in the cases just referred to, after failures by injections, bougies, etc., an operation is to be strongly recommended."

Obviously, the chance of success in this attempt is measured by the probability of finding the intestine bound down by adhesions at the neck of the invagination. Until we have (what is wanting at present)

an adequate number of careful observations on this point, we cannot form a definite opinion as to the chance of success; and the operation must, under all circumstances, be looked upon as a desperate measure, and should be ventured upon only under the pressure of the most urgent necessity and on the clearest indication. But, given these necessary conditions, the surgeon will be amply justified in following Mr. Hutchinson's example; and he has laid the whole surgical profession under a debt by the judicious boldness with which he treated so formidable, indeed so inevitably fatal, a disease.

THE HISTORY OF A PROVIDENT DISPENSARY.

II.

IN the Annual Reports for 1847 and several succeeding years, a special vote of thanks is recorded to Mr. John Gayleard for the efficient manner in which he had superintended the financial accounts of the Dispensary. Mr. Gayleard was one of the medical officers in ordinary at the time, and held the same post for twenty-five years. He seems to have undertaken the superintendence of the accounts in consequence of there being at the time no paid secretary, and no other means, perhaps, of checking the accounts of the dispenser, through whom all moneys were received from the members. The yearly balance-sheet at this period shows a small sum at the right side of the account, and also shows that the custom was to divide among the medical officers all moneys received on account of the Members' Fund, after deducting the cost of drugs, which at this period was remarkably small; but a few years later, one-fourth of the dispenser's salary was also paid out of the Members' Fund, and an account was added of the payments for district cases, of which no notice had previously been taken in the Annual Report.

In the year 1852, a legacy of £300 stock, in Three per Cent. Reduced, was received, the interest from which appears in the balance-sheet for 1853. Desiring to lay before our readers sufficient materials to enable them to judge for themselves about the working of the Dispensary at different periods of its history, we here subjoin a copy of that balance-sheet.

ABSTRACT OF ACCOUNTS FOR THE YEAR ENDING DEC. 31, 1853.

HONORARY FUND.		Receipts.	
Balance at Sir S. Scott's, Jan. 1st, 1853...	£1	17	11
Ditto in hands of Secretary	0	9	7
Annual Subscriptions ... ..	...	75	11
		0	0

Donations:

Anonymous, per Rev. Thos. Garnier	20	0	0
Dividend on £300, in the Three per Cents Reduced ...	13	2	3

£111 0 9

Expenditure.

Rent (five quarters)	£37	10	0
Dispenser's Salary	33	15	0
Collector—Poundage, etc... ..	4	8	0
Printing and Stationery	10	18	7
Coals and Chandlery	5	2	11
Use of Committee Room, Wages, etc.	10	9	0
Surgical Instruments	2	10	5
Furniture	3	15	8
Sundries	1	2	5
Balance at Sir S. Scott's	£0	8	6
Ditto in hands of Secretary	1	0	3

£111 0 9

MEMBERS' FUND: Receipts.

Balance at Savings' Bank, December 31st, 1852 ...	£0	12	8
Subscriptions	151	17	8
Midwifery Fees	35	3	6
Interest at Savings' Bank... ..	1	18	8

£189 12 6

<i>Expenditure.</i>	
Drugs and Druggist's Sundries	£46 18 11
Dispenser's Salary (one-fourth)	11 5 0
Dispenser, for posting Members' Ledger	5 0 0
Paid to Medical Officers, Midwifery Fees	35 3 6
Ditto Surplus of Subscriptions	91 0 0
Balance at Savings' Bank	0 5 1
	£189 12 6
<i>DISTRICT CASES: Receipts.</i>	
All Souls, 560; Trinity, 298—858, at 2s. 6d. each	£107 5 0
Interest at Savings' Bank	0 6 5
<i>Expenditure.</i>	
Payable to Medical Officers	£107 10
Balance at Savings' Bank	0 1 5
	£107 11 5

In 1857, the financial arrangements were altogether changed by the amalgamation of the Honorary Fund with the Members' and District Funds, and by a resolution of the Committee that the sum paid to the surgeons should not exceed £60 each for the two who then held office, nor £40 for the additional medical officer whom they had resolved to appoint. Mr. William Sedgwick, well known by his writings on cholera, was the gentleman appointed on this occasion, and he held office for thirteen years. A paid secretary was also appointed, at the very moderate salary of £15 a year; and, though this has since been doubled, it is certainly not excessive even now, considering the work that has to be done for it, since, in addition to the ordinary routine of attending monthly committee-meetings, keeping minutes of the proceedings, and obtaining subscriptions, the following books have to be kept: (1) entry-book, in which are entered the names, addresses, ages, trade, and date of entry of all members, as well as their weekly earnings and the rent paid by them; (2) members' cash-book, containing a daily statement of moneys received by the dispenser, with the paying member's name, number on the books, date of last payment, and amount paid; (3) members' ledger, in which a yearly account of all the above particulars relating to each member is kept; (4) general cash-book, in which all receipts and expenses are entered; (5) general ledger, containing yearly accounts, balance-sheets, etc.; (6) statistical tables, showing number of patients, and whether cured, relieved, dead, etc.

In 1862, by another resolution of the Committee, the salary of the senior surgeon was fixed at £40, and that of the two juniors at £30 *per annum* each; while, as will be seen by the balance-sheet given below, the dispenser's salary has been very properly increased to £72 (the greater part of his time being employed); and the drug-bill has risen from £16 10s. 1d. in 1845, to £79 19s. 3d. in 1870. As, however, 3,355 cases of illness were treated for this latter sum (and this gives an average of but sixpence per case), it can hardly be considered an extravagant amount; while one can only wonder how, even with salts and senna as the basis of the majority of prescriptions, some two thousand cases of illness could have been treated in 1845-46 for less than £18 each year, giving an average of about twopence per case! The other items of expenditure in the following account appear to be equally moderate and unavoidable.

ABSTRACT OF ACCOUNTS FOR THE YEAR ENDING DECEMBER 1870

<i>Receipts.</i>	
To Balance at Banker's	£6 9 9
Ditto in hand	1 19 6
Members' Payments	255 13 8
Annual Subscriptions	38 13 6
Donations	5 0 0
All Souls District Visiting Society	4 12 6
Trinity ditto	9 17 6
Midwifery Fees	24 3 0
Dividend on £300 Stock, in Three per Cents Reduced	8 16 8
	£355 6 1

<i>Expenditure.</i>	
By Medical Officers	£100 0 0
Dispenser's Salary	72 0 0
Secretary's ditto	30 0 0
Rent	30 0 0
Drugs (remainder for 1869)	58 11 7
Midwifery Fees	24 3 0
Printing Annual Report, Stationery, and Account-Books	13 8 9
Charwoman	7 16 0
Gas, Coals, Chandlery, etc.	4 5 6
Petty Cash	5 17 8
Collector's Poundage	2 12 0
Repairs	0 8 4
Balance at Banker's	£18 5 3
Less Cheque not presented	12 3 10
	£6 1 5
Balance in hand	0 1 10
	6 3 3
	£355 6 1

Outstanding Liabilities (for Drugs), £79 19s. 3d.

By referring to the table given at page 577, it will be seen that this year (1870) was the one in which the largest payments were received from the members; and yet, had not these been supplemented by subscriptions and donations, there would have been absolutely nothing to go to the doctors; and even with these aids the payment in full of their very inadequate remuneration left £20 of the drug bill, which properly belonged to the year, unpaid. In consequence of these financial difficulties, the Committee, towards the end of 1870, increased the admission fee, for those requiring immediate attendance, from half-a-crown to five shillings; and in the course of the present year (1873) raised the terms of membership to the scale recommended by the Charity Organisation Society—viz., sixpence per month for an adult, twopence per month for man and wife, and twopence per month for a child. The immediate effect of the first alteration was to diminish the number of new members, which fell from 801 in 1870, to 479 in 1871, and 344 in 1872. What may be the effect of the second, which only came into operation on July 1st, it is yet too soon to determine, but the necessity for two such changes in so short a space of time is much to be regretted.

MR. MAUNDER has been appointed Consulting Surgeon to the Merchant Seamen's Orphan Asylum, Snaresbrook, *vice* Mr. Startin, deceased.

WE are requested to state that the subscription list of the Fergusson portrait fund is about to be closed, and that those who are desirous of contributing are requested to communicate with the Honorary Secretary.

MR. SYDENHAM J. KNOTT has been appointed Medical Tutor and Curator to St. Mary's Hospital Medical School, and Superintendent of Galvanism to the Hospital. The office of Resident Registrar and Chloroformist to the Hospital, which Mr. Knott has held for the last four years, thus becomes vacant.

PROFESSOR PALMIERI, director of the observatory of Vesuvius, has constructed for the Empress of Russia a metallic thermometer which gives indication of any marked change in temperature by the ringing of little bells. The instrument is intended to be suspended in her Imperial Majesty's travelling carriage.

WE note with welcome the appearance at Melbourne of the first number of the *Australian Medical and Surgical Review: a Monthly Journal of Medical and Surgical Literature and Science*. It is a resumption of a journal which had ceased to appear. It contains matter of interest, especially a valuable paper on Excision of the Hip-joint by Mr. Beaney.

TYPHOID FEVER IN THE UNIVERSITY OF CAMBRIDGE.

WE learned last week that an outbreak of typhoid fever had occurred in Cambridge, which rendered it desirable to send home many of the students earlier than usual. We have instituted inquiries on the subject, and have ascertained the facts, which are of an obscure and mixed character. It is satisfactory, however, to be able to state that the cases are not nearly so numerous as they are reported to be. The outbreak is almost entirely confined to two parts of the town, which are widely separate from each other. Since the beginning of October there have been a few cases of typhoid in the town—two or three cases having occurred in Free School Lane, King's Parade, and Bene't Street. Since then, other cases have appeared in Queen's and Caius Colleges, and on Pens Hill and Market Hill, which are contiguous to Bene't Street and at the back of King's Parade. There has only been one case in Queen's College, and not more than seven in Caius College, one of which has terminated fatally. The sewers from Free School Lane, Bene't Street, and King's Parade, discharge into the sewer which runs along Trinity Street, parallel to the new buildings of Caius College—the portion of the College in which all the cases, except two, have occurred. The new buildings of Caius College were erected three or four years ago by Mr. Waterhouse, and, as far as can be ascertained, the sanitary arrangements of this portion of the College are most perfect; the slops, etc., from the students' rooms not being carried off by drains in the buildings, but carried out of the rooms and poured down gully-holes in the court. From the suddenness of the outbreak, it was at first thought that the milk might be the source of infection, especially as the disease was found to be particularly prevalent in families in the town supplied with milk from the same source as Caius College. The dairy which furnished the milk has, however, been thoroughly examined, and we are informed that no cases of typhoid fever have occurred in the family of the person who keeps the cows, and there is no probability of the water supplied to the house having been contaminated with any excreta. Several well known families in Cambridge are supplied with milk from this dairy, and have, as yet, escaped the fever. As far as can at present be ascertained, the most feasible explanation of the outbreak in the parts of the town named above, is the escape of sewer-air from the imperfectly trapped drains—this sewer-air most likely also containing the specific poison of typhoid, as fever has existed in these parts of Cambridge since October. The only two Colleges in which fever is known to exist (Queen's and Caius) are supplied with water from the Cambridge Waterworks, which are situate at Cherry Hinton, about two miles from Cambridge. The dairy alluded to is also supplied with water from the same source. This water has been examined by a competent chemist, and found to contain no unusual amount of free ammonia or products of organic decomposition. The fever is not especially prevalent among boating-men; therefore the Cam below Magdalen Bridge, where the sewer from King's Parade, Trinity Street, etc., empties itself, does not appear to be the cause of the outbreak. In another part of the town—Adam and Eve Row, Barnwell—a few cases of fever also exist. There seems to be more probability of the milk being the source of infection in this neighbourhood, but we have not yet had sufficient time to investigate the matter properly. We are informed that there is no proper system of ventilating the town-sewers in Cambridge. We believe the College authorities have taken all precautions to prevent the spread of the disease; and the Town Commissioners are taking all necessary steps in the matter. Cambridge is not yet provided with a medical officer of health.

MEDICAL MEMBERS OF THE FRENCH NATIONAL ASSEMBLY.

A WRITER in *La France Médicale* states that twenty-seven members of the medical profession hold, or have held, seats in the present National Assembly of France. Of these, three have died; viz., M. Kuss, mayor of Strasburg during the Franco-German war, M. Ducoux, and M. Barbaroux. Two have resigned; M. André, mayor of Ars-sur-Moselle during the siege of Metz, and now prefect of the department of the Isère; and M. Clémenceau, mayor of Montmartre during the siege of Paris. Among

the remaining twenty-two, the following are more or less well known: M. Bouisson, dean of and professor of practical surgery in the Faculty of Medicine of Montpellier; M. Ancelon, known as the author of several popular works on medicine, hygiene, the diseases of the voice, etc.; M. Paul Bert, professor of physiology in the Sorbonne, and prefect of the department of Le Nord during the war; M. Littré, the eminent lexicographer; M. Rampont, who, during the siege of Paris, was director general of the postal department, and organised the system of transmitting communications by balloons, pigeons, photographs, etc.; M. Testelin, the author of several works on diseases of the eye; and M. Naquet, a well known chemist. The others are, MM. Allemand, Bourgeois, Chevandier, Daumas, Labitte, Lebreton, Maure, de Mahy, Morvan, Roussel, de Soye, Taberlet, Thomas, Guyot, and Triginy.

THE ALLEGED MILK EPIDEMIC OF TYPHOID AT MAIDFORD.

AT the meeting of the sanitary authorities at Towcester, on November 25th, Mr. Alfred Haviland referred to the recent outbreak of typhoid fever in Maidford. He said that he was still investigating the subject, although he had satisfied himself of the cause of the epidemic, and therefore, at the earliest possible date, was desirous of communicating his opinion to the rural authority. Maidford is a village situated partly on the Northampton sands, with concomitant iron-stone, and partly on the upper lias clay, which is exposed by the denudation of the upper strata, by the watercourse running along the lower part of the south-eastern side of the village. This sand and ironstone stratum is easily percolated by water, the well-supply of which is derived from its point of contact with the clay. To the north-west of Maidford, there is, on elevated ground, a capping of oolitic limestone; the village, however, with the exception of one or two cottages, does not lie on this formation. These three consecutive strata incline towards the south-east, and the springs indicated naturally follow this dip, as well as the adventitious soakage from the drains and cesspits, which, in many instances, empty their contents into the brook at the south-east end of the village, where there is grazing land occupied by one of the three dairymen of Maidford. The village is quadrangular in form, and it is notable that the south-easterly street, forming the most depressed side of the quadrangle, has suffered the most severely; in fact, during the early part of the epidemic, the cases were almost entirely confined to this quarter, where it is still lingering. The wells at the back of this street are all more or less polluted with sewage. Within the four streets is a square area, where wells, cesspits, manure-heaps, pigsties, etc., are all promiscuously huddled. The surface-drains are roughly built of square slabs of rammel or limestone, uncemented and perfectly pervious wherever a joint exists. This drain runs down the south-easterly street, and receives others which cross the quadrangle, after receiving every kind of filth from a butcher's slaughter-house, and the blood, offal, and other garbage which make up the wash-food of his inevitable pigs. The town well is polluted, and no wonder, since within a few feet of it is to be found a stale old cesspool. Mr. Haviland had examined more than a dozen wells, and found, with one solitary exception, all polluted with sewage. He expressed his strong belief that the present epidemic could not be traced solely to the dairyman's milk, as stated by "The Rector of Maidford" in the *Times* of November 8th. In the first place, the consumption of milk by the villagers previously to the outbreak was exceedingly limited, and the disease was not confined to those who partook of the produce of this particular dairy. There had been throughout two other sources of milk-supply. The dairyman's family was not attacked until more than a month after the first cases had appeared; his well was undoubtedly polluted, but certainly not to a greater degree than those of his immediate neighbours. Mr. Haviland believed that the cause was a general one, and entirely resident in the water, the poison of which would rather suffer dilution than otherwise by admixture with milk: he deprecated the action taken by the rector in writing to the public press before the facts of the case were known, and before he had had time to form his opinion upon the data collected. As a guardian of the poor for his own

parish, he had every opportunity of ventilating his opinions before the board, where his statements might be confirmed or negatived according to their truthfulness or otherwise. As it was, the result of his premature and injudicious interference had been a serious injury to the dairyman accused of spreading the epidemic, and a state of excitement in his village, which tended to weaken instead of strengthen the hands of the medical officer of health, whilst endeavouring to weigh dispassionately all the evidence he could collect. The rector was present, and considered that he had done right in calling public attention to the state of his village, especially as everybody else was writing to the papers on the same subject. At the time when he wrote, he believed that many of the cases were traceable to drinking the milk from the dairy to which he alluded. Mr. Haviland recommended that the sanitary condition of Maidford should at once be taken into serious consideration, and that a pure and independent water-supply from the upper and most elevated part of the parish should be obtained without delay, and that the whole system of drainage should be reorganised. The population of Maidford at the last census (1871) was 363, and the number of inhabited houses 83. About twenty families have suffered from the epidemic; they have been attended by Mr. Arthur Hill of Blakesley, who reports that, although many of the cases have been of a severe type, none have proved fatal.

A MEASURE OF PROTECTION.

AT a meeting of the the Gloucestershire Branch of the British Medical Association held November 25th, the following resolution was adopted, on the motion of Dr. Bond, Medical Officer for the County of Gloucester.

"That, in the opinion of this meeting, it is essential to the protection of the public health that all premises on which milk, butter, or cheese, are stored or made for sale, should be placed by law under the supervision of a medical officer of health, who shall have adequate powers to deal with such premises in case he shall consider their condition to be at any time prejudicial to health."

VERY LENIENT.

A MAN named Calvert, described as "an unqualified practitioner, who used to sign certificates in some other person's name," attended this week before the Blackburn magistrates to explain how it was that he had signed a certificate of illness with the name of "Robert Wilson, L.F.P.S.G. and L.M." He alleged that he had Mr. Wilson's authority to do so; but this Mr. Wilson, who was present, entirely denied. The clerk, in communicating the decision of the magistrates to Calvert, who was very deaf, said: "The magistrates will overlook the case this time, but they wish you not to repeat it in future; if you do, the law will have to take its course, and that means three months' imprisonment."

THE DETECTION OF STONE.

THERE was a large muster of surgeons at the Medical Society, on Monday evening, to hear Mr. W. D. Napier's description of his instruments for the detection and removal of stone in the bladder. The diagnostic properties of the sound or "detector" invented by this gentleman, depended on its beak being coated with lead, and on the soft and polished surface thus obtained becoming scratched by the slightest contact with any hard substance. If the calculus be small, or if fragments remain after crushing operations, recourse must now be had to the second instrument, which consists of an India-rubber tube, with expanded extremity, not unlike an ordinary convolvulus. Introduced in a folded condition through a species of catheter tipped with cocoa-nut butter, the removal of the cannula permits the full opening out of the cup, which acts as a species of wing in retaining the instrument towards the neck of the bladder. The force of gravitation now inclines any foreign body to be drawn within the pliable and elastic walls, and the process of removal may be completed without any fear of injury to the mucous membrane from the sharp edges of fragments. Mr. Napier concluded by an interesting demonstration on a prepared bladder and urethra, and an animated discussion ensued, in which most of the sur-

geons present took part. We congratulate Mr. Napier on having brought his labours to so successful an issue, and can only re-echo the general opinion of the meeting in according him a hearty vote of thanks for the great energy and ingenuity he has displayed. We shall publish the paper, with illustrations, in an early number, and a report of the discussion.

THE ASHANTEE WAR.

IN addition to the large staff of army medical officers now serving there, or *en route* to the Gold Coast, we (*Army and Navy Gazette*) find, on reference to the *Navy List*, that Sir Garnet Wolseley can now command the services of no fewer than from twenty-five to thirty efficient naval surgeons of different grades. The *Times* special correspondent, lately writing from head-quarters, states that Mr. A. Adams, borne as a supernumerary surgeon on the books of the *Rattlesnake*, had behaved well before the enemy. This gentleman has been little more than twelve months in the service, and has already gained for himself a high reputation. When Colonel M'Neill was wounded, Mr. Adams, who was attached to the troops, coolly tied up the injured arteries under a heavy fire from the enemy, displaying the *sang froid* found only, as a rule, in veterans.

HOSPITAL CASUALTIES.

PUBLIC attention was drawn a few days ago to some remarks by the sitting magistrate at Lambeth Police-court, as to an apparent want of humanity in the authorities at the Westminster Hospital, in the case of a man charged with an attempt to commit suicide. This man, William Jackson, had flung himself into the river at Westminster Bridge, had been rescued, taken to the hospital, and, after a short detention, while his clothes were still soaked with wet, he was allowed to leave in charge of a constable, who took him to the police-office. There, so soon as his plight was discovered, his clothes were dried in the gaoler's room. It took four hours to make them fit for wearing. When the case was first brought before him, Mr. Ellison made some strong remarks on the conduct of the hospital authorities, saying he was glad to find that there was more humanity in a police-court than at the hospital. The case was all the worse because Jackson was suffering from asthma—a fact which the nurse at the hospital, who had charge of the wet clothes, very well knew. In consequence of Mr. Ellison's remarks, the authorities at the hospital took up the case, and sent their secretary, with some of the officials, to make a statement on the subject. It threw little additional light on the matter, however, and only made Mr. Ellison so far modify his remarks as to acquit the authorities of want of humanity, and charge them with nothing worse than neglect. Coming from such a quarter, says the *Daily Telegraph*, the accusation is a grave rebuke. Rightly or wrongly, an impression exists too generally among the poor, that their patients are treated with roughness and offhand celerity by the subordinates at these great institutions. A certain amount of this is perhaps inevitable, for the staff are generally overworked, and sometimes hurry, which may seem heartless to a sick man, can scarcely be avoided. But a perfunctory, wholesale way of dealing with the sufferers should not be permitted to merge into harshness or neglect, and this appears to have been the case with the poor man Jackson. If the authorities had wanted to get him off their hands quickly, they should at least have made such allowance for his ailment as to spare four hours more to dry his dripping clothing. We have not happened to notice the precise facts which have elicited these comments; and we notice them here, partly because the authorities may have really more satisfactory explanations to offer than are here described, and partly because it is important that dressers and house-surgeons should remember how deep is their responsibility, how largely the reputation of their hospital is concerned in their diligent, earnest, and considerate performance of the functions entrusted to them; and how easily a little carelessness in word or deed may seriously affect the public estimation of their *Alma Mater*—and this every good student justly cherishes as dear to him. Considering the very responsible character of the duties entrusted to very young men as dressers and house-surgeons, it is

creditable to their sense of duty and general efficiency that there are so few complaints. But there are some sad exceptions; and three very gross cases of malpractice from the ignorant presumption of a student acting as dresser at one hospital have been recently brought under our notice. They are all three cases of unreduced dislocation treated for weeks as fractures. There is no doubt that in all three an action for damages would have lain. There is, it is certain, a good deal of malpractice arising out of the carelessness of some dressers and young medical officers; and an occasional caution always to consult their seniors when in doubt, and always to treat each patient as if the issue of his case were of the utmost importance, will not be misplaced.

THE ANATOMY ACT.

At a recent meeting of the West Bromwich Board of Guardians, a communication was read from the authorities of the Queen's Hospital, asking for the dead bodies of unclaimed paupers for anatomical purposes. It was proposed that the application should be acceded to, on the ground that the Board, by granting the request, would benefit medical science. On the other hand, it was urged that the course proposed would be repugnant to the ratepayers, who strongly objected to these anatomical experiments. In the end, it was decided that the request of the hospital authorities should be complied with.

THE SEWAGE DIFFICULTY AT BIRMINGHAM.

An important report on the new sewage system in course of adoption in Birmingham has been presented to the Town Council of that borough. The Rochdale method of interception from the sewers, and weekly collection, is being gradually extended with the best results. The intercepted sewage is mixed with screened ashes and sold as valuable manure. No difficulty has been found in getting the landlords to adopt the new system, which is being carried out in some public institutions with success. The purification works outside Birmingham are also being successfully developed, and the water turned into the river Tame in a comparatively pure state. The solution of the sewage difficulty, which at one time appeared impossible, is now much nearer attainment.

M. DE LA RIVE.

M. DE LA RIVE, of Geneva, died at Marseilles, on his way to Cannes, in the seventy-second year of his age, on November 27th. He was not, as has been described in the papers, a physician as the English word signifies, but a physicist. He never had a medical diploma. He is perhaps best known as an original worker on electricity; and his work on that subject was long the standard text-book throughout Europe, and is published in French, English, German, and Italian. He was intimate with Davy and Faraday, and with all the scientific celebrities of that day; and his family and friends have been long connected with the University of Geneva, where M. de la Rive himself formerly held a chair. He was a corresponding member of the Institute of France, and a D.C.L. of Oxford.

OPHTHALMIA IN PAUPER SCHOOLS.

DR. W. O. MARKHAM, writing on this much debated subject in the *Times* of November 24th, says "After much experience, the conclusion to which I was at last driven was this, that though the disease may, by constant and minute care, be prevented from assuming a large and dangerous epidemic form, measures more radical and difficult of fulfilment than those many hygienic rules (properly supported by Mr. Carter) are necessary to expel the disease from the schools. The disease is very contagious. It affects especially the younger children, and, unfortunately, a child once affected too frequently remains so, on and off, if he continue in the school, until he has grown out of the disease—i.e., in the course of years. Such a child is a constant focus of infection. He cannot be kept always in hospital. He recovers from his attack, and is remitted to the schoolroom, relapses, spreads the disease, and is again sent to hospital—often, by the way, doing his best to reproduce the affection by mechanically irritating his eyes, in order that he may enjoy the *otium* and sweets of hospital life. I think I may say that no

hygienic rules can entirely meet this case. The unwilling conclusion to which I am driven is this: that the radical remedy is the entire separation of the diseased from the healthy, once and always. The carrying out of this would require the removal into a separate establishment of every child affected with the disease, and such an establishment as would necessarily be both a hospital and a school—a hospital where the child may be treated when under the acuter influences of the disease, and a school where he may attend in the intervals of recovery from such attacks. At present it is during these intervals, after his discharge from the hospital and on his readmission to the school, that the infection is mainly, if not solely, kept alive." The letter is written with all Dr. Markham's wonted ability and force, and will make his many friends regret more than ever his long retirement from public and professional labours.

THE GENERAL MEDICAL COUNCIL.

THE Crown nominees of the General Medical Council whose places became vacant by expiry of term of office have been reappointed, with the exception of Sir Robert Christison, who retires. Sir Robert Christison is the most authoritative medical person in Scotland, and his presence, therefore, will be much missed from the Council. He is replaced by Dr. Warburton Begbie, who stands perhaps next to Sir Robert Christison in medical position in his country, and with whose excellent qualities as a writer and thinker our readers have had recent opportunities of renewing their knowledge. Dr. Begbie will be a valuable addition to the Council. We believe that the Medical Council will, by an oversight of their landlord, be enabled to retain possession of their present unsuitable premises, pending the result of communications with the Government.

APOPLEXY AND DRUNKENNESS.

DR. J. MILNER FOTHERGILL, of Lower Seymour Street, writes to us:—

"I read your editorial remarks on this vexed question, in your issue of November 8th, with much interest. The diagnosis is often most difficult; and, where the two are blended, well-nigh impossible. Permit me to put forward what appears to me to be, in all probability, the pathology of the condition about which so many unfortunate mistakes are made, especially by the police. The cases generally occur in the street, late on in the day, and in elderly persons, usually males. From some little experience of such cases, I venture to assert that the victim usually presents the external indications of chronic renal disease, premature senile degeneration. Here we know that the muscular walls of the peripheral arterioles are hypertrophied, while there is also commonly hypertrophy of the left ventricle. Between these two there is high-blood tension (*Ueberspannung*), and consequently, in time, arterial degeneration, or atheroma. A person in this condition partakes of alcohol, and goes out into the cool air, which arrests the relaxation of his cutaneous vessels, while the alcohol is increasing the action of his heart. The effect of alcohol is also to dilate the cerebral vessels, and so the impaired elastic coat no longer receives the support usually furnished to it by the semi-contracted muscular coat. The unsupported degenerate elastic wall is exposed to a high blood-pressure, and gives way; the effects of a clot in the brain are added to the effects of the alcohol; police interference follows: the fumes of alcohol are floated on the breath; and the victim of apoplexy is removed to the drunkard's cell of the police-station, where he dies. This is doubtless very distressing; but has not the policeman a difficulty before him which the best educated members of the profession might not always find it easy to solve? The more reason why the police should not take the responsibility of deciding the question upon themselves."

A DYING FAITH.

THE utterances which were suggested to us by the recent debate at the Clinical Society on Dr. George Johnson's cases of poisoning by a homeopathic solution of camphor, have been pretty widely reproduced here and abroad. They have elicited an answer from the journal, which has been forwarded to us, and which, we imagine, represents homeopathic thought; it is the *Monthly Homoeopathic Review*. It sums up the discussion as one which shows that "some medical men who practise homeopathically, as far as they are able to do so, occasionally use

drugs in massive, and probably unnecessarily massive, doses". The "probably" is introduced with admirable *naïveté*. Some of the facts, however, are dealt with. Mr. Carter's statement is "an atrocious libel, which we defy Mr. Carter to substantiate". Dr. Stewart's statement is equally without foundation. "How any physician of the standing and reputation of Dr. Stewart could have stooped to represent so palpable a fabrication as this, we are at a loss to explain." These little-amiabilities, however, are unimportant compared with the general admissions. It is sufficient to know that for "homœopathic" we must no longer read "small", but "massive", and "in some cases probably unnecessarily massive, doses". The suggestion of the editor for preventing misapprehension is the calm reminder that "if it is necessary for a person to take five or ten drops of the tincture of nux vomica, for example, this dose ought to be prescribed with a due quantity of water, and not to be left to the patient to drop out of a two-drachm bottle". There can be no doubt of this, and we are happy to find ourselves so far in agreement with the homœopathic editor. But the practice would be open to this objection, that the patient might then find out that, after all, he was taking a real old-fashioned medicine, and his disgust would be equal to that of the *bourgeois gentilhomme*, who discovered that he had all his life been talking "prose", and that it was not a new-fangled accomplishment.

THE SPIRIT OF NITRIC ETHER.

We recently reported, proceedings instituted against a chemist for selling the well-known substance, commonly known as effervescing citrate of magnesia, but which from the necessity of the case is really a citro-tartrate of soda with magnesia. We considered those proceedings very oppressive and undesirable, and regretted that a conviction was obtained against, as we think, and as is now pretty general admitted, the equity of the case. The following important prosecution appears to us equally ill-judged and oppressive, and we can but rejoice that it failed. Proceedings so harsh and ill-founded are quite contrary to the public interest, and can only tend to bring an useful Act into public odium. At Westminster, Mr. George Fenton, surgeon and chemist, of Great Smith Street, Westminster; Mr. E. D. Doughty, of William Street, Knightsbridge; Mr. W. S. Saxby, of 11, Tothill Street, Westminster; and Mr. W. S. Barton, of 8, Moreton Street, Pimlico, were summoned by the Board of Works for the Westminster District for selling an adulterated drug, *spiritus ætheris nitrici*, or sweet spirit of nitre. The purchase of the article at the shop of Mr. Fenton having been proved by Mr. Owen Williams, one of the sanitary officers, Mr. Dupré, the analyst, said the article was adulterated about 10 per cent. with spirits of wine and a little water. He based his opinions upon the principles laid down in the *British Pharmacopœia* of 1867, which prescribed how the spirit was to be manufactured. The spirit was formerly manufactured from nitric acid and spirits of wine; but, since 1867, the *Pharmacopœia* had introduced the use of sulphuric acid and copper. He considered that was the only way to make it; and if not made so it was adulterated. He could not tell whether the extra spirit had been added before or after the process of distillation. The preparation now under investigation was very largely sold in London. People preferred the old spirit as manufactured by Herring and Co., of Aldersgate Street, who were the largest manufacturers of it; but he was afraid that for many years the public had been supplied with an article not properly manufactured. He considered that adulteration was the addition of any foreign body; but the absence of any necessary ingredient would constitute an adulteration for the purposes of the Act. Mr. Wontner, for Mr. Fenton, characterised the proceedings as an experiment to obtain a conviction and swoop down upon the whole of the profession who did not have this spirit manufactured in accordance with the prescribed rules of the *Pharmacopœia* of 1867. Such a crusade the manufacturers and pharmacists of the country would resist to the utmost, for, according to the theory of the prosecution, the Board of Works were to hold up the *Pharmacopœia* of 1867, and say, "You shall manufacture your drugs our way, and not your own; we don't

charge you with fraud, neither with selling a spurious article, nor increasing bulk, but make your drugs our way." The public preferred this spirit made in the old way. With regard to the adulteration with spirits of wine, as alleged by the analyst, it was dearer than the spirit in question, and, therefore, any fraud was out of the question. The same applied to the increase of the bulk and its deleterious effects; but, apart from that, he submitted that it was not a drug, and that there was no adulteration; and the Adulteration Acts applied to something done with the view of fraud and gain, and had nothing to do with the business of the trader or manufacturer. Mr. Charles Lumley, Examiner of the Pharmaceutical Society, described the old and new processes of manufacture, and confirmed Mr. Wontner as to the much greater demand for the old than the new spirit. Mr. Arnold asked Mr. Rogers whether he could carry the case any further? Mr. Rogers left the matter in the hands of the Court: the local authority was bound to move on the certificate of the analyst. Mr. Arnold allowed costs—£3 to Mr. Fenton, 21s. to Mr. Burton, and £2 12s. to Mr. Doughty; the summonses being withdrawn. He thanked Mr. Wontner for the way in which he had conducted the case.

THE ROYAL SOCIETY.

THE anniversary meeting of the Royal Society was held on Monday last. The President, Sir George Airy (Astronomer Royal), delivered the anniversary address, and resigned the position of President, which he has held for two years. The Copley medal was awarded to Professor Helmholtz of Berlin, in recognition of his eminent services to science. A Royal medal was presented to Dr. Allman, F.R.S., for his important investigations in zoology and botany; and a Royal medal to Professor H. E. Roscoe, F.R.S., of Owens College, Manchester, for his chemical researches. The following officers and Council were elected:—*President*: Joseph Dalton Hooker, C.B., M.D., D.C.L., LL.D. *Treasurer*: W. Spottiswoode, M.A., LL.D. *Secretaries*: G. G. Stokes, M.A., D.C.L., LL.D.; T. H. Huxley, LL.D. *Foreign Secretary*: A. W. Williamson, Ph.D. *Other Members of the Council*: Sir G. B. Airy, K.C.B., M.A.; Sir B. C. Brodie, M.A., D.C.L.; A. Cayley, LL.D.; John Evans, Sec. G.S., F.S.A.; D. Hanbury, Treas. L.S.; N. S. Maskelyne, M.A.; J. C. Maxwell, M.A.; C. W. Merrifield, Sec. I.N.A.; J. Prestwich, V.P., G.S.; A. C. Ramsay, LL.D.; Rear-Admiral G. H. Richards, C.B.; G. Rolleston, M.D., M.A.; J. B. Sanderson, M.D.; W. Sharpey, M.D., LL.D.; F. Sibson, M.D.; Major-General R. Stachey, R.E., C.S.I. Professor Miller has retired from the post of Foreign Secretary, which for seventeen years he has worthily occupied. The anniversary dinner was held at Willis's Rooms; the new President, Dr. Hooker, in the chair, supported by the Duke of Argyll, Lord Aberdare, Mr. Cardwell, Mr. Lowe, Mr. Forster, Sir J. Colville, Sir Arthur Helps, Sir G. Airy, Mr. C. Barry (architect of the new house), and a large number of the leading Fellows of the Society.

IRELAND.

MR. C. R. C. TICHBORNE has been appointed lecturer on chemistry in the Carmichael School of Medicine.

THE Board of Trinity College have appointed Dr. Mapother as Examiner in Pathology and Hygiene for the Examinations for Medical Degrees and Diplomas in State Medicine about to be held.

ESMARCH'S BLOODLESS METHOD OF OPERATING.

THIS plan was lately used in Dublin by Mr. Benjamin Wills Richardson, of the Adelaide Hospital. The patient was a youth, aged about 18, whose thigh was removed in its lower third, for pulpy degeneration of the synovial membrane of the knee-joint. Very little blood was lost, owing to the plan of procedure recommended by Dr. Esmarch having been adopted. The popliteal artery was secured by means of the *presse-arrière*, an ingenious instrument, which Mr. Richardson uses for applying to arteries instead of ligatures. The patient has made a very good recovery, the stump being dressed with carbolic acid in combination with castor-oil.

THE SUPPLEMENTARY ARMY MEDICAL WARRANT, AND THE LETTER OF LORD LANSDOWNE.

IN reply to the letter from Lord Lansdowne (covering a copy of the Supplementary Royal Warrant of November 4th), which we published on November 8th, the following communication has been forwarded, by direction of the Parliamentary Bills Committee of the British Medical Association.

MY LORD,—I have the honour to acknowledge your letter of the 3rd November, enclosing a copy of a Royal Warrant dated the 23rd day of October, and stating that Mr. Cardwell is anxious that no reasonable ground of dissatisfaction should exist among the medical officers of the army, nor any which he can remove consistently with the general scope of the new arrangements. In respect to that generous expression of a desire which will certainly be highly appreciated by the medical officers of the army, by the members of the British Medical Association, and by the medical profession generally, I beg leave to submit the following observations on the subjects treated in your letter, and to request for them Mr. Cardwell's further favourable consideration.

The regranting of the 17s. 6d. a day to surgeons of fifteen years' service is only a restoration of former rights, and it seems hard that it should operate so as to deprive officers of any advantages that were intended for them by the new arrangements. In your letter, reference is made to certain modifications which are to be made in the scheme for early promotion in consequence of the restoration of the 17s. 6d.; but no details are allowed to transpire. If it is contemplated to suspend promotion, which, it was understood from Mr. Cardwell's statement, was to be the ordinary rule at fifteen years' service, it will not be accepted as an equitable proposal; for it is a clause merely providing for a contingency, and in no way drawing upon the coffers of the State. It was surely not contemplated that surgeons of fifteen years' service who remained unpromoted, not from their own incompetency or misconduct, but from the exigencies of the service, should be fined 2s. 6d. a day for their misfortune. It is further to be remarked, that the promise of promotion at fifteen years' service was nowhere positively made, either in the Warrant or in the statement of Mr. Cardwell; and, although the spirit of the promise would no doubt have been loyally carried out during the existence of the present Ministry, it was no way binding on any future administration. Experience having shown that there is but little security for the continuance of privileges even when apparently secured by Royal Warrant, it was this feeling of uncertainty that made medical officers anxious to secure the privileges they already possessed, but without prejudice to any improvement of condition which the new Warrant might confer. It will surely be admitted that a new Warrant, if it does not improve the condition of a department, ought at least to leave it in no worse state than before. So far from this being the case with the last Warrant, the only changes made by it were to the detriment of the medical officers; viz.:

1. Withdrawal of the 17s. 6d. a day after fifteen years' service;
2. Withdrawal of forage as an appanage of rank;
3. Removal of medical officers from their corps, without definitive establishment of a general medical staff; medical officers still paying all contributions and subscriptions to corps, while no longer practically forming an integral part of them.

Against these, the only advantage was the *probable* promotion of men after fifteen years' service.

By the supplementary Warrant, the 17s. 6d. is restored; but, in return for this, the medical officer is threatened with the withdrawal of the sole advantage conferred; whilst the forage-clause is only operative for officers promoted before the date of the Warrant. The result is, that the Warrant leaves the department no better than before, but so much the worse, that forage is no longer an appanage of rank, and that the old regimental system is broken up, in so far as it was advantageous

to the medical officer, without an unified staff-system taking its place.

As regards the forage-clause, its results will be, that in ten years there will not be a single mounted officer in the executive ranks of the Medical Department.

In conclusion, I have reason to believe that the officers of the department feel that they are purely sufferers by the late Warrant, as, by taking away with one hand the small advantages doled out with the other, it has only added to the feelings of vexation and discontent which have prevailed in the department ever since the Warrant of 1858 was first tampered with twelve years ago. It will, it is to be feared, become more and more difficult to fill the ranks of the department from civil life, if this feeling of insecurity is fostered, as it has been, by continual changes, small so-called economies at the expense of the officers, and vexatious withdrawal of, or interference with, privileges which even a Royal Warrant seems powerless to secure.

I have evidence that these feelings are general throughout the service; that they threaten its efficiency; that they are regarded with natural sympathy by the civil profession, and in the schools from which the Medical Department is recruited; and I beg leave, therefore, to urge them upon the serious consideration of Mr. Cardwell.

I have the honour to be, sir,

Your obedient faithful servant,

ERNEST HART,

Chairman of the Parliamentary Bills Committee.

THE NAVAL MEDICAL SERVICE.

ON Wednesday last, a deputation of the Parliamentary Bills Committee of the British Medical Association waited, by appointment, upon Sir A. Armstrong, K. C. B., the Director-General of the Medical Department of the Navy, at the offices of the department, Admiralty, New Street, Spring Gardens. With Sir A. Armstrong was Deputy Inspector-General Dr. Mackay.

Mr. HART stated to the Director-General that they were desirous to bring under his notice certain complaints to the effect that surgeons in the Navy had been refused permission to resign. It was well understood that no officer could leave the service of his country unless his resignation were accepted by the authorities; but it was also believed that it was customary to grant such permission, unless there existed very strong and special reasons to the contrary. The details of certain cases were mentioned; and Mr. Heckstall Smith referred to a case in which the existing belief, that medical officers had no longer the option of resigning their commissions, had operated to prevent a very promising and highly qualified young man from entering the navy.

Sir ALEXANDER ARMSTRONG expressed his pleasure in affording the explanations which were asked, and his satisfaction at the course taken by the Committee of the Association in placing before him the subjects of complaint before pronouncing upon their validity. It was not the fact, that naval medical officers were not allowed now, as formerly, when the exigencies of the service admitted it, to resign their commissions when they had shewn a desire to endeavour to fulfil their obligations to the country whose service they entered. In fifteen instances in recent years, of which he gave particulars, medical officers had been freely allowed to resign, in several for reasons solely connected with their private affairs; but it must be remembered that officers, on entering, signed an obligation to engage for general service, and attested their readiness to proceed on duty abroad whenever required to do so. This being so, he did not feel justified in recommending, nor did the exigencies of the service allow, that medical officers, who had just received a costly special education at Netley, should be permitted to throw up their commissions before fulfilling the obligations they had voluntarily contracted of going to sea. If, after a short term of service, any gentleman, for sufficient reasons, seriously desired to resign his commission, or proved himself to suffer from sea-sickness or any other incapacitating cause, he would not be prevented from doing so. There were, to his knowledge, only four cases in which the question had been raised, the resignations having been fewer than in former years. In one, permission had since been granted; and in the others he was prepared, after those gentlemen had given an earnest of their desire to fulfil their obligations, to give the most favourable consideration to any subsequent applications which they might make.

The case of the surgeon of the *Research* was mentioned, and it was stated that his was one of the four referred to.

Sir A. ARMSTRONG said that the opinion of so important a body as the British Medical Association was necessarily influential in determining the degree of favour with which the naval medical service was regarded; and he was desirous of advancing the interests of the service in every way, and should always be prepared and pleased to entertain any statements referring to it from the Parliamentary Committee, and to afford any explanations.

The deputation thanked the Director-General for the information afforded, and expressed their entire satisfaction with the modification involved in the explanation afforded them of the accredited statements that medical officers of the navy could no longer, as heretofore, resign their commission.

EDUCATION OF MIDWIVES.

THE President, Honorary Secretaries, and several Fellows of the Obstetrical Society waited upon Mr. Stansfeld, at the offices of the Local Government Board, on November 21st, to lay before him their views with regard to the instruction and licensing, registration and supervision of midwives. With Mr. Stansfeld were Mr. Hibbert, M.P., and Mr. John Lambert. With the President of the Society, Dr. Tilt, were Dr. Hall Davis, Dr. Madge, Dr. Thomas Chambers, Dr. Branton, and the two Honorary Secretaries, Dr. Phillips and Dr. Aveling.

Dr. TILT said: The subject upon which we have to speak has already been brought before your notice by a deputation from the Parliamentary Bills Committee of the British Medical Association. It is, therefore, unnecessary for me to endeavour to impress you with the whole results of the extraordinary neglect and imperfections of all that relates to the parturition of the lower classes in this country. A state of matters exists here which is not to be found in any other civilised community; and, as some of the facts relating to the present condition of midwives have been pointed out to you by Mr. Ernest Hart at the deputation already alluded to, I will only add one or two remarks. Not only is there a great excess of mortality among parturient women, and a greater number of still-born children than there should be, but there is a great deal of preventable disease among women in parturition, which is caused by the incompetence of their attendants. If some of these poor women escape with their lives, they are often not able afterwards to do a day's work, many of them being permanently invalided, their homes broken up, and their children thrown upon the parish. I believe the expenditure entailed in this way upon this country is certainly far greater than any sum of money which it might be necessary for Government to spend in setting the instruction and licensing of midwives on a reasonable footing. Since we had the honour of coming before you upon this question, or rather upon one which directly relates to it—the urgency of including still-born children in the registration of births—two things have occurred to which I will refer. The first is, that the Royal College of Surgeons, although recognising the importance of licensing midwives, will have nothing to do with it. They referred the matter to a committee, and, on the report of that committee, they said they would have nothing to do with the subject. Their charter will allow them to do it if they choose. I will also call your attention to the fact, that this question was made the subject of a great and serious discussion at the last meeting of the General Medical Council. They determined by a considerable majority that it was a question demanding serious investigation, and they re-appointed a committee to report further upon the education, examination, and registration of midwives. I will make two other remarks on the position of the Society represented here, and on what it has done. The Obstetrical Society was founded sixteen years ago, not only to cultivate all that relates to the advantage of our branch of medicine, but to improve all that concerns midwifery in this country. We are a body of some six hundred Fellows, and we muster in our ranks all the eminent obstetricians in London and the provinces. I mention this that you may understand, should Government think it necessary to form examining boards in different parts of the country, that we are in a position to undertake the task. In 1869, a committee was appointed by our Society to investigate, among other things, the condition of midwives and the proportion of births they attended. Most harrowing descriptions of misery caused by the blundering ignorance of these women were returned, and, as it was found that the medical bodies as at present constituted were unable or unwilling to interfere, our Society determined to organise periodical examinations of midwives, and these examinations are held every quarter in London. The candidates for our diploma have not been numerous, but it is not difficult to understand why such is the case. It is clearly because our diploma has no legal value—no more value, indeed,

than any certificate which any one of us may give in our individual capacity. I have told you what the Society has done to remedy the evils which it has discovered, and “suggestions” are now submitted to you which, if carried out, would, we believe, effect the object we desire. We do not think our scheme perfect. All that we want is to impress upon the Government that something should be done. We do not care whether we are made use of or not; we are ready to be made instrumental in effecting any good, if any good can be done through us. I will now ask you to hear one of our honorary secretaries, Dr. Aveling, who has written a book on the *History and Prospects of Midwives*, and who has given great attention to the whole matter.

Dr. AVELING.—I will not take up your valuable time in endeavouring to enlist your sympathy with the present subject, for I know we have it. I imagine the motives which have induced us to undertake the task of pressing this matter upon your attention are the public safety and the public economy, and, involved in these, the public happiness. On the score of public safety, we think something should be done to improve the condition of midwives. It is cruel to allow ignorant women to cause, by neglect or unwarrantable interference, havoc among poor parturient women. As regards public economy, the pauperising effect of midwifery malpractice should be remembered. When a woman with a family dies, the children are often thrown upon the parish; and when she does not die, she is sometimes thrown upon the parish in consequence of the injuries she has received. I have now under my care a poor unmarried woman, whose mother is a midwife, and who suffered from neglect in her confinement to such an extent, that she is quite unable to work for her living, and has for five years been a burden on the parish in which she lives. I will now make a few remarks upon the “suggestions,” a copy of which I had the honour of forwarding to you a few days since. [The suggestions referred to were published at page 608 of the JOURNAL for November 22nd.] First, with regard to the “Definition of a Midwife.” You will observe that we look upon her more as a midwifery nurse than as a medical woman. I have calculated that the number required in England and Wales would be at least 10,000. It can scarcely be expected that this number of women could be trained to a much higher position than medical and surgical nurses, and we therefore limit the qualifications which we would demand of a midwife to those enumerated in our definition. With regard to the instruction of midwives, three methods have been adopted in various countries. The first is a sort of missionary system, in which the teachers go about from place to place instructing all the midwives they meet. The second is by means of one large institution, in which midwives are able to attend midwifery lectures and cases of labour. The third is that which we recommend; the midwives receive oral instruction from a skilled obstetrician at a house or hospital, and clinical tuition at the homes of the patients. As to licensing, this used to be done by the bishops, but now diplomas were given by all sorts of persons. The one I now show you was granted by an individual. It is printed, and has the royal arms at the top. Diplomas of this kind are worse than useless; they deceive the public, and do not guarantee the competency of their holders. You will observe that this diploma represents its owner as having been examined in the treatment of diseases of women and children. This is most dangerous, as it leads ignorant people to believe its owner capable of treating these diseases.

Mr. STANSFELD.—Is this considered a legitimate proceeding?

Dr. AVELING.—There is no law against it.

Dr. TILT.—We do not think it a right thing to be allowed.

Mr. STANSFELD.—Is it considered an unprofessional thing to do?

Dr. PHILLIPS.—We do not consider it a professional thing to do, although the person who signs it is a medical man.

Mr. STANSFELD.—Then this is not a professional document.

Dr. AVELING.—Then as to registration. It is desirable that midwives who have succeeded in obtaining licenses should be registered. This would involve the expense of a registrar, and the publication of a register. It has been proposed that the General Medical Council might issue a sub-register, in which the names of midwives might appear. The system of supervision which we have suggested is certainly the most economical, if not the most efficient. In Prussia, inspectors are employed to go round and visit the midwives periodically. It is their duty to examine the diaries of the midwives, to abstract from them statistics which are of the greatest value. They investigate cases in which death has taken place during labour, and hear any complaints which may be made.

Mr. STANSFELD.—By whom are these inspectors appointed?

Dr. AVELING.—I am not aware. I may quote, in reference to the necessity of supervising this class of women, a portion of a letter from Mr. Henry Bonham-Carter to the General Medical Council, who says, in reference to granting certificates to nurses—“We find that the efficiency of a nurse requires constantly to be kept up by persistent and

strict discipline and supervision," and points to "the strong tendency to self-conceit, inducing them to consider that they had attained all the requisite skill and knowledge, and causing a gradual relapse into inefficiency."

Mr. STANSFELD.—May I take this as a statement of what the deputation would like me to hear?

Dr. TILT.—I take it that Dr. Aveling, in relating what is done in Prussia, a bureaucratic country, did not think that such a system would do in this country. We would rather advise an approximation to the system adopted by the Government of France, where the midwives are kept to certain strict regulations, such as that they should confine themselves to natural labours, and, whenever the case requires it, that they should call in a skilled obstetrician. Also that they should not use instruments, being liable to a fine of one hundred francs for the first offence, and double for the next.

Mr. STANSFELD.—To what extent are instruments used in this country by midwives?

Dr. AVELING.—Not at all.

Dr. TILT.—But there is no law to prevent them from doing so.

Mr. STANSFELD.—But as a fact they do not use them. There are two questions raised; the first is the machinery by which the midwives' knowledge and skill may be tested, and licenses or certificates issued to them. Upon the first part of the subject I understand you to say you desire machinery should be contrived to meet these wants, and that you are comparatively indifferent as to the method; that it might be by employing a society like yours, or it might be through getting others—such as the Royal College of Surgeons—if it could be brought to change its mind. I understand that you do not lay any stress on the nature of the machinery to be employed. Then arises the question as to the training and instruction of midwives. That is a question with which I am only indirectly concerned; and, though departmentally I am interested in it, yet the practical dealing with it will rest with another department. I believe I quote an expression of Dr. Aveling's, when I say you desire women to be midwifery nurses and not medical women. I do not see the reason why you should confine the women to that position.

Dr. AVELING.—The number required would be too great for them all to be medical women.

Mr. STANSFELD.—But I do not see why you should place a restriction if she has the power of rising higher.

Dr. PHILLIPS.—We think women should pass through a complete curriculum of medical education before they are allowed to treat diseases. We are quite willing that they should treat medically, and use instruments, if they have first gone through a proper course of training, and obtained a qualification such as is demanded of medical men.

Mr. STANSFELD.—But that question is not raised; they do not use instruments. It seems to me that throughout the country the position of the poor renders it necessary for them to employ midwives. They being able to afford so little, the ordinary treatment of them in parturition must be by midwives. This being so, I think our desire should be to make that treatment as efficient as possible. It appears to me, from what Dr. Aveling has placed before me, that you probably would have some ten thousand midwives. I do not know what the number to deal with would be, but by far the greater number would probably be of the class which Dr. Aveling describes as midwifery nurses, but I should at the same time like to give them a chance of being midwives. I do not see why it should be said that women should know so much and no more, unless she is to know the whole profession of medicine. It seems to me I am discussing a professional subject with you at a great disadvantage to myself, but it strikes me that parturition, being a natural function, it is not necessary to look at it as a question of disease. I suppose in a great majority of cases nature will do its work, and, if assistance is required which a woman cannot give, it is even then a special kind of assistance, in that it is assisting a natural action. I fail to see that it is impossible to accept the idea that a man or woman cannot become skilled in midwifery without having a complete medical knowledge. I do not entirely say that in all cases midwives would be sufficient. I can quite understand that there might be certain extremely dangerous cases in which it would be folly not to call in the best advice and skill; but I do not see why you should say absolutely that a midwife unless she had received a medical education should be no more than a midwifery nurse.

Dr. MADGE.—We do not desire to keep properly educated women to a low position, but our objection is to unskilled midwives taking the position of medical women.

Mr. STANSFELD.—I do not see why there should not be a middle class and a middle term between midwifery nurses and medical women able to conduct any ordinary case of parturition; it seems to me that there is room for a second class between the two.

Dr. AVELING.—Such a class exists in France, where midwives are divided into first and second class. The fees which could be obtained by midwives among the lower classes in small villages would be too small to remunerate a midwife of the first class, but this might not be the case in large towns.

Mr. STANSFELD.—Then why should we not have a first class?

Dr. TILT.—I think that whatever difference exists is only a question of words. I think we are agreed as to the class of women, but the difference is upon the words midwifery nurse used by Dr. Aveling. We see what is done in France and Prussia works well, and we see also that the lower classes in this country require a similar class of midwifery practitioners called midwives. It is impossible that we can do without something similar to what is in practice in other countries. With regard to your view as to our limiting the women to a certain amount of knowledge, I may say that in France some female practitioners have raised themselves to great eminence in midwifery. These are instances to show that there is no limitation if women have the energy to work and raise themselves to a higher class.

Mr. STANSFELD.—I should like to see a system for the training and education of midwifery nurses, and I should like to give opportunities for those of energy and perseverance to rise up to what may be called first-class midwives. Do you entertain any objection to that?

Dr. AVELING.—Personally, I do not entertain any objection.

Dr. T. CHAMBERS.—We require a class of educated midwives, and, to fill that position, it requires training, for them to understand what is natural and what is not natural. The safety of the patient lies in their being able to determine this; it does not matter what name is given to them.

Mr. STANSFELD.—I am quite one with you in desiring to see the training and licensing of midwives, but I think there should be some differences in their positions. I should not be satisfied with any scheme which was not elastic, and which did not give to women who had means and energy and a desire to acquire higher knowledge and skill, a position something above that of a mere "midwifery nurse."

Dr. CHAMBERS.—Perhaps the phrase of Dr. Aveling was unfortunate.

Mr. STANSFELD.—I do not say that; in fact, I do not think it was unfortunate so far as it expresses the employment of the women, and, while it does not say "so far and no farther shall you go, unless you have a complete medical education," I desire to see your rules elastic. I do not want you to say to any woman, "You shall be a midwifery nurse, but you shall not be permitted to learn more, unless you pass through a whole medical curriculum."

Dr. AVELING.—I used the term "midwifery nurse," not as a substitute for "midwife," but to explain that the woman required must necessarily be more of a midwifery nurse than a medical woman. I would prevent no woman rising as high as her talents and energy will carry her, but the position of a midwifery nurse should be definite and limited. Dental surgeons and pharmaceutical chemists are thus limited; they are not allowed to assume the positions of surgeons and physicians. Midwives must also be content with their lot; they cannot, as I know there is a wish among some in London, rank as medical women until they have been educated and licensed as such.

Mr. STANSFELD.—I quite agree with that.

Dr. PHILLIPS.—It would be a very improper thing to have women not medically trained treating the diseases of parturient women before and after labour.

Mr. STANSFELD.—I do not understand that no woman is to treat a case before or after labour, with proper limitations of course. The certificates would enable them to act, or rather they would not be forbidden to act without a medical license.

Dr. PHILLIPS.—But they would be amenable in case of manslaughter through their want of skill.

Mr. STANSFELD.—Everybody would be liable in a case of manslaughter. There is no difference in point of liability in such a case whether you are trained or untrained—you cannot plead a medical diploma in answer to an indictment for manslaughter. I do not think there need be any difference between us that may be called a difference. I always like to avoid unnecessary restrictive rules. I like to trust to natural results. I hope your views may resolve themselves into having two classes of women. I infer from your visit to me that you desire that I should have some conversation with my colleagues of the Privy Council. I do not think you should leave it altogether in my hands, and I would suggest that you should convey your views to the Privy Council.

Dr. TILT.—Perhaps you will forward them.

Mr. STANSFELD.—I will forward them and discuss them with Lord Aberdare; but do not consider me your spokesman: you should yourselves forward your suggestions to the Privy Council.

Dr. TILT.—We beg to thank you for the attention you have given

the subject. Your suggestions will be laid before the Obstetrical Society, and doubtless acted upon.

Mr. STANSFELD.—I shall be able to say to Lord Aberdare that I take great interest in the matter, and that I believe some scheme to be necessary.

The deputation then withdrew.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 37, Great Queen Street, on Friday, November 29th; present, Mr. Ernest Hart, Chairman; Dr. A. P. Stewart, Dr. Desmond (Liverpool), Mr. Heckstall Smith (St. Mary Cray), Dr. Holman (Reigate), Dr. Farquharson, Dr. A. Henry, and some medical officers of the public service (by invitation). Letters were read from Mr. Eyton Jones and Dr. Steele.

A letter was read from the Marquis of Lansdowne, enclosing a copy of a new Army Medical Warrant, and stating Mr. Cardwell's further intentions in reference to the representations made to him at a recent deputation of the Committee on the subject of the previous Warrant. (This letter has been published at page 553 of the JOURNAL for November 8th.)

The letter was discussed, and the Chairman read a draft reply, which he had prepared. (See page 675.)

It was moved by Dr. HOLMAN (Reigate), seconded by Dr. FARQUHARSON, "That the letter now read be signed by the Chairman, and forwarded to the Marquis of Lansdowne, Under Secretary of State for War."

The CHAIRMAN stated that he had been, in August, requested by the President of the Local Government Board to draw up a scheme for the regulation of the education and registration of midwives—a subject which had been brought under notice on a previous occasion. He had thought it better to defer bringing this subject under the consideration of the Committee until the Obstetrical Society, which was known to be maturing a scheme, had published it; and he now laid before the Committee a *verbatim* report of what had taken place at a recent deputation from that Society to Mr. Stansfeld on Friday last. (See page 676.) He recommended that the whole matter should be brought now by each delegate to this Committee under the separate consideration of his branch, so as to obtain a basis for further action.

Dr. DESMOND (Liverpool) supported this view. The Committee consisted of delegates from every branch, and of members elected by the whole Association at its annual meeting; but provincial members found difficulty in attending as often or as numerous as they wished, and he approved, therefore, of the adoption of some such method as that suggested.

Dr. HOLMAN and Dr. STEWART concurred.

It was resolved: "That Dr. Holman, Dr. Desmond, and Dr. Aveling, be requested to consider the scheme of the Obstetrical Society for the education and regulation of midwives, and make such remarks or alterations as they may consider necessary, and circulate the scheme to the delegates of the branches to this Committee, with the request that they will take an early opportunity of submitting the same to the Councils of their respective branches, and communicate the result to the Chairman of this Committee."

THE BROWN INSTITUTION.

By direction of the Senate of the University of London, the annual course of lectures will be delivered by Dr. Burdon Sanderson in the theatre of the University on successive Tuesdays and Fridays during the present month, at five o'clock in the afternoon. The first lecture will be given on Tuesday, the 9th instant. The following will be the subjects of this lecture.

PART I.—Introductory account of the Brown Institution. Provisions of the Founder's Will relating to the investigation of the diseases of domestic animals. Scheme adopted by the Senate for carrying these intentions into effect. Government of the Institution: the Hospital, the Laboratory, and the annual course of Lectures.

PART II.—Introductory Discourse on the Physiology of Fever in Man and in the Lower Animals. Of the characteristic signs of fever, elevation of bodily temperature is the most constant, and may, therefore, be taken as the starting-point in the investigation of the nature of fever, although it may be eventually shown that pyrexia is not the essential characteristic of the febrile process. Pyrexia can only be understood as resulting from the disturbance of those conditions on which the natural equability of temperature depends. It is necessary, there-

fore, to precede the consideration of it by a discussion of the regulation of temperature in the animal body. The processes by which the equability of temperature is secured may be divided into those which are in constant though unperceived operation, thus constituting the *normal or insensible regulation of temperature*; and those which come into action only when, by conditions arising either inside or outside of the organism, the temperature is already considerably above the normal. These last may be distinguished by the term *reaction*.

A. *Normal or Insensible Regulation*.—The process may be considered either (1) as a function of the whole organism, or (2) as a function of the cell or individual living mass of protoplasm.

1.—a. In the healthy state of the animal body, the quantity of heat produced and discharged in a given time is subject to frequent variation, but the two quantities must necessarily remain on the whole equal, as otherwise the temperature of the body would not be constant. b. This equality is dependent not on the adaptation of discharge to production, but on the adaptation of production to discharge. c. The readiness with which the internal production of heat in the animal body adapts itself to changes of external conditions is dependent on the fact that, under all circumstances, the capacity for production is in excess of the demand; consequently, disturbance of regulation always results in elevation, not in depression, of temperature.

2.—a. In the cell, as in the whole organism, all oxidation is attended with the evolution of heat. b. In the cell, as in the whole organism, all processes of growth or restitution of organic form are attended with involution or disappearance of heat. There are, therefore, in the animal organism two processes, both of which are, in the strictest sense, functions of the cell as an individual, and, as regards the production of heat, opposed to each other. By one of them the cell takes part in the production of heat in the whole organism, by the other in the regulation. Hence the normal or insensible regulation of temperature may be regarded and understood as a function of protoplasm, exercised independently of the nervous system.

B. *Extraordinary Regulation of Temperature, or Reaction*.—Phenomena of reaction in man and in the lower animals. Reaction is a function of the intracranial nervous system. The final cause of reaction is the restitution of the normal temperature. The absence of reaction is one characteristic of fever.

The subject of the second lecture (on December 12th) will be Pyrexia, and its relation to the other constituents of the febrile state.

MIDDLE-CLASS LUNATIC ASYLUM FOR YORKSHIRE.

A PUBLIC meeting in furtherance of a proposed middle-class lunatic asylum for the West Riding was held lately in the Leeds Philosophical Hall, where there was a numerous attendance. The Mayor of Leeds (Alderman MARSDEN) occupied the chair, and among the gentlemen present were Dr. Crichton Browne, of the West Riding Lunatic Asylum; Mr. E. Baines, M.P.; Mr. W. H. Leatham; Mr. W. Middleton, Chairman of the Leeds Board of Guardians; Mr. W. Aldam, Mr. Arthur Lupton, Mr. Wheelhouse, Mr. S. Hey, Mr. Corrie, Mr. Hall, Mr. T. R. Jessop, Dr. Kelly, Dr. Eddison, Dr. Greenhow, Dr. Holdsworth (Wakefield), Dr. Keadall, Dr. Mann, and many others.

The MAYOR opened the meeting, and Dr. Crichton Browne, to whom the origination and energetic furtherance of this valuable and most desirable enterprise is due, read a great number of letters from eminent persons expressing their desire to aid in it, and eloquently and forcibly stated the objects in view, and the grounds for supporting the proposition.

Mr. BAINES, M.P., in moving the first resolution said, that he believed that medical men, who had the best means of judging in this matter, were unanimous in feeling strongly the need for such an institution as the movement was convened to promote. To Dr. Browne, in particular, they were all deeply indebted—not only for having originated the meeting, but also for having illustrated its necessity in a letter which really seemed to leave hardly anything more to be said. The case in favour of such an institution as was now proposed had already been made out in the most triumphant way on the grounds both of humanity and of common prudence. Since the letters published by Dr. Browne and by Dr. Allbutt on the subject, an article had appeared in the BRITISH MEDICAL JOURNAL which assumed the case in the most confident way, giving the West Riding full credit for intending to do what had been proposed; and he hoped the people of Yorkshire would not disappoint the expectations formed of them in that respect. One point which had struck him as important was, that Dr. Crichton Browne assumed that the proposed asylum would be self-supporting. That, as they knew, was not a common feature of such institutions, but he believed there was an actual precedent for this expectation in the

county of Stafford. It was much easier to raise a noble amount in donations than to get gentlemen to bind themselves for an indefinite period to the payment of any considerable sum in annual subscriptions. If, therefore, they could by one great effort in the West Riding raise a building worthy of the object in view, this would be almost equal to completing the whole work. It was estimated that the cost of such a building would amount to something like £25,000, to accommodate 100 patients. For these patients a variable scale of charges was proposed. It was proposed that there should be ten presentation cases—educated persons, governesses, clergymen, or the like—who were altogether without means, and who would be admitted to all the benefits on the recommendation of subscribers without any payment whatever. For the remaining ninety patients the charges would range from 5s. to £2 per week, so as to meet the circumstances of all middle-class people of moderate means. The scale suggested, apparently a most reasonable one, was as follows, viz.:—Ten cases at 5s. per week each, ten at 10s., ten at 15s., twenty at 20s., ten at 25s., ten at 30s., ten at 35s., and ten at 40s. per week. The last named rate would meet the case of bankers, merchants, manufacturers, professional men, or the like, who would not be likely to grudge £100 a year, when it was considered that, according to a statement in the *BRITISH MEDICAL JOURNAL*, "the lowest charge for the private asylum was two guineas a week, to say nothing of extras, a very indefinite quantity." The same excellent article in that *JOURNAL* added a suggestion which might be worthy of being taken into consideration. It was that a "nursing institution ought to be founded in connection with the proposed asylum. In no class of diseases are the services of trained and skilled nurses more important and efficacious than in mental maladies. If, in many cases of incipient insanity, the quiet firmness and tact of an experienced nurse could be substituted for the fussy attentions and agitating interferences of relatives and friends, rapid recovery might be hoped for, instead of protracted attacks. It is no exaggeration to say that removal to an asylum might be rendered altogether unnecessary, and the ban connected therewith might be spared, in many acute mental ailments, could the physician in attendance only command efficient and trustworthy assistance in his home treatment." In conclusion, Mr. Baines moved—"That it is expedient that a separate asylum should be provided for insane of the middle and educated class of limited means in the West Riding of Yorkshire."

Mr. W. H. LEATHAM, in seconding the resolution, said the sympathies of Mr. W. S. Stanhope, the President of the West Riding Asylum at Wakefield, was thoroughly with them in the movement. His own experience as a magistrate led him most cordially to support the proposal now before the meeting.

The resolution was carried.

Mr. R. B. MACKIE proposed—"That, as no statutory powers exist for founding such a middle-class asylum upon the public rates, a subscription list be forthwith opened with a view to procure, by voluntary contributions, the funds necessary to provide a middle-class asylum for the West Riding of Yorkshire." The amount required seemed large, but still it was small when they considered how vast were the resources of the West Riding; and, after reading the letters and the leading article that had appeared in the columns of the *Mercury*, he felt that all must be convinced of the urgent necessity and of the desirableness of such a project as that of the asylum.

Mr. F. W. TETLEY seconded the resolution, which was adopted.

Dr. KENDALL proposed—"That it shall be a principle of organisation in the West Riding Middle-class Asylum to combine a certain amount of accommodation free of charge for educated persons who are entirely destitute, with a large proportion of accommodation for those who are able to contribute to their own support, or to pay moderate rates of board." As a visitor for some years of the West Riding Asylum, he could most thoroughly endorse everything that Dr. Crichton Browne had said respecting the miseries entailed upon those who were committed there as paupers when they were people of education.

Dr. EDDISON, who seconded the resolution, congratulated Mr. Crichton Browne upon having initiated the movement. Years hence, when many of them were forgotten altogether, families too numerous to count would be thanking him and those who had worked with him for having relieved them of burdens too heavy to be borne. For physical injury to the body, rest was absolutely necessary, and all who had gone over the asylum—which they were agreed was the best that could be—must have seen persons of education, ability, and refinement compelled to mix with those who, from no fault of their own, were the very reverse. Under these circumstances, too, bad as they were, cases of recovery undoubtedly happened; but numbers never recovered, who, if they had, would have been able to have again taken up their position of usefulness in society.

The resolution was adopted.

On the motion of Dr. GREENHOW, seconded by the Rev. H. TEMPLE, the following was also adopted:—"That the following gentlemen be requested to act as a committee, with power to add to their number, to take such steps as may seem to them advisable to make known the want of a Middle-class Asylum in this district, and to obtain subscriptions with a view to its provision:—The Worshipful the Mayor of Leeds, the Right Rev. the Lord Bishop of Ripon, the Right Hon. Lord Wharnccliffe, the Right Hon. Lord Houghton, Mr. W. S. Stanhope, M.P., Mr. E. Baines, M.P., Mr. W. St. J. Wheelhouse, M.P., Mr. W. H. Leatham, Mr. W. Adam, D. B. Kendall, M.D., Rev. John Gott (Vicar of Leeds), Mr. Arthur Lupton, Ald. George, Rev. H. Temple, Ald. Barran, Mr. W. Middleton, J. D. Heaton, M.D., T. Clifford Allbutt, M.D., Mr. James Stables, Mr. James Kitson, Mr. F. W. Tetley, Mr. Wm. Wray, Mr. Edwd. Green, Mr. R. B. Mackie."

A subscription list was opened in the room, and several subscriptions of large amount were promised.

CORRESPONDENCE.

APOPLEXY AND DRUNKENNESS.

SIR,—Following out the valuable remarks and advice which appeared in the *JOURNAL* of November 8th, under the heading of "Apoplexy and Drunkenness", might we not suppose the case of a man in whom intoxication plays the first part, and apoplexy the second and fatal part? A man is found helpless and unconscious from the evident effects of too much drink. He is carried, perhaps not too gently, to the police station, and placed in a cell with his head so low as to favour the flow of blood to the head and to retard its return. In the morning, he is found dead; and a *post mortem* examination for a Coroner's Inquest reveals the unmistakable proof of a ruptured vessel; and so, what was drunkenness at night, is apoplexy in the morning. If in such a case the unfortunate man had been seen by a doctor, who, cautious in arriving at a diagnosis, would take probabilities into consideration, such precautionary measures might be directed as were most likely to preserve the integrity of the cerebral vessels, and avert the fatal issue.

To meet the difficulty of not obtaining a medical opinion, might not a few plain rules be printed, and hung up in every police station, directing such means as would be easily practised, the neglect of which should be considered a breach of duty, involving a penalty of greater or less severity? The means to be adopted should be these:

To move the unconscious man with care and gentleness; to place him in the cell in the semi-recumbent posture; to relieve him from all pressure from his dress affecting the throat and chest; to apply a mustard plaster to the neck, and cold to the head; to have him visited during the night, especially when the effects of intoxication would naturally be passing away, so as to ascertain whether right consciousness was returning.

Though in many cases such proceedings may be uncalled for, still, if they avail in a single instance to the preservation of a life which might otherwise have been sacrificed to ignorance or listless negligence, their use would bring an ample reward for the trouble they entail.

I am, etc.,

THOMAS T. GRIFFITH.

Wrexham, November 27th, 1873.

POISONING BY HOMŒOPATHIC CAMPHOR.

SIR,—I regret that I did not observe the notice of Dr. George Johnson's communication to the Clinical Society on the above subject; had I seen it, I should have forwarded to him the following case, in addition to the three which he read. In September, 1871, I was staying at the Bell Alp, with Johann Jaun as guide. Jaun is an overland guide, and is well known as an active and vigorous man. His age is, perhaps, 28. One morning we started, about 3.30 A.M., for the ascent of the Schienhorn; and a London gentleman (whose name I forget), who, with his guide, intended to cross the Beich Grat, accompanied us on our way. When we had reached the *nevê* of the Beich Glacier, Jaun, who had fallen back, came up to me and said that he was suffering so severely from diarrhoea, that he feared he should be unequal to the ascent. As the morning was very fine, I was much disappointed, and mentioned the state of the case to my companion. He promptly brought forth a bottle of "homœopathic camphor," with which he had been armed by his own homœopathic attendant against diarrhoea. I caught at any chance of a cure, and gave my guide ten drops of it, which was double the dose ordered to my companion. As another loose motion occurred, I gave him a second dose of ten drops at most. I say, "ten at most," because, in my slightly contemptuous estimate, I

dropped it carelessly upon a bit of sugar. My own intention was to give him a liberal five drops. He may, however, have taken twenty drops in all. Soon afterwards, he began to feel very ill, and, in particular, to suffer from a distressing giddiness (*Schwindel*). He had also some headache and nausea, and became so nervous, that he feared to walk any farther upon the snow. We were certainly upon a slope, but it was not very steep; and, before taking the medicine, he would have walked upon it without a thought. As it was, we had to deposit him in a cave for safety, and I gave him some ice-water and bathed his head. When quiet, he seemed better, and my companion and myself walked on with the other guide to the summit of the pass, and remained there until Jaun crawled up, about an hour and a half later, still feeling very giddy and nervous. He picked out the safest place in the rocks, and there fell off into a sort of lethargy, from which I gently aroused him from time to time. He was quite unable to take food, but he drank some wine and water at intervals. As the morning was hot, I was able to remain about two hours longer on the summit, when Jaun felt able to go homewards; fortunately also a gentleman came up from Ried with two guides, so that we reached the Bell Alp without further difficulty. He grew better as we returned, and next day was quite well. There was no more diarrhoea after the second dose. When I read Dr. Johnson's cases, I see that we were lucky to come off so well, and that I was to blame in leaving Jaun behind without assistance. Without the other guide, however, we could not have proceeded, and my companion had a long walk before him. I am, etc.,

Leeds, December, 1873.

T. CLIFFORD ALLBUTT.

THE STUDENTS OF ST. THOMAS'S HOSPITAL.

SIR,—Will you allow me space to contradict certain statements made in the *Daily News* of the 2nd instant, which are absolutely unfounded accusations against the students of this hospital, and which have been repeated with equally gratuitous comment in other papers? What really occurred was as follows. At 4 o'clock P.M., nearly a hundred students had to go from one lecture-theatre to another, passing on their way a room in which an inquest was being held. The lecturer had not arrived, and some noise was made in the theatre while the men were waiting his arrival; after waiting about twenty minutes (the lecturer having been unable to come), the men left the theatre and proceeded down the corridor to the cloak-room, prior to leaving the hospital. Not more noise was made than ordinarily occurs under such circumstances. I can positively affirm, having been there, that the statement that the men "paraded the corridor in dozens, uttering ear-piercing shouts, catcalls, groans," etc., is altogether untrue; nor was the noise in the lecture-room made with any intention of annoying the coroner, as few, if any, of the students were aware that an inquest was being held at the time. I think the coroner has acted with scant courtesy to the authorities of St. Thomas's Hospital, through whose kindness he is permitted to use the room in which he holds his court, and to which he has no manner of right. If he had any complaint, real or imaginary, to make against the students, he should have laid it before the Dean, Dr. Peacock, instead of encouraging the publication of a libel on the conduct of the students here with but small chance of refutation. I may add that an explanatory letter sent to the *Daily News* was refused insertion. I am, etc.,

F. HAMILTON PECK.

St. Thomas's Hospital, December 4th, 1873.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE Pontypridd Urban Sanitary Authority offers the magnificent sum of £10 per annum for an Officer of Health.

PUBLIC ANALYST.

SIR,—For the appointment of a public analyst for a city, or district, or county, is it necessary that the candidate shall be a registered medical practitioner? Secondly, is it desirable that this should be the case? I am, etc.,

Rochester, Nov. 29th, 1873.

FREDERICK J. BROWN, M.D.

*A public analyst is required by the Act to possess "medical knowledge". Mr. Stansfeld has decided that any one who is not a medical practitioner may yet be legally held to possess "medical knowledge". This seems to us to leave an unfortunately excessive discretion in the hands of the local authorities.

OBITUARY.

JOHN BUTTERWORTH WALKER, M.R.C.S.

Mr. J. B. WALKER, who died November 1st, was the only child of Mr. John Walker, a gentleman of good fortune, who resided for many years at Sydendam, and latterly in Stamford Street, Blackfriars Road. He pursued his medical studies at King's College, and also at St. Thomas' Hospital, where he became a dresser under the late Joseph Henry Green. At the hospital he was always attentive to his duties, and by his kindness to the patients, and general amiability, became a favourite both with his master and his fellow students. He commenced practice at Iver, in Buckinghamshire, and married the daughter of Mr. Pennington, Surgeon, of Needham Market, Suffolk. She died five years ago, leaving him with a family of ten children.

Mr. Walker removed from Iver to London about twenty years ago, and for the last fifteen years resided in Clifton Gardens. In this wealthy district of London he had a good practice and a large circle of friends, including many leading members of the profession. His genial character, kindness of heart, and amiability, endeared him equally to all his friends and patients, and his gentlemanly bearing and high sense of honour added greatly to his social character and position. His eldest son, Mr. Robert Walker, having pursued his medical studies and distinguished himself at St. Mary's Hospital, was amongst those selected to join the surgical staff in the late Franco-German war, and recently received the honorary distinction of the cross for merit from each country. He has for some time been engaged in assisting his father in practice, to a large share of which he will, in all probability, succeed.

GEORGE COATES, L.S.A. LONDON.

MR. COATES died at Bournemouth on November 18th. He was articled at the Gloucester Infirmary previously to entering St. Bartholomew's Hospital, which he did in 1824. In 1827, he obtained his diploma of L.S.A. He practised for thirty-six years in Hart Street, Bloomsbury, and for the last ten years in Euston Road. During the epidemics of cholera in the years 1832 and 1849 he showed great energy, sound judgment, and courage. He had a very large practice; he was a successful practitioner, and by his amiable and kind disposition he secured the friendship of all his patients, just as by his skill and judgment he secured their confidence. He leaves a widow and eight children. Two of these continue his medical career; viz., Dr. G. V. Coates of Westbourne Place, and Mr. F. T. Coates of Euston Road. Mr. Coates had been suffering from paralysis for some time. He died of apoplexy.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 27th, 1873.

Redmond, John, York Town, Surrey
Travers, Otho Robert, Cheam, Surrey
Turnell, Arthur Pythias, Brixworth, Northamptonshire
White, James Benjamin Kelly, Whitechapel
Whitten, William John, Commercial Road

The following gentlemen also on the same day passed their primary professional examination.

Barlow, Thomas Carey, Guy's Hospital
Hames, George Henry, St. Bartholomew's Hospital
James, Walter Culver, Guy's Hospital
Makins, George Henry, St. Thomas's Hospital
Paxon, Herbert Elliott, London Hospital
Pettigrew, Augustus Joseph W., St. Thomas's Hospital
Snook, William Ernest, Guy's Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 11th, 12th, and 13th of November, 1873, the following candidates obtained the License to practise Medicine.

Clarke, Frances Edward
Courtenay, John Hoysted
Yeo, Gerald Francis

The following candidates obtained the Midwifery Diploma.
Clarke, Francis Edward
Courtenay, John Hoysted
Horne, Patrick
Howard, William Wells

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BACKWORTH COLLIERY**, Cramlington—Medical Officer.
BARNET UNION—Medical Officer for District No. 3: £60: 10 per annum.
BEDFORD GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, rooms, etc. Applications, 10th instant, to the Chairman of the Weekly Board.
BIRMINGHAM AND MIDLAND EYE HOSPITAL—House-Surgeon: £100 per annum, apartments, board, and attendance. Applications, 20th instant, to J. C. Gell, Secretary.
BRISTOL ROYAL INFIRMARY—Assistant House-Surgeon. Applications, 8th instant, to Wm. Treneer, Sec.
BUCKINGHAM RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £100 for one year. Applications, 20th instant, to Henry Hearn, Clerk to the Rural Sanitary Authority.
CARDIFF URBAN AND PORT SANITARY DISTRICTS—Medical Officer of Health: £250 per annum.
CARMARTHEN UNION—Medical Officer for the Llangendeirne Upper District: £40 per annum.
CENTRAL LONDON OPHTHALMIC HOSPITAL—Two Assistant Surgeons. Applications, 9th inst.
CHELSEA—Medical Officer to the new Infirmary and Workhouse: £250 per ann., furnished apartments, etc. Applications, 10th instant, to Wm. Miller, Clerk, Arthur Street, Chelsea.
CHESTER GENERAL INFIRMARY—House-Surgeon: £80 per annum, residence and maintenance.
CLUTTON RURAL SANITARY DISTRICT—Medical Officer of Health: £230 per annum for three years. Applications, 11th instant, to E. H. Perrin, Clerk, Temple-Cloud, Bristol.
CONWAY UNION—Medical Officer for the Creuddyn District: £75 per annum, and fees. Applications, 10th inst., to Wm. Hughes, Clerk.
DORSETSHIRE—Public Analyst: £300 per annum.
DUNMANWAY UNION, co. Cork—Medical Officer for the Coolmountain Dispensary District: £100 per annum.
FROME UNION—Medical Officer for District No. 2: £90: 5 per annum.
GAINSBOROUGH RURAL SANITARY DISTRICT—Medical Officer of Health: £150 for one year. Applications, 8th inst., to T. H. Oldman, Clerk.
GORTON—Public Analyst.
INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.
KENT COUNTY LUNATIC ASYLUM—Two Assistant Medical Officers: £130 per annum each, furnished apartments, etc. Applications, 10th instant, to Messrs Beale and Hoar, Maidstone.
MACHYNLETH RURAL SANITARY DISTRICT—Medical Officer of Health.
MANCHESTER ROYAL EYE HOSPITAL—Three Assistant-Surgeons. Applications, 15th instant, to P. Goldschmidt, Chairman of the Board.
METROPOLITAN FREE HOSPITAL—Physician.
NAVAL MEDICAL DEPARTMENT—Assistant-Surgeons.
ROYAL LONDON OPHTHALMIC HOSPITAL—Assistant House-Surgeon.
ST. GEORGE PROVIDENT DISPENSARY, Mount Street—Physician. Applications, 20th inst., to Col. Alcock, Hon. Sec.
SALFORD UNION—Assistant Medical Officer to the Workhouse: £130 first year, £150 second year, £180 per annum afterwards, and apartments. Applications, 9th instant, to T. H. Bagshaw, Clerk.
SOCIAL UNION FRIENDLY SOCIETY—Physician. Applications to Joseph Davis, 50, Duke Street, Aldgate.
SOUTH SHIELDS—Medical Officer to the Borough Police.
SUNDERLAND AND BISHOP WEARMOUTH INFIRMARY AND DISPENSARY—Surgeon. Applications, 18th instant. Senior House-Surgeon: £80 per annum, board and residence. Applications, 25th instant, to John Kitts, Secretary.
SURREY DISPENSARY, Great Dover Road—Dispenser: £80 per annum, furnished apartments and coal.—Assistant Dispenser: £52 per annum. Applications, 15th instant, to R. G. Minshull Jones, Sec.
TEWKESBURY UNION—Medical Officer and Public Vaccinator for the Forthampton District: £55 per annum, and fees. Applications, 16th inst., to George Badham, Clerk.
TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £100 per annum, furnished apartments, etc. Applications to Honorary Secretary, Exe Villa, Tiverton.
UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.
WEST CRAMLINGTON COLLIERY, Cramlington—Medical Officer.
WOLVERHAMPTON ORPHAN ASYLUM—Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- HINDHAUGH**, William, Esq., appointed Resident Medical Officer to the General Dispensary, East Grinstead, Sussex, *vice* John Dixon, Esq., deceased.
VINES, Edward Prince, Esq., appointed Resident Clinical Assistant at the Hertford British Hospital, Paris.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

- FARNES BARNES**.—On November 20th, at the Parish Church of Deane, near Bolton, Lancashire, by the Rev Herbert Munn, Henry Barnes, M.D., of Carlisle, to Emily Mary, daughter of the late Thomas Barnes, Esq., Cheetham Hill, Manchester.—No cards.

DEATHS.

- TAYLOR**, Frederick, M.B., in Dublin, on November 24th.
WOOD.—On November 28th, at Woodhouse Laves, Leicestershire, Thomas Wood, Ph.D., aged 37, son of Charles W. Wood, Esq., surgeon.

OPERATION DAYS AT THE HOSPITALS.

- MONDAY**.....Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

- MONDAY**.—Medical Society of London, 8 P.M. Dr. J. M. Fothergill, "On the Depressants of the Circulation, and their rise"; Dr. Semple, "What is Diphtheria? Illustrated by a recent Outbreak in Italy."
TUESDAY.—Royal Medical and Chirurgical Society, 8 P.M.: Ballot, 8.30 P.M.: Mr. Jolliffe Tufnell, "Case of Aortic Aneurism (abdominal) cured by position."
WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Tholozan 'Physician to the Shah of Persia', "On the Development of Plague in the High Grounds of Europe, Asia, and Africa"; Dr. Gavin Milroy, "On Quarantine in Relation to Epidemic Cholera".
FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Wheelhouse, "Case of Aneurism of the External Iliac cured by Pressure with Lister's Abdominal Tourniquet"; Dr. Cayley, "Case of Hæmoptysis"; Mr. Douglas Powell, "On some cases illustrating the Rheumatic Origin of Aneurism of the Aorta"; Mr. Brudenell Carter will show a patient cured of Sarcoma of the Orbit by Excipitation and Cautey; and also a patient with Sarcomata of both Irides.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

D. W.—1. Parkes on Hygiene. 2. Hassall on Food. 3. Michael, Corfield, and Wanklyn, on Public Health.

DR. WOAKES (Luton).—We shall be glad to see the paper mentioned.

DR. SANKEY (Cheltenham).—Many thanks.

MODERN HOMOEOPATHY.

J. H.—The cases mentioned, in which a homoeopath prescribed oil of male fern in a full dose (for expulsion of tape-worm!) in epilepsy, and a "preventive lotion" for scirrhus of the breast, may be matched by the particulars of other cases which have been forwarded to us.

MR. JEAFFRESON attributes the delay to the true cause.

J. D. (Glasgow).—Duly received; and shall be inserted, if possible. We have a great number of communications on the subject.

SPASMODIC ASTHMA.

SIR,—In reply to Dr. Berkart's letter at page 648 of the last number of the JOURNAL, I cannot see wherein the incorrectness of my quotation of Paul Bert's experiments consists. Any one reading my paper, at page 600 of the JOURNAL, will see that I have quoted from the Sydenham Society's *Biennial Retrospect*, 1869-70, page 26. The words quoted are these: "The arrest (of respiration) is much more easily obtained during expiration than during inspiration." The same interpretation is given to Paul Bert's words in the notice of his book in the *Medico-Chirurgical Review* for 1870, page 360. I cannot myself see where the difference between Dr. Berkart's interpretation and mine exactly lies, but I do not wish it to be understood that I believe the constant condition in all cases of spasmodic asthma to be a contracted state of the lung. Clinical evidence is certainly teaching me that the lung may be seized and caught by spasm both in expiration and in inspiration.

I am, etc.,

JOHN C. THOROWGOOD.

Welbeck Street, W., December 1873.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

INQUIRER (Beaumaris).—We cannot certainly say. Write to Mr. Bremridge, Secretary of the Pharmaceutical Society, Bloomsbury Square, London.

THE INFECTION OF SCARLET FEVER.

SIR,—A strong sense of duty to the public has impelled me to address this letter to you. I do so reluctantly, knowing the deceased as I did, and being well acquainted with his family, whose feelings I should be one of the last to wish to hurt by any remarks I am about to make.

The body of the late Dr. Gwynne Harries, of the Medical Department of the Local Government Board, was permitted to leave the private apartments of the London Fever Hospital, where he died, as stated, after two days' illness of malignant scarlet fever, enclosed in a simple coffin, without any lead or zinc shell, and so conveyed by railway across the breadth of England and South Wales. That the coffin was not air- or water-tight, was proved by the fact of the carbolic acid contained in it oozing out and staining the clothes of the men on whose shoulders he was conveyed from the station to the house of his friends. There cannot be a doubt that the authorities of the Fever Hospital have a heavy weight of responsibility resting on their shoulders, and should any disaster arise in consequence of such culpable negligence, they or their subordinates would be answerable. Here, unfortunately, it seems to be nobody's business to inquire into such matters; and although much indignation is felt, it unfortunately ends there. There is something almost grim and terrible in the thought of the body of a sanitary inspector encoffined traversing the breadth of England containing the poison of scarlet fever, and to know that the deadly subtle essence was simply confined by thin planks of wood. What would have been his report of a similar case had he been alive and called on to investigate such a glaring violation of sanitary caution? I have felt it my duty to make these facts public. When sanitary reform is occupying so much time, thought, and attention, it does seem strange that such negligence should have been allowed. We had every right to expect better things from the authorities of the London Fever Hospital.

Haverfordwest, Dec. 1873.

EDWD. PICTON PHILLIPS, M.R.C.S.E.

CHLOROFORMING HORSES.

SIR,—I cannot admit the validity of Mr. McBride's objections to the use of chloroform in veterinary practice. Before a horse is subjected to any painful operation, it is necessary to cast and hobble him. This done, it is impossible for the animal either to break his back or otherwise injure himself; and it is quite as easy and quite as safe to give him chloroform as it is to administer it to the human subject. Surely, Mr. McBride would not have us suppose that horses struggle more while inhaling an anæsthetic than they do under the prolonged agony of the knife or searing-iron. Every day's experience tells us that they do not break their backs in the one case; and how they are to do so in the other, passes my comprehension.

When I was a student at the Ecole de Médecine in Paris, sixteen horses per week were tortured to death at the Veterinary School of Alfort. There were eight students to each horse; and each student had to perform eight operations upon the same living sensitive patient. The poor brutes writhed and screamed again in sore distress; but motion was impossible, and the agony of impotence under such terrible infliction was one of the worst attributes of their suffering. I never heard that they broke their backs, however; and cannot suppose that the administration of chloroform would have entailed such a catastrophe.

I have often heard veterinary surgeons urge, as an objection to the operation for cataract, that horses successfully treated would become dangerous from shyness; but I never knew one who had seen such a case, and am obliged to assume that the idea is a mere conjecture. For my own part, I believe that, while useful vision for near objects would be restored, they would not notice such as are magnified into bugbears by animals with better vision.

I am, etc., CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary, etc.

P.S.—I may mention that, if methylated chloroform be used, the cost does not much exceed 6d.; and that the canvas-bags used for poulticing horses' feet, do exceedingly well for inhalers.

SIR,—In reference to Mr. M'Bride's letter on the above subject in your last week's issue, allow me to say a word or two on behalf of the horses. It is disappointing that Mr. M'Bride does not state his mode of administering the anæsthetic to horses. Many years since, I published a successful case of firing for spavin under chloroform. There was no great effort made to escape by the mare, beyond the usual struggles of the legs and feet to get released from the "hobbles"; no great muscular efforts of the back and loins to a degree sufficient to fracture the spine. Such violence could arise only from a sense of suffocation on the part of the animal. No such feeling arose in the case alluded to above for this reason, that only one sponge saturated with chloroform was placed in one nostril, the other being left perfectly free for the admission of atmospheric air. The sponge in the one nostril was covered with a thick pad of folded linen, so that at each inspiration the mare took into the trachea an equal ratio of chloroform-gas by one nostril and of common air by the other. There was no sensation of suffocation, because the air was not excluded. I administered the chloroform, and common sense dictated to me the necessity of not excluding the atmospheric air. It took some time—fifteen or twenty minutes or more—and several ounces of chloroform to produce perfect insensibility. I would not allow the operation to be begun until the proper effect was induced. I deprecate undue haste in these matters. The operator—a young veterinary surgeon and a friend—was enthusiastic in the cause, and applied his hot irons with rather too much energy, the mare suffering nothing; and the result was that, on recovery, the hocks were blemished. This circumstance argued nothing against the advantages of the anæsthetic.

I earnestly hope that that noble animal the horse, the faithful friend and servant of man, and from his artificial condition, subject to many very painful surgical operations, may yet evermore have the benefit of chloroform administration, and be spared from many terrible agonies. Mr. M'Bride may not have tried the method I have described; and, if he have not, and would put it in practice as opportunities occur, and report the results, the medical profession generally would be under an obligation to him, as such reports could not but throw light on their own practice amongst their own race.

I am, etc.,

Sutton Coldfield, Nov. 24th.

GEORGE BODINGTON, sen., L.R.C.P.E.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

ADMINISTRATION OF ETHER.

SIR,—In your issue of November 15th, there is a communication from Dr. C. Bell Taylor on the Administration of Ether, in which he gives a list of cases operated upon while under its influence. I should be glad to learn through your valuable columns how long Dr. Taylor takes to get his patients sufficiently under the influence of ether to commence the operation, as the time Dr. Taylor mentions for some of his operations seems unusually long. I cannot quite agree with Dr. Taylor, that in order to produce any effect with ether all air must be excluded, as I always administer ether combined with air, the patient being ready for operation on an average in four minutes.

I am, etc.,

G. EVERITT NORTON.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.
SIR,—I have read in your JOURNAL of Saturday last, with great satisfaction, the letter from Dr. Stanley Haynes, and am glad to find that at last some one else has come into the field who sees the desirability of throwing open the Society for the Relief of Widows and Orphans of Medical Men to all British practitioners. This is a subject that I have mooted more than once in the columns of another medical paper, and hitherto without a single response. Now, however, I trust the day is not far distant when we shall see the Society roused from its state of exclusiveness and well supported by all British practitioners.

I am, etc.,

C. SWABY-SMITH, M.R.C.P. Edin.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than Thursday, twelve o'clock.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Manchester Examiner and Times; The Birmingham Daily Post; The Australian and New Zealand Gazette; The Temperance Record; The Bath Express and County Herald; The Birmingham Gazette; The Dublin Morning Mail; The Derbyshire Journal; Saunders's News-Letter; The Glasgow News; The Derby and Chesterfield Reporter; The City Press; The Southampton Times, and Winchester, Portsmouth, Isle of Wight, and Hampshire Express; The Lincoln Gazette; The Stroud News; The Lincoln Journal; The Liverpool Weekly Albion; The Manchester Courier and Lancashire General Advertiser; The London Mirror; The Leeds Mercury; The Exeter and Plymouth Gazette, Nov. 26th; The Anti-Gam-Law Circular, Nov. 29th; The Northern Echo, Nov. 28th; The Daily Post, Dec. 1st; The Bedfordshire Mercury, Nov. 29th; The Eastern Daily Press, Nov. 29th; The South Durham and Cleveland Mercury; The Manchester Evening News; The Australasian; The Cumberland Packet; The New York Evening Post; The West Country Lantern; The Aberdeen Times; The Dublin Express; The Aberdeen Free Press; The Belfast Evening Telegraph; The Carlisle Journal; The Daily Courier; The Melbourne Age; The Malton Messenger; The Altrincham and Bowden Guardian; The Stafford and Gloucester Advertiser; The Edinburgh Courant, Nov. 29th; The Gloucester Mercury, Nov. 25th; The Carlisle Express and Examiner, Nov. 25th; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Henry Arnott, London; Dr. George Johnson, London; Dr. Rumsey, Cheltenham; Sir G. Duncan Gibb, Bart., London; Dr. Edis, London; Dr. Reginald Southey, London; Mr. Eassie, Hendon; Mr. Reeves, London; The Secretary of the Pathological Society; Mr. Eastes, London; Dr. J. Althaus, London; Our Dublin Correspondent; Mr. Michael, London; Mr. Waren Taylor, London; The Secretary of the Royal Medical and Chirurgical Society; Mr. C. G. Wheelhouse, Leeds; Dr. Farquharson, London; Dr. Bodington, Sutton Coldfield; M.D. Ed.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Clinical Society; Mr. T. Holmes, London; Dr. Mercer, Beverley; Dr. Burdon Sanderson, London; Mr. Beresford Earle, Winchester; Mr. Churton, Erith; An Associate; Dr. Haddon, Manchester; Dr. F. J. Brown, Rochester; Dr. Heywood Smith, London; Dr. J. W. Moore, Dublin; Dr. Hughlings Jackson, London; A Correspondent; Dr. Thorowgood, London; Mr. Fox, Cockermouth; Mr. Donald Napier, London; J. D., Glasgow; Mr. Jeaffreson, Newcastle-upon-Tyne; The Rev. H. R. Taylor, Dublin; Mr. E. P. Vines, Bristol; Dr. J. Milner Fothergill, London; Dr. Stanley Haynes, Malvern; Mr. Savory, London; Mr. Whitehead, London; Mr. J. H. Houghton, Dudley; Dr. Cheadle, London; Dr. Denham, Dublin; Mr. Naylor, London; Dr. Boyd Mushet, Southgate; Dr. Sankey, Cheltenham; Mr. Priestley Smith, Birmingham; Dr. Clifford Allbutt, Leeds; Dr. Talfourd Jones, Brecon; Dr. Woakes, Luton; Mr. James Bird, London; R. W.; Mr. Hindhaugh, East Grinstead; Dr. Mapother, Dublin; Dr. Cotting, Boston, U.S.; Mr. Dayman, Millbrook; Dr. Bradbury, Cambridge; Sir Robert Christison, Edinburgh; Dr. Philipson, Newcastle-on-Tyne; Dr. Wilson Fox, London; Dr. Begbie, Edinburgh; Dr. R. W. Batten, Gloucester; etc.

BOOKS, ETC., RECEIVED.

A Treatise on Medical Electricity. By J. Althaus, M.D. London: Longmans, Green, and Co. 1873.
Surgical Anatomy. By Edward Bellamy. London: J. and A. Churchill. 1873.
The Microscopic Structure and Mode of Formation of Urinary Calculi. By H. Vandyke Carter, M.D. London: J. and A. Churchill. 1873.
Traité Théorique et Pratique d'Hydrothérapie. Par le Dr. Beni-Barde. Paris: G. Masson. 1874.
Transactions of the Pathological Society of London. Vol. xxiv. London: 1873.
The Junior Local Students' Guide to Latin Prose. By R. M. Millington, M.A. Relfe Brothers. London: 1873.

REMARKS

ON

THE GROWTH OF CICATRICES FROM WOUNDS
MADE IN EARLY LIFE, AND THE SUPPOSED
WEARING OUT OF SOME CICATRICES.*

By WILLIAM ADAMS, F.R.C.S.,

Surgeon to the Great Northern Hospital; Consulting Surgeon to the National
Orthopædic Hospital; etc.

A GOOD deal of attention has lately been directed to the subject of cicatrices in a medico-legal point of view, chiefly in reference to the kind of wound of which they were the result, and also the possibility of their gradual disappearance in the course of time. I therefore propose to bring under the notice of the Society some facts which have fallen under my observation, in reference to the growth of cicatrices from wounds made in early life, which I am enabled to prove by a series of casts now exhibited to the Society. I also propose to offer a few observations on the supposed wearing out of some cicatrices.

In reference to the first part of our subject, viz., the growth of cicatrices, the four casts now exhibited were taken from the feet of the same child, at an interval of six years and a half, and prove that a cicatrix on each foot had grown during that time fully an inch in length. The child from whom these casts were taken, Master A., aged one year and nine months, was first brought to me on October 19th, 1852. He was the subject of congenital varus of both feet, and the deformity existed in a very marked degree at the time he was brought to me. I was astonished at observing two very long scars, one on each foot, reaching from the front in a curved direction, over the convexity and outer part of the foot, quite to the back, and measuring two inches and a quarter in length. There were also several scars at right angles to the larger ones, evidently from the sutures which had cut their way out. Judge my surprise when I learnt that these were the scars of operations performed only about a year previously to cure the club-foot. As far as I could learn from the family, in explanation of this extraordinary and novel procedure, it appeared that the surgeon who operated commenced the mechanical treatment of the case soon after the birth of the child. At the end of about ten months, however, it seems that very little progress had been made, and then the surgeon performed the operations, the cicatrices of which are shown on the casts.

The operation consisted in cutting away all the loose skin, which could be pinched up between the thumb and finger, on the convexity of the club-foot; and I may remark, that there often appears to be a great excess of skin on the convexity of the foot, in a severe case of varus, and this is rendered more apparent by an effort to bring the foot into its natural position. This probably tempted the surgeon to remove it; and the idea seems to have been to overcome the turning inwards of the foot by the removal of as large a portion of the skin as possible from the outer half and convexity of the foot, trusting to the process of contraction by the cicatrix on the outer side of the foot to overcome the inversion. None of the tendons were divided. I was informed that the wounds healed slowly, and that poultices were required for two months. It is remarkable that such an operation should have been performed instead of tenotomy, and its magnitude may be judged of by the fact, that the scar on each foot measured two inches and a quarter. I cured the deformity in the ordinary way, and the child returned to the country. He was brought up to town again on May 14th, 1859, in consequence of a slight relapse of the deformity, and then I was surprised to observe that the cicatrix on each foot had grown fully an inch in length, but still retained its linear character, i.e., without increasing perceptibly in breadth. Each scar had, therefore, grown one inch in length during the interval of six years and a half. In order to demonstrate this fact, I had models of the feet taken, and they are now exhibited to the Society. They were, at the time, exhibited to the Pathological Society, and are described in vol. xi of the *Transactions* of that society.

The next case to which I would refer is that of a young lady, who, when a baby only a year old, was operated upon by the late Mr. Joseph Henry Green, in the year 1842, for the removal of a rather deep-seated

nævus from the front part of the chest, midway between the clavicle and the nipple. I assisted Mr. Green at the operation, which was performed by excising the nævus; and Mr. Green remarked at the time that only a very small scar would be left, which would not be conspicuous in after-life, and his opinion was, that the cicatrix would be less after excision than after removal by the ligature.

I have no measure of the exact size of the scar left by this operation, but the wound healed favourably, and the cicatrix could not have been more than an inch and a quarter to an inch and a half in length.

When the young lady had completed her growth, at 19 years of age, and had then become stout, with a full development of the breasts, the scar had enormously increased in size, both in length and breadth, measuring three inches in length, and varying in width at different parts from three-fourths of an inch to an inch and a quarter; so that, in eighteen years, this cicatrix had more than doubled its length, and, unlike the cicatrix previously described, had remarkably increased in width. This, no doubt, depended upon the growth of fat and the expansion of the skin in all directions by the development of the breast in this region. I need hardly say, that the disfigurement at the present time is very great, and, from the situation of the scar, as well as from the fact that it is disposed to become conspicuously reddened under the influence of warmth, she is unable to wear a low dress in the evening. I exhibit to the Society a drawing which was taken by tracing the cicatrix on silver paper, when she was 19 years of age.

The rate of growth, as demonstrated by these cases, does not appear to be sufficiently known to surgeons, or considered by them when performing operations on children in exposed portions of the body, the general opinion being, that scars either remain stationary or wear out; but, after deep wounds, or when a portion of skin has been destroyed, the cicatrix appears to be persistent through life, and to grow *pari passu* with the rest of the body, or rather with the portion of the body over which it may be placed.

Although all cicatrices, at the time of their formation, are much less than the wounds from which they result, still, if the wounds should be made in early childhood, the resulting cicatrix will be, at the completion of growth, very much larger than the original wound; but cicatrices of wounds made after the completion of growth maintain through life their same proportions.

Vaccination scars in the adult are frequently seen from one-half to three-quarters of an inch in diameter; and there can be no doubt that this size has been attained by growth of the cicatrix. We may also occasionally see a large bald patch on the scalp of an adult, who has had a small nævus removed from this situation during childhood, and many other illustrations might be given.

Surgically speaking, if the rate of growth of cicatrices be borne in mind, pains should be taken to make the wound as small as possible when operating upon children, especially in exposed parts of the body; and, by various subcutaneous methods, nævi may be generally destroyed without using the knife, and a cicatrix altogether avoided.

With regard to the second question raised in the present paper, viz., the supposed wearing out of some cicatrices, the opinion is entertained by many, that cicatrices do diminish in appearance, fading away, as it were, and sometimes wear out; but I doubt whether such an opinion rests upon any well-ascertained facts or accurate observations.

If there be any scars which do wear out, I believe they are only those which result from superficial cuts, which do not penetrate fairly through the deeper layers of the skin into the subcutaneous fat. In the growth and renewal of the skin proceeding from within outwards, such superficial scars may well be supposed to wear out, as there is no separation or retraction of the deeper layers of the skin; but, when the wound penetrates through the substance of the skin to the subcutaneous fat, even such a small incised wound as that made by the point of the lancet in bleeding, or by the tenotomy-knife in dividing tendons, a gap is at once formed between the divided deeper layers of the skin, which retract in consequence of the elasticity of the skin, a property well known to depend upon the abundance of yellow elastic fibrous tissue everywhere permeating its structure. The gap is at once filled by blood, and sometimes by the protrusion of a granule of fat between the lips of the wound; lymph is afterwards effused, and in this the development of white fibrous tissue proceeds.

The new intermediate connective tissue, or proper cicatrix tissue, essentially consists of interweaving fibres of the white fibrous tissue, as well described in an interesting paper on the structure of cicatrices by the late Mr. Henry Gray, in the *Transactions of the Pathological Society*, vol. ii, page 289. Not only does the cicatrix structure differ from true skin in the absence of the yellow elastic fibrous tissue, but it also differs in the greater thickness of the external cuticular layer, and in the absence of hair and the glandular elements of the true skin.

When the cicatrix-tissue is once formed, it becomes a permanent

* Read before the Medical Society of London.

structure of the body, growing in the same proportion as the part of the body on which it is placed, as well described by Sir James Paget in his *Lectures on Surgical Pathology*, vol. i, page 49, where he observes that "the scar of the child, when once completely formed, commonly grows as the body does, at the same rate and according to the same general rule; so that a scar which the child might have said was as long as his own forefinger, will still be as long as his forefinger when he grows to be a man."

We have no evidence to show that the cicatrix-tissue is ever absorbed, or undergoes any process of wasting, by which the scar could be said to wear out; on the contrary, the rule appears to be, that the cicatrix, once formed, if even not more than a line in width, never wears out, but remains as a permanent tissue, renewing itself by assimilation and growing with the rest of the body.

There are two reasons for this permanency of cicatrix-tissue: 1st, that the tissue is sufficiently well-organised to be able to maintain itself in the general nutrition of the body; 2ndly, that the cicatrix-tissue is so widely different from the structure of the true skin, that it never can become assimilated to it, or resemble it, either in the naked eye or microscopic appearances.

CYANOPUON LARYNGIS: THYROIDITIS WITH BLUE SUPPURATION.

By SIR G. DUNCAN GIBB, BART., M.D., LL.D.,

[Senior Assistant-Physician to Westminster Hospital.]

THREE-and-twenty years ago, a case of mine was published in the *British American Medical and Physical Journal* for September, 1850, of what I then called cyanopuon, or cyanuret of iron in the purulent discharge occurring in chronic disease of the breast. The pus imparted a distinct dark blue colour to the linen and dressings, and afforded much interest at the time. In dwelling upon it, I entered into some speculations as to its origin, and gave a summary of the cases that had been published. That paper has been quoted, and is especially referred to in Mr. Holmes Coote's article, "Abscess," in vol. i of *Holmes's System of Surgery*.

In October, 1870, an instance more remarkable still came under my observation, and is unique in the annals of medicine; so much so, indeed, that it seemed to me desirable to place it upon record at once. Independently of the blue suppuration that was present, the pathological lesion was of great interest from its uncommon character, danger, and subsequent good recovery. The particulars are briefly as follows. A single lady, aged 27, consulted me on the 21st October, 1870, with the following history. She had been delicate about the throat for some years, although the general health had always been good. About six months previously, she had suffered from a severe cold, with aphonia for a few days; this was followed by tenderness and subsequent swelling over the right wing of the thyroid cartilage. The former subsided, but the swelling remained permanent, became rather hard, and was sensitive to the touch. About five weeks before I saw her, the swelling again became painful and increased further in size; she applied poultices to it with some relief, and, although it did not decrease nor subside, it became quite soft.

On presenting herself to me, a decided prominence was observed in the situation described, with distinct fluctuation, and the skin covering and surrounding it was discoloured of a brown and dark blue, as if from ecchymosis, but in reality not so. There was clearly an abscess present, consequent upon inflammation of the wing of the thyroid cartilage in the first instance; and the indication seemed clear enough to evacuate the matter with the lancet, although the propriety of doing so caused me some reflection; yet, if it were allowed to become chronic, the cartilage would be attacked and serious mischief might ensue. In the laryngeal mirror, the integrity of the larynx was seen to be perfect; and the voice was good, whether in speaking or in attempts to utter contralto notes. With a narrow sharp-pointed bistoury, a puncture was made, and a drachm and a half of pus was evacuated, of a dark blue colour, not quite so dark as Prussian blue, but more of an azure tint. The relief was decided, the swelling subsided a good deal, and bread-and-water poultices were prescribed until her next visit. A chemical examination of the pus yielded clear evidences of the existence of iron, by similar tests to those used in my first case. The patient had taken preparations of steel internally some years ago, but not lately; the discoloration of the pus, therefore, was due to some physiological change analogous to that which gives rise sometimes to indigo in the urine.

In the course of two or three days, the swelling of the abscess had greatly gone down, with some discharge of blue pus that stained the linen and dressings. On the 7th day, there was a little oozing only of a thin bluish pus, which tinged the linen of a fainter blue colour. At this time, the parts were a little swollen and indurated; the cartilage, however, did not seem to be involved, and there was no foetor from the pus. By the twelfth day, the discharge had almost wholly ceased, with no discoloration at all; the general swelling had further subsided; the skin looked more natural, and of a better colour; a little tenderness was present over the abscess, the original seat of which seemed to have been beneath the perichondrium of the thyroid cartilage. On the twenty-fifth day, the opening had closed and all swelling had subsided, yet a little discoloration remained and the merest tenderness. She was considered to be cured. When seen on the subsequent February 1st—fourteen weeks after her first appearance—she was perfectly well and complained of nothing, nor was there anything to be seen beyond the slight cicatrix to mark the site of the abscess. The thyroid cartilage had escaped a great danger; for, although it must have participated to some extent in the inflammation which involved its fibrous covering, yet no subsequent symptom occurred to show that the cartilage itself was injured; and, as upwards of two years have elapsed, we may reasonably infer it has permanently escaped.

It may be observed, however, that suppurative inflammation of the external surface of the thyroid cartilage is extremely rare; and, when to this is added the transformation of the well-known yellow into a distinct blue pus, the case is invested with many points of interest, both in a physiological and pathological sense. Blue stains occasionally occur in the linen dressings, from chemical changes which pus sometimes undergoes, when the matter itself is not blue; and this, I believe, has been the experience of several surgeons, including the late Sir Benjamin Brodie. The actual blue colour of the pus within an abscess, however, is a phenomenon of the highest degree of rarity, although the nature of the pus is perfectly harmless. If iron in any form has been given, we can readily understand its presence as the result of certain well-known chemical changes; but, otherwise, we must look for an explanation in something more subtle and profound, involving a combination of certain elements to produce compounds analogous (as has been already stated) to indigo, which, in its composition, is wholly different from a salt of iron. If physiological chemists were correct in their views, that the source of the indigo-forming substance in the animal economy was or might be due to destruction of some of the proteine compounds, and more especially hæmatosin, then we have an explanation of the colour of blue pus; but, in the present instance, the pigment was due to a salt of iron, and not to indigo. Dr. William Bird Herapath brought an instance before the meeting of the British Association for the Advancement of Science at Bath in 1864, in which pus or the liquor puris was shown to contain blue pigment, and which he believed to be the first instance recorded of that character, whereas I gave a summary of ten cases in 1850. In his case, purulent secretions from the surface of an inflamed leg stained the clothes of a blue colour; whilst in mine the pus of an abscess was blue previously to being evacuated, and had been so for many days before, which is a wholly different thing.

The experiments to determine its nature were these.

1. Liquor potassæ, added to the blue pus, discharged the blue colour, which it does with Prussian blue.
2. The addition of dilute muriatic acid, for the most part, restored the blue colour, which it also does with Prussian blue.
3. Some of the pus was evaporated to dryness and ignited; the calx, acted upon by a solution of ferrocyanide of potassium, gave a distinct alteration of Prussian blue.

I may remark, that these tests are wholly different from those of indigo. Moreover, on boiling some of the blue pus with distilled water, filtering, adding an equal quantity of liquor potassæ, which removed the blue colour, and then, again boiling, a dark brown colour was produced, showing that sugar was present, a phenomenon that I was the first to demonstrate upwards of twenty years ago. Under the microscope, no granules of blue pigment were observed; but the pus-corpuscles seen were those of healthy pus, only coloured of a transparent beautiful blue colour, which was dispelled by adding a drop of liquor potassæ.

In my first paper, published in 1850, the chemistry of the subject was so fully gone into, as well as the consideration of pus of all colours, that it would be a needless repetition to go over the same ground in the present instance. Suffice it to say, that I place upon record a case thus far unique in its combination of thyroiditis running into suppuration, the pus being charged with a salt of iron, giving to it a decided dark blue colour.

DISEASES OF THE CHEST IN CHILDREN: THEIR TREATMENT BY BLISTERS.

By DANIEL MACLEAN, M.D., L.F.P.S.G., Glasgow.

The object of this paper is to notice a method of treatment in the diseases of children which is, so far as I am aware, novel, and which I have adopted in suitable cases with great benefit. It is a treatment for which parents have very often little partiality, but by which many lives will be saved; and if my views be correct, it is based upon a pathological groundwork, and explains numerous circumstances in connection with these diseases otherwise obscure.

Diseases of the chest hold a remarkably high place in the yearly bill of mortality; causing in Scotland the deaths of as many children of five years of age and under, as the deaths at all the other ages put together. Any means, therefore, that will modify this state of things, or even give a greater control over these diseases, is well worthy of consideration, and is a justification for bringing before you what might otherwise be deemed a trivial subject.

The treatment which I would advocate over and above the special treatment to the chest proper, is the application of counterirritation in the form of small blisters over the roots of the nerves going to the chest and those auxiliary to the act of respiration. The most appropriate spot for their application is immediately behind the ear, where there is naturally no growth of hair. The form of blister which I invariably use is the *tela vesicatoria* of the Messrs. Smith of Edinburgh; it has no specific virtue over the other forms of cantharidine counterirritation, but is very convenient, cleanly, and almost certain in its action, especially on the tender skin of children. These blisters have this special recommendation, in such cases, that they are comparatively painless, and can be allowed to remain applied to the surface an indefinite length of time, as they never produce destruction of the true cuticular tissue—only irritation, which raises the epidermis with a layer of serum below; and this serous fluid acts as a protection to the more active surface beneath. Three hours, when applied to a child, is in general a sufficient length of time; then, by substituting a layer of fine cotton-wool, a bag of fluid will be speedily produced, whose action will protect the tissues from undue stimulation. This amount of counterirritation is usually quite sufficient for producing the effect required; but should circumstances necessitate it, reapplication can be continued, so long as the blisters are thought to be of benefit. In this way we have complete control over the counterirritation, and can modify it according to circumstances.

My reason for using this method of treatment is, because there is so much nerve-force acting in excess in diseases of the chest in children, as to influence to a very great extent their continuance and their result. It is with the object of getting rid of this *vis nervosa* in excess, that I recommend the adoption of this blistering treatment in the diseases of children. The results of my use of this style of treatment have been such as to justify me in advocating it as one of our stock methods of cure in diseases such as those which I mention.

It is not of value in every case of chest-disease, nor in every stage of each case of chest-affection. Speaking generally, it is only of value in disease attended with a permanent or prolonged irritation of the mucous and elastic minute tissue of the smaller bronchial tubes and tissue of the air-cells, such as is found in the acute stage of most diseases of the chest. I have used this treatment in many cases in different diseases of the chest in this stage of irritation—when the tubes are in the dry, congestive, or inflamed condition of the disease—and I find that the patient quickly improves; the respiratory murmur becomes soft, and the moist mucous *râles* are developed in a comparatively short time, before the child has become weakened either in body or in lungs. The convalescence is much speedier, with fewer fatal mishaps than took place previously from the full virulence of the complaint being only attacked at one point, viz., in the lungs themselves. All these diseases influence the whole body as well as the lungs, besides being themselves influenced and kept up by the general condition of the whole system, more especially through the agency of the nervous system.

I do not propose to give in detail the cases in which I have applied blisters to the head in chest-affections, but only to mention generally those in which the greatest benefit is to be gained from this procedure. Like others, I have been often baffled by this class of diseases, and believed that there was some other factor or factors at work besides the local alteration of texture; and, from the frequency with which nervous symptoms appeared, was led to believe that the brain or nervous system was the disturbing influence at work. I had the care of a child about a year old, who baffled me for some time. There were no apparent head-symptoms; the child was out of sorts, restless, uneasy, and

fretful; the skin was hot, the respiration hurried; there was a dry irritating cough, and the child refused to take food. All over the chest in both lungs the respiratory murmur was harsh, rough, and tubular; no moist *râles*, no crepitation, no rhonchi. This condition continued for some time, and the child was losing flesh, notwithstanding the use of almost all the remedies usual in chest-affections, till I persuaded the father (with the greatest difficulty) to allow me to apply two small blisters—one behind each ear, for three hours. The next day the breathing was easier, the restlessness greatly subdued, and the respiratory murmur became moist and soon natural, all of which was the precursor of a speedy recovery. Another case of the same character came under my care; the same difficulty was experienced in removing the disease; but the father, being a man of intelligence, on the reason being explained to him, at once permitted the application of the blisters; after which the alteration in the condition of the child became in a very short time so marked, that there was no difficulty in tracing the result to its proper cause.

I also use the blisters in the bronchitis of children when I am called in the early stage of the disease, before the supervention of the moist mucous *râles*, notably in the first or dry feverish stage of the complaint. Bronchitis is a complaint occurring so frequently, that people become accustomed to it, and object to what they consider the cruelty of applying blisters to young children, and refuse to permit their application at the only time when they can be of use; but would often wish them put on in the advanced stages, when, instead of doing good, they do harm. Thus I have not had the privilege of applying them in all cases of bronchitis; but where I have had the opportunity, in the proper cases and at the proper time, I have invariably shortened the disease and had speedy recoveries.

In measles, also, blisters applied as I recommend are desirable. Although this is not strictly a disease of the chest, yet in every case the lungs are involved as much as if the origin of the ailment had its seat there. When the disease has a fatal termination, it comes generally through some lung-complication, or through some alteration of the cerebral centres, such as convulsions. The latter complication is not an accompaniment invariably attending measles like the chest-affection; but nervous derangements occur so often that it shows an intimate connection between the two, and unmistakably points out for adoption the principle and practice I wish to establish. In measles, I generally apply the blistering treatment both as a means of cure to the chest-complication, and as a preventive to the development of cerebral symptoms. In all cases I look out for nervous symptoms, as I believe they always indicate a very severe phase of the malady. The sudden disappearance of the rash in measles is often followed by an outbreak of some affection of the brain. It is, therefore, at all times wiser to be prepared for such an emergency by the adoption of treatment which will have a tendency not only to prevent such an occurrence, but will at the same time relax the excited and congested bronchioles and air-cells. The same treatment by blisters holds good as well in cases of infantile pneumonia, during the first or congestive stage, when there is a determination of blood to the pulmonary capillaries and increased activity in all parts of the lungs. Of course, this treatment is founded upon the same principle as in the other diseases of the lungs, and is applicable to all diseases in which the same conditions hold good.

All the different diseases which I have mentioned—bronchitis, pneumonia, measles, and congestion—it will be observed, may be divided into two classes; those that begin in the lungs, and those that have their origin in the nervous system. But, although the origin is different, the result upon the lung in the first stage is the same, and justifies the adoption of the same method of treatment.

By this method of applying blisters behind the ear, I believe that I shorten the duration of the disease; reducing the length of the first stage, and hastening the recovery. The irritated condition of the minute tissue of the bronchial tubes and air-cells, with the determination of blood towards the parts, being removed, the moist stage of the disease is quickly induced; thus, generally, preventing the exhaustion of the body and lungs, which takes place if the disease be allowed to run its course, or if we must wait till it submits to our usual pulmonary remedies.

This method of treatment is not only of practical value, but also involves a pathological principle of action, which is of the first importance, and which is in force not only in the case of children, but of adults as well, although not so apparent, and not at present under discussion; viz., the important part which the nervous system plays in disease, and especially in disease of the lungs. In children, this part of the organism cannot be ignored, and is on all hands admitted to be proportionally in extra activity—necessary, during early life, to fulfil the purposes of growth; and it thus becomes a factor whose influence cannot be safely overlooked during disease. In the condition of parts

to which the blistering treatment is applicable, the reflex action of the nerves supplying the lungs plays no secondary part in exciting, continuing, and modifying the abnormal action going on.

We must remember that the air-sacs in children, as well as the ultimate bronchial tubes, the terminal dilatations, and the alveoli, being smaller than in adults, when from any cause contraction takes place, these become still smaller. Their capacity being diminished, and the blood-vessels having become less in diameter through the forcible application of the elastic tissue, less air enters the air-vesicles, less blood passes into the capillaries, and there is less freedom in the transfusion of the gases—necessary to health—from the increased thickness of their walls: we have thus increased frequency of respiration, and diminished aëration of the blood, so that there is a condition inherent in the parts themselves which enables the smallest cause to act prejudicially.

Supposing a case of bronchitis be taken as a typical example of the action going on in the body: there is first the exciting cause or "cold" invading the lungs through the tubes, acting upon the mucous membrane as a local irritant, interfering with its normal nutrition, and deranging its circulation. This effect of irritation is not confined to the large and small bronchial tubes, but also affects the air-cells with the pulmonary circulation, though to a less extent. This irritation stimulates the minute tissue to increased action, and we have contraction of the elastic tissue, with an increased flow of blood in the capillaries, causing active congestion, which implies contraction of the capillary vessels. This contraction of the elastic tissue should cease so soon as the exciting cause—the "cold"—was removed. This does not take place, because the contraction and congestion of the parts are continued long after the cause is removed; because, besides acting as an irritant to these, it also has raised an action or irritation on the periphery of the nerves, thus irritating the filaments of the pneumogastric nerve through the afferent fibres; the impression is carried to its ganglionic centres, and thence, by the reflex process, is sent through the efferent fibres back to the already irritated and excited minute tissue, contracting still further the capillaries and elastic tissue. The original irritation is thus followed by that produced by the action of the nerves, and that process is kept up till the nervous action ceases through exhaustion. By this time the tissues involved, and very often the body itself also, are exhausted; too late, probably, for the little patient.

Dr. Roberts, in his article on Bronchitis, in Reynolds's *System of Medicine*, says that "cold," besides acting, as I have mentioned, on the mucous membrane, operates secondly "by acting upon the system at large, in some way or other not understood; the bronchitis being only a part of the general disturbance." This little understood part of the process going on in bronchitis is explained, by taking into account the stimulation of the nervous system in connection with the local affection. It is not an explanation of all the symptoms in connection with the disease, but it accounts for most of them. You cannot have disordered function going on in any part of the body, without its influence being felt, more or less, throughout the whole; and if deranged tissue-function affects the body, how much more will the deranged nervous function affect the general system, considering how easily and readily impressions are carried along their filaments.

Besides the irritation going on at the periphery of the nerves, influencing the tissue to which the filaments are distributed, this influence is not without its effect upon the ganglionic centres themselves; and cannot fail, by being continued for a length of time, to produce a pathological action there also. No organ in the body can be kept, for a length of time, in a state of irritation, without affecting its minute tissue, and producing, by its increased action, an increased growth of a low type among its cells, making them incapable of performing their proper work. This seems to be what takes place in the cerebral centres, and they cannot be expected to escape the operation of the usual law; so that, by long continued action in the filaments of the nerves, the nerve-cells are themselves ultimately affected, and we have at length, what is met with very often as sequelæ of disease in the chest—nervous symptoms, convulsions, and, probably, effusion into the ventricles. Anyone at all conversant with the diseases of children has to lament, too frequently, this result following disease in the chest; and to my mind the explanation is quite clear.

Thus we have, in the diseases to which I refer, an action and reaction going on, the chest upon the brain and the brain upon the chest. To this fact is to be attributed the increased mortality among children from diseases of the chest; they are less stable in the materials of which they are constituted; they are more susceptible to external impressions; their nervous system is, so to speak, too highly strung; and we thus account for the little understood conditions mentioned by Dr. Roberts.

The converse of this state of matters also holds good, as is to be

expected, if the principle advocated be true; viz., that diseases of the brain and nerve-centres produce disease or disordered function at parts distant from themselves—notably, in the lungs. Should an abnormal action be going on among the cells of the brain, it is impossible that an influence should not be sent along the nerves which arise from them, unless the abnormal action has advanced so far as to destroy the central cells. From the close connection between the ganglionic cells and the nerve-filaments, any irritation or stimulation among the cells will pass along the nerves to their periphery; and, unless it be denied that the nerve-filaments have any function to perform in the parts to which they are distributed, this central irritation will cause irritation and contraction of the elastic fibres of the air-cells and bronchioles; and, in this way, you have an abnormal action taking place in the lungs, from a disordered or diseased condition of some of the nerve-cells of the brain or nervous system.

We have thus in the chest, disease arising in the lungs from some cause external to themselves; and we have disease in the chest from some cause seated in the brain. The class of cases first mentioned, where we have increased respiration, tubular breathing, etc., in which I first applied the treatment by blisters behind the ear, is an example of abnormal action in the lungs, arising from disorder in the encephalon. The affections of the lungs in measles have also their origin extraneous to the lungs themselves. Some authors also speak of diseases in the chest from the reflex action of the dental nerves in teething; and, as examples of affections of the lungs arising in the chest itself, no better could be obtained than those of bronchitis and pneumonia. In whooping-cough, we have another example of an irritation of the nerves causing disease of the lungs; here we have the action of the nerves of a different character, acting upon the minute tissue of the lungs only at intervals, and by the powerful spasmodic contraction and relaxation its tendency is to exhaust the tissue, as I have pointed out in my paper on the Open Air Treatment of Whooping-Cough, in the *Glasgow Medical Journal* for last year. In this disease there is the interval of relaxation, which gives the tissue time to recover itself so far from the effects of the nervous action; but, in the cases under consideration, the baneful influence at work upon the tissue is prolonged without intermission, and what is required is to remove for good what takes place in whooping-cough only now and again.

If the opinion thus given, as to the important part the pneumogastric nerves and ganglionic centres play in these diseases, be correct, in what way can we turn this knowledge to account, and reduce the disease itself to a minimum? There may be other modes of effecting this object, but, as I have indicated, the placing a blister at or near the course of the nerve, between the irritated terminations of the nerve-filaments and the irritated ganglionic nerve-cells, has given me convincing evidence, in the results, that the action going on between these two parts has been stopped; at all events, symptoms, indicating that such an action has ceased after this application, have established the fact as strongly in my mind as if it could be demonstrated.

The explanation of the use of counterirritation in this manner is, that it comes between the two spots where nervous action commences, and this new centre of irritation acts as a tap to the nervous force here, and diverts it from its usual course. The *vis nervosa* coming from the lungs, and the *vis nervosa* coming from the ganglionic centres, are both stopped at this point, and their energy, being expended in this new inflamed tissue, does not proceed further to keep up the pathological action either in the lungs or in the brain. In fact, from whatever part the irritation comes, by this means it ceases to be reflex action. Commencing in the minute tissue of the air-passages, it passes along the afferent filaments of the nerves till it reaches this new centre of irritation, and there expends itself, not passing to the ganglionic cells of the brain; and, in the opposite direction, the influence coming from the brain ceases at this point also; so that the reflex action is removed, and the irritated terminal points have time to recover their wonted condition. I consider that this action of the blister has much the same power, though less permanently, as could be attained by the division of the nerves at the same part of this course. Section of these produces diminished respiration, relaxation of the elastic fibres, with retarded flow of blood through the capillaries, and effusion of serum from these vessels. Blistering over the course of the nerves produces a state of things much the same, only of a temporary character, and not so extreme. During the action of the blister, which can be continued or removed, the hurried respiration is moderated, the dry vesicular murmur is removed, and we have the exudation of the natural secretion from the mucous membrane, so that we have remaining only what Dr. Laycock calls the *vis nervosa* of the tissues themselves. The great factor, whose action so powerfully affected the original malady, having been thus removed, the parts soon recover their original

tone, not having been subjected to the long continued exhaustion which follows the unimpeded action of the reflex power playing through the pneumogastric nerves. Moreover, the system generally does not suffer to the same extent, and, consequently, recovery is much more rapid and satisfactory.

When disease in the chest arises from some abnormal action going on in the encephalon, the blisters remove the chest-disease, and we are at liberty to direct our efforts to the cerebral disturbance, thus limiting our remedies to a smaller morbid locality; and, the body submitting to only one focus of injury, the disease in the chest, being removed, ceases to act as a stimulus to that of the encephalon.

Some objections may be raised to this explanation, as involving a new theory as to the action of blisters, as well as the new theory mentioned previously, in reference to the pathological action of the nervous system in diseases of the chest. I am one of those who believe that blisters act as stimulants, but not that their stimulating action does good only through the nervous system, and through that alone, as is believed by those who call themselves "Young Medicine." Dr. Anstie is, perhaps, the clearest exponent of their views; and in the *Practitioner* for March 1870, he says of blisters, that "they are the refuge of the destitute." He will probably object to the explanation given; but even he, in his anxiety to confound those who differ from him, and to establish his own views, contradicts himself in the seven propositions which he gives in explaining the action of counterirritants. In some of his views I am at one with him; but, in others, he is as unsatisfactory as he accuses his opponents of being. It seems to me that blisters act in different ways under different conditions. They act by diverting nervous force; they act by exhausting tissue-contraction; they act by the stimulation of glands and tissues; and they act by stimulating reflex action; but that blisters are only "the refuge of the destitute" I deny. Guided by observation and experience, they may become handmaids to the wise, and afford a harbour of safety for the destitute in health.

THE CAUSES AND PATHOLOGY OF THE VARIOUS ACQUIRED MALPOSITIONS OF THE UTERUS.

By T. D. GRIFFITHS, M.D.Lond., Swansea.

THE term *malposition* is taken, in the present instance, to include prolapsus, and the various acquired versions and flexions of the uterus. It is chosen in preference to *displacement*, as the uterus is one of the most movable organs in the body, and possesses a considerable latitude for variation in its position, which should be considered as normal.

In order to elucidate the proximate and most obvious causes which tend to produce uterine malposition, and which are practically of the greatest interest, it is necessary to notice briefly the general anatomy of the female pelvis; the mobility, flexibility, and variableness in the size of the uterus; certain pathological conditions of the uterine appendages, their neighbouring organs and tissues, general malnutrition, and certain muscular efforts.

General Anatomy of the Female Pelvis.—The uterus is retained in its natural position, between the bladder and rectum, by the broad ligament on each side; the fundus, scarcely reaching the brim of the pelvis, is directed upwards and forwards; the posterior surface, which is more convex than the anterior, is free, and covered by the peritoneum, which is reflected from the cervix uteri to the posterior wall of the pelvic cavity in front of the rectum, and in this situation, where it forms the recto-uterine pouch, it dips below the level of the cervix. Here the partition between the peritoneal cavity above and the vagina below consists of serous and mucous membranes, with some intervening muscular fibres and loose areolar tissue; this structure (recto-uterine ligament*) forms a portion of the wall of the peritoneal cavity. The anterior surface of the uterus is also free except at the lower fourth, where it rests, as it were, on a cushion, and is firmly attached to the bladder, and supported *in situ* by the recto-vesical fascia.

The peritoneal cavity is limited in the pelvis by a somewhat horizontal diaphragm (pelvic diaphragm) consisting of the bladder, uterus, and its ligaments. The outlet of the pelvis is closed by powerful muscles and fasciæ, which are supplementary in their function to the pelvic diaphragm.

The Mobility and Flexibility of the Uterus.—Although the uterus is a highly movable organ, it is not equally so in all directions, and this

is an important point to be remembered. The upper and heavier portion is freely movable in the antero-posterior direction, but greatly limited in its movement laterally by the broad ligaments. The organ as a whole is capable of a considerable movement in the vertical direction, which forms an arc of a circle in the pelvic cavity, having its centre in front of the pubes. This curved direction is determined by the greater fixity of the anterior attachment of the cervix.

The uterus, more especially in the virgin state, is capable of resisting flexion to a considerable extent in virtue of the thickness of its wall, but the organ is not equally rigid in its whole length, it is more easily bent at that part which corresponds to the inner os, or thereabouts, and it is here (in a line between the upper part of the vesico-uterine attachment, and the point at which the peritoneum leaves the posterior part of the cervix) that flexion takes place.

Variableness in the Size of the Uterus.—Increase in the size of the uterus plays an important part in the causation of uterine malposition, which will be more particularly considered under the head of pathology. Suffice it now to notice only a classification of its various enlargements.

LARGE UTERUS.

(1) Physiological enlargement.

- (a) Very slightly during the access of menstrual periods.
- (b) During pregnancy and period of involution.
- (c) After involution or postpuerperal, one-fourth to one-third larger after than before parturition.

(2) Pathological enlargement.

- (a) from congestion.
- (b) " inflammation.
- (c) " hæmorrhage (peri-and intra-uterine).
- (d) " hypertrophy (hyperplasia).
- (e) " imperfect involution.
- (f) " tumours (heteroplasia).

Certain Pathological Conditions of the Uterine Appendages, their neighbouring organs and tissues, should occupy a place in the etiology of uterine malposition. It is evident that imperfect involution of the broad ligaments after parturition, inflammation of the ovary, ovarian tumours, etc., are capable of influencing the position of the uterus. Again, tumours, or over distension of the bladder, may displace the uterus backwards; fecal accumulations in, or tumours of the rectum, may attain to such a size as to push it forwards, upwards, or both; abdominal tumour, or fluid in the peritoneal cavity may, under certain circumstances, bring about flexion, version, or prolapsus, but in these cases the malposition of the uterus is of secondary importance. Finally, the soft structures guarding the outlet of the pelvis are not unfrequently damaged in parturition, so as to allow the uterus to descend below its natural limits.

A state of malnutrition of the system generally, and of the uterus and its appendages in particular, is perhaps one of the most frequent disturbing influences which affect the position of the uterus. This pathological condition may be brought about in one of three ways; namely, by defect of nutritive material in quantity and quality; by retardation and perversion of the nutritive process caused by some local disease, or diathetic condition of the system; or by some anti-hygienic surroundings, or enervating habits in which the patient has been indulging. A state of defective nutrition, in whatever way induced, is attended with a loss of elasticity and resisting power, conditions extremely favourable to uterine malposition.

Muscular efforts, more especially of the abdominal wall and thoracic diaphragm, should only be mentioned in this place to complete the list of important elements in the production of uterine malposition, as it will be more particularly considered under the following head.

Pathology.—In the normal state there exists an equilibrium between the weight of the uterus, and the resistance offered by the surrounding structures, by means of which the organ is supported in its natural position. It is our province now to consider the mode in which this equilibrium may be disturbed so as to result in malposition. It is very evident that an increase in the weight of the uterus without, and *a fortiori* with, a decrease of the resisting power of its ligaments, may suffice to affect its position. Again, the same result may be produced by an increase of pressure brought to bear upon the uterus and its attachments by a forcible action of the thoracic diaphragm, and abdominal wall, or by an increase in the superincumbent weight due to various diseased conditions of the abdominal organs. Although these propositions constitute the actual and ultimate explanation of uterine malposition, a more detailed account is necessary to explain its production, and the conditions which determine its varieties. It is observed that the abdominal wall, pelvic diaphragm, and soft structures closing the outlet of the pelvis, move synchronously with the respiratory movements of the chest.

* Recto-uterine ligament is taken here to include (for the sake of brevity in description) the whole of the soft structure, limited on each side by the broad ligament, which attaches the uterus to the posterior wall of the pelvic cavity.

It is also observed that, during moments of powerful muscular effort, when the chest-wall is fixed, the thoracic diaphragm, abdominal wall, and muscles guarding the outlet of the pelvis, contract powerfully to steady the trunk. Under these circumstances, the abdominal organs are subjected to equal pressure in all directions; but, under precisely similar circumstances, with the exception of relaxation (or a passive state) in lieu of powerful contraction of the muscles at the pelvic outlet, the abdominal organs are pressed in the direction of the pelvis, and therefore force downwards the pelvic diaphragm towards the perineum. This is what actually takes place during the act of defæcation, especially when much effort is used. Under the latter circumstances, it happens not unfrequently that the pelvic diaphragm gives way partially at the recto-uterine ligament, very much in the same way as the abdominal wall in cases of hernia. The peritoneum is forced downwards between the rectum and vagina; and, as it descends, it drags upon the posterior surface of the uterus, and causes it to fall backwards into the recto-uterine pouch, and bend at its most flexible part the junction of the body and cervix. Again, when the uterus as a whole is slightly lowered in the pelvic cavity, which is generally the first step in the process of posterior malposition, the fundus is directed upwards towards the promontory; and, when this position is obtained, the body of the uterus is forced backwards in front of the intestines at each succeeding muscular effort. The degree of flexion, which varies considerably in different cases, depends upon the amount of muscular effort, flexibility of the uterus, fixity of the anterior attachment of the cervix, capacity of the pelvis, state of nutrition of the soft parts, and integrity of the structures at the outlet of the pelvis; *e.g.*, pure retroversion—that is, without any flexion—would be obtained in a capacious pelvis, with a relaxed condition of tissues and a somewhat swollen rigid uterus.

Posterior displacements are not unfrequently brought about quickly by violent straining at stool, or by any sudden and instinctive muscular effort made to save oneself from falling, when the body is unexpectedly overbalanced by a slip of the foot or otherwise. It appears that, under the latter circumstance, the muscles at the outlet of the pelvis are liable to be taken by surprise, not being so readily acted upon by a reflex stimulus as those more immediately concerned in keeping the body in the erect position: hence the sudden displacement downwards of the pelvic diaphragm, and malposition of the uterus. These are the most usual circumstances in which posterior displacements are produced in young and healthy females; but more frequently they are the work of weeks or months, and are the result of a combination of causes—namely, a loss of elasticity and resisting power of the soft tissues, increased weight of the uterus, together with muscular effort, etc.

Although the normal position of the uterus is apparently more favourable to anteversion and flexion than any other displacement, yet, as a matter of fact, it is found that anterior displacements which are productive of any discomfort to the patient are extremely rare in comparison to the other varieties. The explanation of this is to be discovered in the anatomical connexion of the uterus and the inferior resisting power of the pelvic diaphragm at the recto-uterine pouch.

The positive conditions which most frequently determine anterior displacement are, the virgin state of the uterus and its attachments, a slight increase in the weight of its body and fundus.

With regard to lateral varieties of uterine malposition, it may be stated, in the first place, that even the posture of a patient may suffice to determine this to a slight extent temporarily. The fundus of a heavy uterus is found on examination to incline to the side on which the patient lies—that is, when the pelvis is capacious, and the soft tissues are relaxed and flabby. But a more permanent lateral displacement may be produced by a tumour situated a little to one side of the median line in the body of the uterus; by acute or chronic disease of either of the broad ligaments; by a diseased condition, attended by increased weight of one of the ovaries; or by tumours, etc., in the neighbourhood of the uterus and its appendages.

Prolapsus Uteri.—It has been already shown that the uterus is freely movable in the vertical direction, the line of movement forming an arc of a circle which is more or less parallel with the axis of the pelvic cavity. And it is found, on examination, that the relative position of the uterus in this pelvic arc varies in different individuals, and also in the same individual, within a certain latitude, under varying circumstances. When the cervix descends below its normal limits (which may be stated approximately to be at about an inch and three-quarters above the fourchette), the case is said to be one of prolapsus. When this occurs, the pelvic diaphragm is forced downwards in an infundibular manner. The suspensory ligaments of the uterus, as well as the supports at the pelvic outlet, give way, allowing the organ to descend, and, in extreme cases, to invert the vagina and protrude through the vulva. The main conditions which determine this variety of mal-

position are, loss of elasticity and resisting power of *all the surrounding* attachments of the uterus; increased weight of the organ itself, and the parts pressing upon the pelvic diaphragm; and impaired support of the soft structures around the vagina and at the pelvic outlet.

THE ORIGIN OF MIASMATIC DISEASE.*

By JOHN M. BRYAN, M.D., President of the South Midland Branch, Northampton.

IT has not been usual, I believe, that your President should deliver an address at this our autumnal meeting; but I think it is due to the Society, and to the position which he holds, that the business of the meeting should be opened by one, however short. I am pleased to meet all present, however few the number; and I regret that the distance at which many members reside, and the difficulty to leave professional duties, prevent more from being present.

This year will long be remembered in our annals for the greatest gathering of medical men ever brought together in London, or, perhaps, any other place. There were three thousand present at our annual general meeting in August, besides four hundred ladies at the Mansion House, and that number at two of the evening *soirées* or presentations at which I was, *viz.*, at the Mansion House, given by the Lord Mayor, and at the College of Surgeons; one other also was given by the University College, at which ladies were present. I was pleased to see our Branch fairly represented, as I believe I counted about twelve of our Associates at King's College. But surely more ought to have been there; and absent gentlemen can hardly realise the vast hospitality and pleasure derived, and knowledge gained at the annual general meetings. I can speak well for myself, having attended the three last, *viz.*, Plymouth, Birmingham, and London, as well as Leamington, Oxford, and others.

As this locality has recently been visited by typhoid fever, and was so, likewise to my knowledge, some few years since, I thought it might be interesting, and lead to some discussion and good results, if I made a few remarks on that disease, and the origin of miasmatic diseases generally. I may premise that infection is the power possessed by the breath, perspiration, excrementary discharges, and cutaneous waste of persons in certain morbid conditions, to propagate "catching" diseases. And it might be well to consider what are true reliable disinfectants, in contradistinction to deodorisers, as there is much difference of opinion on the same. I am disposed to think that the only true disinfectants are those which produce an atmosphere or vapour in which neither we nor any life can be sustained, such as heat, chlorine, and sulphur vapour principally.

The belief in the spontaneous origin of the specific miasmatic diseases rests on negative evidence, *viz.*, the fact that cases do spring up, in which it is impossible to trace the disease back to a personal source of specific propagation and dissemination—an event which is inherent in the very nature of these diseases. There seems no doubt that typhoid fever is the result of the inhalation of miasm of decomposing animal matter, either in the form of aerial emanations, such as sewer-gas, or of local pollution of the drinking water, by infiltration of such matters; and, whenever we meet with a case of enteric fever, we always look to the local circumstances under which the patient was placed, at a date corresponding to that of the ordinary commencement of the period of incubation, which period, according to Sir W. Gull, may be from twelve to fourteen days.

Endemic influences result from conditions or agencies peculiar to a locality which favour the development of various miasmatic diseases, and may thus account for their sudden origin; they are traceable to the constitution and state of the soil, water, and air; to elevation above the level of the sea, vicinity of sea-rivers, or stagnant water; woods or vegetation, variations of temperature; prevalent winds; in connection with avocations, modes of life, quality and quantity of food, as modified by moral agencies, such as indolence and activity, privation and comforts, filth or cleanliness of people, together with their habits of life and employment. Endemic influences become mainly active through the following conditions, *viz.*:—1st, that the specific poisons by which the communicable diseases, such as small-pox or typhoid fever, propagate their kind, are never totally in abeyance; 2ndly, the specific communicable diseases are constantly somewhere, and only under conditions favourable to their dissemination do they spread or become epidemic; and, although their germs or gases, or active principles or media of propagation and development, may lie dormant or latent for a time, it is not to be inferred that they have ceased to exist. There are the same

* Read before the South Midland Branch.

alternations of slumber and activity—prevalence in one place, free in neighbouring places—and so that they prevail in a new locality after having died out in the old. The occurrence of long intervals of rural exemption is not traceable to any feebleness of the poison to act; for, when the disease becomes developed in these places, the ratio of persons attacked is incomparably greater than is ever seen in cities in like circumstances. *Ex. gr.*, about two years since, at Kingsthorpe, a village near Northampton, the death-rate was 76 to the 1000; and such I have personally known some years back at Hardingstone, Brafield, Denton, Ecton, and other villages, where the entire population seemed affected; and I have had twenty-three or more cases under my charge at one time in one of these.

In small villages, where no sewers exist, the air may be infected, or the water contaminated, by direct or indirect importation of cases of specific diseases, or their equivalent, the poison itself, as I have myself known and seen from servants going home with typhoid, and several of the family in some distant village (at the time free from any like complaint) taking the same, and dying in numbers of two, three, or more; so that the organic impurities, the dung-heaps, the open soil which surrounds the dwellings of the patients, the cesspools and privies common to several houses, gradually but eventually become impregnated with the specific poison of the disease. One element is constant, that is, the specific or morbid poison which is the origin of each case.

In large cities, such specific poisons are always more or less active. The immunity acquired by one attack is of no avail against the rest. There is reason to believe that fermentation, putrescency, or decomposition may quicken the activity or facilitate the development of specific morbid poisons in the way of a predisposing cause; but cases spring up in which it is impossible to trace the disease to a personal source of specific propagation.

It seems to have been clearly proved by Dr. W. Budd of Bristol, "that the communicable poisons of typhoid fever are capable of being imported or carried from place to place by persons who have the disease." Mr. Simon makes the important remark, that "the bowel-discharges may not be the *sole* means of multiplying or disseminating these diseases, although Dr. Budd's arguments are to the general effect, that, specially, the bowel-discharges are the means by which a patient, whether moving or stationary, can be instrumental in disseminating typhoid fever or cholera;" query, whether the bowel-discharges, in the course of decomposition, or not, acquire power? Sir W. Gull's theory is, "that germs get into the blood, as the air is full of them." He also says, that, "in the treatment, we must save the strength from the beginning, and not trust to medicines to cure it;" and he would prefer to carry anyone through typhoid fever by wines, soups, and fresh air rather than by the use of drugs. From what I have seen myself, I believe that there may be no case, however unfavourable the symptoms, from which recovery may not take place.

I might still further dilate on this subject, did time permit; but, having thus far proceeded, I shall hope to hear remarks from our valued associate, Mr. Haviland, and others, which may possibly lead us to the best mode of treatment. As to entire prevention, we must leave that also to the first-named gentleman; as the ungrateful public can hardly expect us, as medical practitioners earning a living, to do that which would lead us to say, with Othello, "that our occupation is gone!"

PATHOLOGICAL MEMORANDA.

CONGENITAL UMBILICAL HERNIA.

A PATIENT of the Westbourne Dispensary, a primipara, was delivered by the midwife of a female infant; vertex presentation, labour normal. At birth the infant presented the following peculiarities: (a) considerable deficiency of the cranial bones at and around the posterior fontanelle; (b) a supernumerary toe and finger on each hand and foot respectively; (c) at the umbilical aperture a large globular tumour of the size of a small hen's egg, with semi-solid and fluid contents, enclosed by an expansion of the sheath of the umbilical cord. From the lower end of this tumour extended the funis, which at birth had been divided and ligatured just below the tumour.

The infant lived five days. During life it took hardly any nourishment; uttered a peevish whining cry; it had no action of the bowels; but on the second day the friends gave some castor-oil, and two evacuations of meconium took place: no subsequent defæcation occurred. There was no vomiting.

At the *post mortem* examination, the tumour near the umbilicus was found to be an umbilical hernia, consisting of the following structures:—viz., the remains of the funis, about two inches of the ileum, the cæcum

and vermiform appendix, and a portion of the colon distended by meconium. All these contents were matted together by old adhesions of lymph; and the adhesions between the superficial parts of these, and the walls of the sac, were very firm; at the umbilical ring, however, no adhesions existed.

Remarks.—The mother attributes this occurrence to a fright she received in the early months of pregnancy, owing to hearing about a man who was killed on the Metropolitan Railway, after which he was dragged by the train with his head on the rails. Pathologically, the case presents the following points of interest. 1. The marked adhesions point to inflammatory action having occurred during the early months of pregnancy; so that probably a temporary umbilical hernia existed previously to the fright, and at this time became aggravated in size, and was rendered permanent, probably, by some accidental peritonitis which then occurred, bearing out the view held by Sir James Simpson. 2. These early and firm adhesions render an attempt to reduce such congenital umbilical hernia impracticable. 3. Ligature and division of the funis must be carefully applied, so as to avoid all chance of including any intestine below the tumour. 4. Purgatives are useless; the case shews the necessity of giving a prognosis of death within a few days of birth, in all probability.

H. CRIPPS LAWRENCE, L.R.C.P.Lond., etc.,

Surgeon to the Westbourne Dispensary.

CLINICAL MEMORANDA.

VACCINATION FROM A VARIOLOUS PATIENT WITHOUT COMMUNICATING SMALL-POX.

MR. ALDERSON'S memorandum on vaccination from a child suffering from small-pox, in the JOURNAL of Dec. 6, reminds me of a circumstance that occurred to me in the autumn of 1864, when small-pox was prevalent here. I was consulted about a boy 14 years of age, who was slightly feverish; and, as he had never been vaccinated, and lived in a street where small-pox was prevalent, I at once vaccinated him. His arm took so well, that I re-vaccinated more than a dozen persons from it. On the same day, the eighth, the boy felt rather chilly; and on the thirteenth day I was sent for, and found him in bed with incipient confluent small-pox, which was especially thick on the face. He was very ill for about a week, and then rapidly got better, and the pustules aborted, never becoming larger than a split pea. He is now in good health, married, and has a family. All the arms rose well, and no variola was communicated.

In this case, it seemed to me that the vaccination rendered the small-pox latent for a time, but that, when the vaccinia had passed its *acmé*, the variola took its usual course, but was rendered abortive, and declined, instead of being worse, after the eighth day.

RICHARD ALFORD, F.R.C.S. Eng., Weston-Super-Mare.

FÆCAL ACCUMULATION.

AS an addition to the case of fecal accumulation published by Dr. Cole, in the BRITISH MEDICAL JOURNAL of November 29th, and to illustrate the importance of diagnosis in all diseases situate below the diaphragm, which are too often designated as obscure "abdominal tumours," I beg to submit the following. A. P., aged 14½, was admitted into the Queen's Hospital, Birmingham, February, 1871. When she was two years old, her mother noticed an enlargement of the abdomen on the right side. When she was two years and a half old, she had scarlet fever, and the enlargement was said to be due to dropsy. She was always confined in her bowels, often passing a week without a motion; and, four years ago, there was no motion for nearly three weeks. After the bowels had been confined for some time, the enlargement increased in size and diminished again when a motion was passed. The motions were always small in quantity, and watery. There was no sickness nor headache; no cedema of the ankles; no pain on micturition. Occasionally, she had griping pains in the tumour. On admission, the abdomen presented a prominent enlargement, chiefly on the right side, and was very prominent in the right iliac region. By firm pressure, the hand could be placed below the tumour into the cavity of the pelvis. The superficial abdominal veins were rather enlarged; there was no bulging of the flanks; there was hyperresonance all over the abdomen, except in the right iliac region; there was no fluctuation. On palpation of the right side, a sensation was given as if the abdominal walls were pressed against some sticky tumour, and then slowly separated from it. Firm pressure with the finger left a depression, which could easily be distinguished. The tumour could be felt extend-

ing nearly to the costal cartilages on the right side, its edge passing down to the umbilicus; and, from that point, it extended for about three inches to the left of the middle line. The ribs were slightly everted; the lungs were normal; there was forcible cardiac pulsation about an inch and a half above and one inch to the inner side of the left nipple. The cardiac sounds were normal. The stomach extended almost to the left nipple. The spleen and liver were normal. She had never menstruated. Dr. Sawyer, then resident-physician, diagnosed faecal accumulation, and, on the evening of her admission, explored the rectum, and, with a scoop, brought away masses of faecal matter, imbedded in which were a large number of cherry-stones. She was ordered a pill containing one-third of a grain of Socotrine aloes, half a grain of extract of hyoscyamus, and one-third of a grain of extract of nuxvomica, to be taken thrice daily, and compound camphor liniment to be rubbed in every night. On February 23rd, she had an injection in the evening, followed by a motion consisting of hard faeces. She was ordered to have a drachm of sulphate of magnesia in infusion of roses three times a day; and enemata of cold water and salt night and morning. On the 24th, in the evening, two chamber-utensils full of faeces were passed, and two more after injection on the morning of the 25th. Next day, there were three more copious motions. The cardiac impulse was a rib and a half lower. On the 27th, she had two more motions, not so hard as before; and, on the 28th, one motion. On March 1st, a fluid stool passed after each injection. She was ordered to have aromatic iron mixture twice a day; and faradisation (gentle) daily. On the 2nd, the apex-beat of the heart was much lower. She had no sickness nor faintness. Shortly after this, she left the hospital perfectly well.

L. HERBERT JONES, Watford, Herts.

SURGICAL MEMORANDA.

THE ELASTIC LIGATURE.

IN the BRITISH MEDICAL JOURNAL for November 29th, under the above heading, after calling attention to Sir Henry Thompson's removal of a mammary tumour by this method, it is stated that, "While to Dr. Dittel is unquestionably due the credit of having made a most ingenious application of the result of an unfortunate accident, and of having called the attention of surgeons to a mode of operation which may prove to be of much value, it would be an error to suppose that he is the first surgeon who has used the elastic ligature in the way recommended by him. More than three years ago, Mr. Henry Lee read a paper before the Royal Medical and Chirurgical Society, in which he described an operation that he had practised for the removal of naevi by the use of elastic ligatures." (BRITISH MEDICAL JOURNAL, vol. ii, 1870, p. 99.) At that meeting I claimed to have used the elastic thread on many occasions previously to the reading of Mr. Lee's paper, though I had confined its use to cases of fistula in ano and for the division of bridges of skin between the orifices of fistulous tracts.

I may take this opportunity of mentioning that, during the visit of the Siamese Twins to this metropolis, after applying an elastic ligature to a case of fistula in the operating-theatre of the Westminster Hospital, I stated to the visitors and students then present my belief that these brothers might be separated, with very little risk, by transfixing the band which united them with a needle carrying one of these threads, at the distance of an inch from the upper or lower border of the septum, and, after it had cut through this inch of flesh, proceeding inch by inch in a similar manner from below upwards or from above downwards till the whole was thus divided.

It is all very well to remind the profession of Mr. Lee's paper, now that the utility of the elastic ligature has been recognised abroad, and a recent operation in one of our hospitals has again brought it into prominence; so little, however, was Mr. Lee's paper thought of at the time when it was read, that it is not published in the Society's *Transactions*, and but a short abstract of it is given in the journals which reported the proceedings of the meeting, while the names and observations of the speakers on that occasion are not even mentioned.

The use of elasticity in surgery, whether as a substitute for the knife or the *écraseur*, or for making extension or compression, or even for mere retention, is not, in my opinion, sufficiently appreciated by the profession. As long ago as 1856, I began to make use of India-rubber cords for making extension in fractures and for the unbending of joints which had become flexed through disease; and this method has since received increased development at the hands of Mr. Barwell, for the treatment of club-foot and diseased hip. In the form of elastic tubes of different sizes and strengths, and which can be cut to any length, I have employed it extensively for making compression in diseases of the joints, as well as for retaining splints in position in lieu of bandages.

In short, in all cases where continuous extension, pressure, or support is required, the action of these elastic bands is preferable to the intermittent action of the ordinary calico bandage.

C. HOLTHOUSE.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

STRANGULATED HERNIA OF RIGHT OVARY IN FEMORAL REGION :
OPERATION : RECOVERY.

(Under the care of Mr. EDMUND OWEN.)

WE are indebted for these notes to Mr. Knott, Resident Registrar.

A spare woman, of medium height, aged 39, was admitted into St. Mary's Hospital on September 5th, under the care of Mr. Edmund Owen, suffering from a painful tumour in the right femoral region, of which she gave the following account. Two years ago, in attempting to fix a clothes-line, she over-reached herself, and immediately felt severe pain in the right groin, but there was no swelling. In the course of a few days the pain subsided—leaving, however, a feeling of weakness in that region—and much exercise was certain to be followed by pain shooting across the hypogastrium. About six months after the accident a lump appeared in the groin, but, on lying down, she was able to return it into the abdominal cavity. After its first appearance the swelling frequently came down—in fact, "was as often down as up". It was of the size and shape of a small hen's egg. She never wore a truss.

At the time of her admission the hernia had been down a week, and was extremely tense and painful. Her bowels were regularly open, and she had not suffered from sickness; still, her face was flushed, and wore an expression of extreme anxiety: pulse about 100, and rather small. The patient was put into a hot bath, and taxis employed, but without success. Mr. James Lane then saw the patient with Mr. Owen, and herniotomy was agreed upon, the opinion being that the protrusion was omental. Chloroform having been administered, an incision was made through the integuments in the long or vertical measurement of the tumour, and a tight strangulation which existed at the femoral ring was divided in the usual manner, but still the size of the tumour could not be diminished. A further examination of the tumour showed it to consist chiefly of two cysts, containing a clear fluid—one being as large as a pigeon's egg, the other of the size of a filbert: from these a pedicle of the thickness of the little finger could be traced up into the abdomen. On the inner side of the mass was a free fold of peritoneum, which could be readily peeled off. The cysts were then emptied, and the collapsed mass readily pushed up through the femoral ring. The edges of the wound were brought together by means of sutures of carbolic catgut, and dry lint compresses applied and fixed with strapping. These dressings, when removed on the tenth day, were still quite dry, and the wound was found completely healed. The sutures had been shed after solution of their deep parts. No opium was required. The patient was discharged well on October 1st.

During the progress of the operation, it became evident that the tumour consisted of the ovary in a state of cystic degeneration. The patient was afterwards asked whether the tumour was more painful at the catamenial periods. She answered that it was exceedingly painful at those times—so much so that she could hardly touch it, and dared not attempt to replace it. She had had seven children and two miscarriages. Her catamenia, which had always been very regular, appeared the day after the operation, a week before their time.

REMARKS BY MR. E. OWEN.—Escape of the ovary through the saphenous opening seems to be of very rare occurrence—much more so than through the inguinal canal. In the latter case, the hernia may not improbably be congenital, and in its nature analogous to the descent of the corresponding organ, the testicle, in man. The affection may then, moreover, be bilateral. In the foregoing case the ovary had undergone cystic degeneration—a not uncommon result, according to the report of Dr. J. Englisch of Vienna (New Sydenham Society's *Biennial Retrospect* for 1871-72, p. 291). No gut or omentum had passed into the sac; in fact, all the peritoneum which the ovary had dragged down in its descent was represented by the small fold on the inner side of the tumour. It would, perhaps, have been better had this serous fold been stripped off and the diseased ovary removed from its pedicle, as the patient still suffers to a small extent (Nov. 10th) during menstruation,

and even at other times, though by no means to the extent that she did previous to the operation. There has been no further protrusion in the region, and the patient still wears the truss with which she was supplied on her discharge from the hospital. There is no displacement of the uterus.

Dr. Englisch, speaking of the various kinds of acquired (inguinal and femoral) ovarian hernia, cites only three cases in which the mass was irreducible; but it does not appear in how many of them operative measures were undertaken—whether after a correct or incorrect diagnosis—with a view to their reduction.

THE LONDON HOSPITAL.

CASES OF CYST IN THE BRAIN.

(Under the care of Dr. RAMSKILL.)

CASE I. A Large Cyst in the Left Hemisphere—Supposed to be the Result of a Fall.—Morbid changes in the brain, similar to those found in the case recorded below, are rarely met with. Of course, cysts of the brain are common; but a cyst of this size, or one occupying the position of this cyst, is rarely found. The case is also clinically and etiologically instructive. The patient (Walter R.) was 21 years of age. His mother, from whom we obtained the following history, said he was quite well up to six years ago. About that time, he was thrown out of a cart, and ever since then "his head had been troublesome." He had had repeated attacks of headache, accompanied by tremor of the extremities and vomiting; but he had not lost consciousness, and his face had not been convulsed. He had also had frequent attacks of bleeding from the nose, which seemed to relieve the headache. During the last six months, he had not been able to do any work, but the last two months he had seemed to be much worse; he had complained much of headache, and had lost the sight of his right eye.

On admission, there was convergent strabismus; and he complained of singing in his right ear. He had a vacant look, and, although his answers to questions were intelligible, they were given in a hesitating manner. When spoken to rather sharply, he seemed to rouse himself, and then answered more readily. He complained very much of pain in his forehead, and this continued throughout the time he was in the hospital. He walked about the ward, and his face had no unhealthy aspect. His body was well nourished, his appetite was good, and, whilst in the hospital, he had no tremor, and stated that he slept well, whereas, previous to admission, he had slept very badly. His heart, lungs, abdomen, and urine were carefully examined, and found to be normal. After being in the hospital about a month, he seemed to be in much the same condition; but, one day, after being about the ward as usual, in the evening he had a fit, during which he was unconscious and convulsed, and on the following day he died.

Necropsy.—The scalp and skull were found to be healthy. The dura mater over the anterior and under portion of the left hemisphere was adherent to the pia mater, and the latter to the brain. On cutting into the brain-substance, a quantity of reddish, semi-transparent, thickish fluid escaped from a cyst. The convolutions of the left hemisphere were much flattened, but there were no indications of arachnitis, and no lymph was found on the pia mater. A large cyst was seen extending through the under portion of the left anterior lobe, as far back as the posterior lobe; it did not communicate with the descending cornu of the left lateral ventricle, but the piece of brain separating this cyst from the cornu was very thin. The cyst was very close to the surface, the intervening brain-substance being in parts not more than a quarter of an inch thick, and it almost touched the surface of the anterior and middle lobes. This cyst extended about half way up the hemisphere; its inner surface was smooth and very vascular. In its posterior and under part was a firm, hard gritty mass about the size of a large pea, which was adherent to the lining membrane. The microscope showed this matter to consist of cholesterine and a quantity of granular fat-like matter, which was dissolved by ether. Lying on the lining membrane of the cyst were a number of minute greyish thin scales of cholesterine and fat; they were scattered over a considerable portion of the inner surface of this cyst, and amongst them was some dark pigment-matter. The right middle cerebral artery was healthy; the left was pushed to one side, and with difficulty found. The left optic nerve was considerably altered, and the left portion of the optic commissure so much altered, that it could scarcely be recognised; it was converted into a soft grey gelatinous-like substance. The third and sixth nerves on the left side had probably been somewhat pressed upon by the cyst. The remainder of the cranial nerves were healthy. The remainder of the brain was healthy, and the motor tracts were unaffected. The other viscera were healthy.

On this case, Dr. Ramskill remarked that the clinical history favoured the opinion that the injury the patient received six years ago was the cause of the brain-disease; the fact of his being able to do his work, with occasional cerebral disturbance only, was not opposed to that conclusion; for it is well known that a person may have an abscess, or other morbid mass in his brain, and may daily attend to his work, no one suspecting that there is disease within the skull. In other persons, as in this case, there may be recurring severe pain in the head, which may continue for a few hours or days only, but these attacks become by degrees more protracted and severe. If accompanied by vomiting, these may be supposed to be bilious attacks. Epileptiform seizures, with complete loss of consciousness, are common in such cases; but there may be convulsive movements of a limb or limbs without loss of consciousness; and it is instructive to notice that this patient had attacks of trembling, which were probably simply modified slight convulsive attacks. The absence of disturbance of nutrition, as shown by his well-nourished body, was particularly noticed. Although no hæmatoidin-crystals were found to indicate that this cyst resulted from hæmorrhage and contusion of the brain, yet it seemed to Dr. Ramskill, looking at all the features of the case, that such was most probably its origin.

CASE II. Cysts in the Brain: Atrophy of the Right Hemisphere.—The following case of brain-disease is clinically and pathologically very instructive. Morbid changes such as were found in this child's brain are seldom met with even in adults, much less in children. It is common in adult life for a cyst in the brain to produce recurring epileptiform convulsions, but children's convulsions are not usually dependent upon any such coarse lesion in the cerebral organ. The patient was F. I. T., aged 4 years. His mother stated that, when the child was five weeks old, he seemed to have no use of his right leg and arm, that he subsequently lost the use of his left limbs, and that this paralysis continued at least a month, if not longer. After that, it disappeared, and he seemingly recovered, and remained well until he was a year and a half old. He then walked and talked like other children of that age. One morning, after he had slept as usual, when his mother took him out of bed, she found he could not stand, and he had also lost the use of his arms. He talked as usual for about a week after this attack, and then lost his speech. About six months after this seizure, he had a fit—the first of many; the fits returned almost daily; sometimes he had six, and often as many as two or three a day. During the fits, his mother said, "he was drawn up double; he did not kick; his eyes were open, and rolled about, and his head was drawn to the left; the fits lasted two or three minutes, and were worse when he was in bed; when he 'came to,' he screamed dreadfully for about a quarter of an hour." His appetite was good, but he took little or no animal food. His limbs had been rigid ever since the first fit, shortly after which he passed worms in his evacuations; the thumbs were tightly flexed and overlapped by the fingers. He had choreic movements in his neck, head, and front of chest, and there was a peculiar choking sound when he took food.

He died about a fortnight after admission. At the necropsy, Dr. Hughlings Jackson and Dr. Sulton carefully examined the body, with a view of ascertaining if the limbs were atrophied or badly developed; but there was nothing to indicate this. The skull was healthy. The membranes of the brain were healthy, excepting that the pia mater was rather milky-looking, and thickened over the cysts. The right hemisphere was much smaller than the left; the posterior lobe of the left projected about three-quarters of an inch behind the right, owing to the diminished size of the latter. The ventricles were apparently larger than natural. In the right hemisphere, three-quarters of an inch from the anterior extremity of the brain, there was a cyst which was about one inch and a quarter long by three-quarters of an inch broad; it was lined by a thin membrane intersected with vessels. The outer wall of this cyst merged into the pia mater in one part, and the remainder of it contained very little brain-matter. The cyst was, therefore, close to the surface of the hemisphere; it was separated from the right lateral ventricle by a layer of brain-substance about one-eighth of an inch thick, and the outer half of the right corpus striatum was almost completely destroyed by this cyst. The optic thalamus was unaffected. There was about an inch square of healthy brain-matter in front of the lateral ventricle and the cyst; but, with this exception, the anterior two-thirds of the hemisphere consisted of these two cavities only, that is, the cyst and the lateral ventricle. There was also a cyst in the anterior portion of the left middle lobe close to the surface of the brain; this was about three-quarters of an inch in length, and half an inch in breadth. The remainder of this hemisphere seemed healthy, with the exception that the anterior lobe was encroached upon by the dilated ventricle. The pons Varolii and the medulla oblongata were healthy. The heart, lungs, liver, spleen, and kidneys presented no noticeable change.

ANÆSTHETICS.

XXV.—DEATH FROM A MIXTURE OF CHLOROFORM AND ETHER.

IN a copy of the *Boston Post* of November 15th, for which we are indebted to the courtesy of Dr. B. S. Cotting, of Roxbury, Massachusetts, we find the report of an inquest conducted with remarkable care and completeness on a lady who died from the effects of inhaling a mixture of chloroform and ether, administered by a dentist for the extraction of a tooth. The lady declined to inhale nitrous oxide gas, and was set upon this anæsthetic. The evidence showed that she was healthy, and that there was nothing in her case which should have prevented the administration of ether. The necropsy was very complete, and a careful chemical examination of the blood was made. The following is the more important part of the medical evidence.

Dr. E. S. Wood, acting Professor of Chemistry in Harvard Medical School, submitted a written report of the results of his examination of the mixture of chloroform and ether prepared and administered by Dr. Eastham, and of a portion of the liver and spleen and one kidney of the deceased lady. The substance of the report was, that the mixture contained sixty per cent. of ether and forty of chloroform by bulk; that the blood had no odour either of ether or chloroform; that neither of these liquids was detected by analysis; and that the same was true of the organs, which were carefully analysed. Being questioned, he said that, roughly, the proportion of deaths by ether was 1 in 25,020; by chloroform, 1 in 2,500; and by the mixture of the two, 1 in 5,000. The smallest amount of chloroform reported to have caused death was from fifteen to twenty drops by inhalation, one drachm by taking into the stomach; and of the mixture, one part chloroform to four parts ether—by bulk, one drachm.

Dr. Henry J. Bigelow, Professor of Surgery in the Harvard Medical School, said that he was present at the first case in which ether was given at the Massachusetts General Hospital in 1846, and ever since he had made a study of anæsthetics. He was present at the *post mortem* examination of the body of Mrs. Crie, and could endorse the reports of the necropsy made by Dr. Fitch. Every organ was in perfect health. He had heard the testimony in the case, and, under oath, that the lady had breathed from two to four drachms of the mixture, whose analysis he had also heard. It was his opinion that she died from breathing chloroform. There could be no doubt of it. The ether in a mixture of three-fifths ether to two-fifths chloroform would not harm a child, but the chloroform might kill an adult. He had been present at but one death from chloroform, but they were numbered by hundreds. He never knew of the death of any person from any peculiarity in ether which was properly administered. Ether was a powerful agent, he said; and, if a man were feeble and dying, it would contribute to his death like a dose of opium, a severe cold, or anything else that had weight and force and power in it. But this was not the real question between ether and chloroform, for both were powerful agents. The real question was, Has chloroform, besides this narcotic power, some very poisonous influence which acts upon the system? and has ether such a power? He answered that it had, and ether had not; chloroform killed suddenly, and ether could not.

XXVI.—ALLEGED DEATH FROM ETHER.

To the Editor of the British Medical Journal.

SIR,—Your issue of October 11th, contains the following:—"We have this week to make the sad announcement of a death from the inhalation of ether. It occurred at the South Hants Infirmary. We shall be glad of the comments of Dr. Morgan and our Boston contemporaries."

The avowed interest attaching to death from ether, compared with that attending the rather common occurrence of death from chloroform, attests its rarity; and those who have been long familiar with the safety and efficiency of the former may think it perhaps a little late to subject it in England to an experimental test which the comparative fatality of chloroform seems at length to have secured for it. I venture to comply with the invitation with which you have honoured your Boston contemporaries, believing that until some anæsthetic shall be discovered equally safe, with less odour and less bulk, or some better form of anæsthesia than that by inhalation, ether must be considered, on the whole, our best anæsthetic. We need not here distinguish too nicely between anæsthesia, narcotism, and inebria-

tion, when effected through the lungs. It is more important that special attention should be directed to several points connected with this subject which seem to be inadequately emphasised in contemporary European literature, especially asphyxia, pulse, and the real difference between what the journals somewhat promiscuously denominate "death from ether" and "death from chloroform."

The Massachusetts General Hospital numbers more than 15,000 cases of ether inhalation, 6000 of which have been recorded within the last five years. The quantity of ether consumed during these five years has been about 2,800 pounds,—half a pound, more or less, to a patient; in one case four and a half pounds in twelve hours. It fell to my lot, in 1846, and for a year or two after the discovery of ether anæsthesia, as junior surgeon, to administer most of the ether in that institution; and having been personally cognisant of a large proportion of the cases of its administration there, down to the present time, besides those in my own practice, I have never been satisfied of the occurrence of a single death which could be attributed to any property of ether, apart from the gradual and progressive inebriating influence which it possesses in common with other anæsthetic agents.

A detailed report of a case involving so urgent symptoms and so prompt action as the one alluded to, is obviously liable to inaccuracy, and the account should therefore be accepted with reservation, and rather as a good illustration of an emergency quite likely to recur in the experience of those who may believe, with a late English medical journal, that the less the air, during the ether inhalation, the better the anæsthesia, or, with the French chemist, that nitrous oxide only asphyxiates. Nobody doubts that asphyxia produces insensibility. This is easily shown by a bag containing a few gallons of atmospheric air. But this insensibility, necessarily brief, is unattended by exhilaration. It is distressing, accompanied by lividity, by rigidity if pushed far enough, and is doubtless responsible for much of the dread which certain patients have of pulmonary inebriation.

The case in question is reported as follows. "David Newman, aged 14, a strumous lad, who had suffered from repeated attacks of corneitis, was admitted an in-patient of the above institution on September 25th, 1873, under the care of Dr. Lake. On Wednesday, October 1st, he was brought into the operating room in order that iridectomy might be performed. When on the table, he exhibited considerable alarm, and required some persuasion before he was induced to lie down. Dr. Griffin having taken charge of the pulse, half an ounce of ether was poured on a sponge contained in a cone of spongio-piline, and the latter was closely applied to the mouth and nose. After a few minutes' inhalation, the ether being nearly exhausted, three drachms more were poured on the sponge. Shortly after commencing to inhale this second quantity, he began to struggle violently, getting at length into a state bordering on opisthotonos, his face becoming intensely scarlet. Dr. Griffin then announced that his pulse, which up to this time had been perfectly natural, had become very feeble. The ether was at once discontinued, when, the pulse having improved, Dr. Lake operated, no more ether being administered. At the close of the operation, which occupied only a few seconds in its performance, and before the eye could be bandaged, the pulse became imperceptible, the breathing was suspended and the countenance livid. The tongue was drawn well out of the mouth, and held there; the calves of the legs were vigorously flagellated, and the chest freely slapped with a wet towel. The effect of these measures was to cause the patient to respire freely, to cry out lustily, and to kick about on the table; but this improvement did not last long, probably about a minute. The pulse at the wrist did not return, and the breathing again stopped."

Artificial respiration, electricity, etc., were resorted to, but without effect, and the necropsy revealed nothing of importance.

In order to be clearly understood, let me here concisely restate this account, as I interpret the phenomena.

A feeble boy was etherised. During this process, though only partially narcotised, he was very completely asphyxiated, and, when nearly dead, was operated on without efforts at resuscitation. When at last his absolute prostration awakened serious alarm, he was vigorously flogged with a view of restoring his exhausted strength; and under this active stimulus was excited to a final muscular effort which expended and extinguished his flickering vitality. I believe that such a death might have occurred without the ether.

Let us consider the circumstances in detail, and see whether or not they substantiate this hypothesis; and first, the apparatus employed for inhalation. This was calculated to produce asphyxia.

If the spongio-piline were covered as usual, with India-rubber, no air could reach the patient, except in the interstice, between the cone and the patient's face. But, according to the account, the cone was closely applied. If so, absolute asphyxia would ensue. It may seem superfluous to say that during the etherising process a patient must live, as

usual, upon oxygen. Let us even needlessly assert that without it a man must die. Either will not save his life, if he be deprived of oxygen. It would not have saved Desdemona.

Asphyxia did ensue; but its symptoms passed unheeded. The patient struggled violently. Now a half-conscious struggle often results from mere muscular excitement, and is of little moment. But a rigid struggle with opisthotonos, is very different. Such spasm is connected with asphyxia, and may involve the muscles of the larynx. In this connection let me remark that there is a wide distinction between the common and desirable snore of a relaxed and vibrating soft palate and a croupy stertor of the contracted laryngeal aperture. The latter is a part of that general rigidity of which opisthotonos is a manifestation, and by excluding air it indefinitely prolongs the asphyxia which occasions it. Air is its only remedy.

These appearances are familiar, in the practice of the Massachusetts General Hospital, even to the house-pupils and ward-tenders, to whom etherisation is habitually entrusted. Lividity of the forehead indicates a probable similar colour of the blood within the head, and announces that spasm may not be far off. Conversely, muscular spasm and laryngeal stertor direct attention to the colour of the face. All these symptoms raise the question of admitting air promptly, and until the natural colour returns. Indeed, it sometimes happens that because the muscles are rigid a patient seems imperfectly etherised, when the experimental admission of air relaxing the muscles proves the contrary. Even a half-conscious resistance, terminating in insensibility, often makes the patient a little livid; so that a struggle then suggests examination of his condition, and sometimes an interval and re-commencement.

If all this be true of inhalation with a sponge, through the meshes of which air has free access to the lungs, and which for hospital use, if not the most economical, is, beyond comparison, the simplest and safest ether inhaler, what were the chances of a slender boy, struggling desperately for breath, rigidly convulsed with opisthotonos, his face congested, his mouth and nose still sealed by an impervious cone forcibly and closely applied until the pulse gave way?

I unhesitatingly submit asphyxia as the primary cause of death, upon this report.

Notwithstanding this condition of the patient, he was operated on. With so complete asphyxia, it would in Boston be considered of the first importance, before operating, to re-establish respiration, pulse, and colour; after which more ether might be administered, to complete the anaesthesia. But in this case no such efforts were made, and no such interval was allowed. After a few seconds which were occupied by the operation of iridectomy, the patient still livid from his struggle with the closely applied cone, "the pulse became imperceptible, the breathing was suspended", and in "about a minute" he was dead.

To this overwhelming effect of asphyxia upon a slender subject was doubtless added a certain amount of ether inebriation; but there is abundant evidence that this was but partial and incomplete. The quantity of ether administered was inconsiderable; and it is distinctly stated that the patient, when his legs were vigorously flagellated, and the chest freely slapped with a wet towel, "cried out lustily, and kicked about on the table," during the one minute he lived after the operation. Narcotism had not even reached insensibility to pain. No such imperfect ether anaesthesia can be held as principal in such a death.

It would be equally unphilosophical, in view of these facts and in an endeavour to shift the responsibility, to accuse the improbable shock of so slight a surgical operation, and still more any mysterious and as yet undiscovered property of ether, outside of that familiar, gradual, and comparatively innocuous influence which it possesses in common with other intoxicating agents. Further reference will be made to this.

A word about restoratives. The most effectual method of resuscitating a patient asphyxiated or over-dosed with ether is at once and quietly to get good air into his lungs. The volatile quality of both chloroform and ether makes their elimination from the pulmonary surfaces so easy, that, even when breathing seems to have ceased, a little thoracic movement, artificially assisted, generally enables the patient himself to re-establish respiration, and brings up the pulse. A feeble boy, who had exhausted his strength in a violent struggle for breath and life, would have no great stock in store to respond to a vigorous flagellation. In this respect he might differ from one who had gone tranquilly to sleep with opium.

In arraiging ether, let us not confound things. All powerful therapeutic agents and expedients may, under certain circumstances, contribute to depress the system; ether and chloroform among the rest; chloroform, as stronger than ether, possessing, of the two, the greater depressing influence. But this effect of a mere narcotism common to both, and which may contribute to the death of a feeble or dying patient, is not the real subject of discussion in the medical journals.

The question is—Has either of these agents, besides this gradual narcotic power, any additional, different, and peculiar, quality which renders it dangerous? To this I unhesitatingly reply, that chloroform has, and ether has not.

When we say "death from chloroform," we mean death by a shock or poison peculiar to chloroform, even when inhaled by a healthy person, under the most favourable circumstances with abundance of air, and with every precaution; sometimes occurring at the beginning of anaesthesia undertaken for a trivial operation, almost as if by prussic acid; the sudden failure of a normal pulse indicating that the patient is beyond recovery.

With ether, I believe this to be simply impossible. It always acts slowly, never depressing the vital powers suddenly, or beyond recovery, without fair warning by the pulse in time to avert danger by the simple expedient of filling the lungs with unadulterated air.

In a somewhat extended paper upon anaesthetic agents, written in 1848 at the request of the American Medical Association, and published in the *Transactions* of that body, about one year and half after Morton performed his first painless extraction of a tooth, and only a few months after Professor Simpson's first experiment with chloroform, the absolute necessity of air, the essential indication of the pulse, the difference between the snore of narcotism and the livid stertor of asphyxia, are all specified and insisted on. I may perhaps be pardoned for quoting in conclusion the following passage, which touches the main point of modern ether discussion.

"Ether does not prevent, nor is it to be considered responsible for, the ordinary collapse, resulting, in certain states of the system, after certain injuries and certain operations. The strong argument in behalf of ether is, that so few instances have occurred in which it could be even suspected of agency in fatal results.

"With chloroform the evidence is a little different. Two somewhat remarkable cases of death, occurring during the brief administration of this agent for surgical purposes, at once present themselves; the Cincinnati case, and that of Mr. Meggison at Winlaton. In these cases death occurred in about five minutes from the beginning of the inhalation. . . . These instances suggest a specific cause of danger. This is the sudden impression upon the system of a powerful inebriating agent. Abundant alcoholic stimulus has often produced immediate death; and analogy would suggest that inebriating vapour in the lungs may be the equivalent of similar fluid in the stomach, and that in one or both of the cases alluded to, chloroform may have produced a sudden and overwhelming shock upon the system."

I am, etc., HENRY J. BIGELOW.

Boston, November 6th, 1873.

Note.—The inodorous and transitory character of anaesthesia by nitrous oxide, notwithstanding its attendant asphyxia, may perhaps recommend it for the brief extraction of a tooth; and we should not ignore the fact that chloroform insensibility is perhaps as safe as many other experiences which people do not hesitate to encounter—crossing the Atlantic for example; and yet one accustomed to the use of ether in surgical operations protracted during an hour or more, with an occasional examination or inquiry about the pulse, and a suggestion to admit air, if the medical student in attendance happens to forget it, is not a little impressed by the solicitous and apprehensive circumspection attending English anaesthesia.

Under these circumstances, a few purely practical suggestions, in a familiar form, however superfluous or even trite to a part of the surgical world, may perhaps not inappropriately serve as a record of the current views and practice of etherisation in the hospital with which I am connected; which has, perhaps, a larger experience than any other, of this form of anaesthesia.

1. Accept the odour and the bulk of ether as a cheap compromise for the safety of the patient and the confidence it gives the operator.
2. Believe that its anaesthetic effects, whether pleasant or objectionable, do not differ materially from those of chloroform.
3. Recognise the fact, that, while chloroform may kill without warning, ether never does.
4. Aim at anaesthesia by inebriation, not by asphyxia. With ether vapour insure air to the patient. Though he struggle at the beginning, if he is not rigid or too livid, it is safe to compel inhalation; but if you can devote more time to the process, the resistance will be often less.
5. Use, and let hospital assistants use, a good-sized bell-shaped sponge; and then it may be a question of less rather than more air. The various forms of apparatus which restrict or graduate the quantity of air require more attention and more assistance. Of these a close bag is the worst. If the sponge is damp it retains ether better, while the vapour is per-

* "Anaesthetic Agents; their Mode of Exhibition and Physiological Effects." By Henry J. Bigelow, M.D., one of the Surgeons of the Massachusetts General Hospital.—*Transactions of the American Medical Association*, vol. 1, 1848.

haps a little softer than when absolutely pure. The ready ignition of the latter suggests the precaution of moistening with water the skin and saturating linen, before employing near the face even galvano-cautery. 6. Keep the pulse in hand; at any rate, examine it often. When the pulse is right, the patient is so. With chloroform, the pulse may be right and the patient wrong. If slow or feeble,* or if the patient snores more than he needs, save his strength by giving air, at any rate, until the pulse comes up; but renew the ether before he is sensible of pain. If the pulse shows that he is suddenly faint, lay him down and give him air. 7. If the patient is livid or rigid, give him air. 8. If his glottis contracts, give him air. 9. If he breathe badly, put the finger inside the cheek to admit air over the base of the tongue. 10. Should he vomit, of which there is usually timely notice, give the matter free exit by turning the patient, if recumbent, well to one side. Although there is less nausea with an empty stomach, it is not well to starve a patient about to encounter a protracted operation. 11. From time to time evacuate the tracheal mucus from the fauces, during an expiration, with a sponge held in dressing forceps. 12. In operations about the nose and mouth, give for convenience, a powerful dose before beginning. Impregnate the whole circulation to the degree it usually attains in the middle of a long operation. The patient is then easily kept quiet. Otherwise a volume of fresh blood may find its way to the brain, and suddenly revive him. Let the repeated dose be also heavy. 13. In these operations, expect blood in the trachea, and evacuate it like the mucus; but, by reason of its quantity, more promptly. 14. Indeed, if such an operation promises much blood have a tracheotomy tube ready, with hooks to hold the incision open while they compress the veins, so that the tube can be entered by a cut or two in a few seconds. 15. Or insert the tube before the operation, and put a sponge in the pharynx. The patient may then be etherised through the tube. I have had occasion to resort to these expedients. 16. In artificial respiration, act with the patient, and not against him. He will not cease to breathe at once, and wholly. Enjoin silence; watch the first attempt at inspiration, and at the expiration compress the thorax, aiding its elastic reaction, if absolutely necessary, by Silvester's, or other quiet method. See that the tongue is well forward. 17. Do not cool the patient by exposure and wet surroundings. 18. Being first assured that he can swallow a teaspoonful of water, feed him, if you like, with stimulus, during the expiration, but not the inspiration. 19. Give to all painful surgery, without exception, the benefit of anaesthesia; but a patient unequivocally exhausted by long disease (of the bladder, or of a joint, for example), or an habitual inebriate, may require care; without which, protracted narcotism may gradually depress his pulse beyond the rallying point. On the other hand, a healthy labourer, who reaches the hospital some hours after a railroad accident, cold, and literally pulseless at the wrist, from hemorrhage and exposure, is, as a rule, stimulated by the ether during and after at least one amputation. 20. Notwithstanding every expedient, there is occasionally an untoward subject who is habitually tetanic and livid, whenever etherised; or, more rarely, one whose respiration is notably intermittent before he becomes insensible. The latter requires attention. In children, it may be added, anaesthesia is cumulative.

Such are some of the minor considerations and prompt precautions which collectively determine the question of life or death in the exceptional emergencies of anaesthesia by ether. Many of them apply with equal force to chloroform; but, against the shock of chloroform and its sequences, whether "chloroformic syncope", "cerebral anaemia", or "cerebral congestion", precaution avails nothing.

UREA.—From experiments made on himself, Rabuteau (*L'Union Médicale*, tom. xiv, 1872, p. 841) has found that when urea is introduced into the organism it is entirely eliminated by the urine, without undergoing any change, within twenty-four hours. It may also be detected in the saliva, which, however, normally contains a small quantity. Contrary to the usually held opinion, Rabuteau maintains that urea has only a very feeble diuretic action.—*Journal of Anatomy and Physiology*.

* "Here is the precaution against danger; ... the sign is the diminution of the force and frequency of the pulse."

In an early case of the administration of ether by Dr. Morton, and which has been reported, the danger from over narcotism was quite as imminent as in any case I have since seen alluded to. As a bystander on that occasion, I casually felt the pulse, and found it barely distinguishable; and though it subsequently still decreased, the means at once adopted for the restoration of the patient proved ultimately successful. This occurrence pointed to the pulse as an index of the stage of narcotism; a few subsequent experiments confirmed the belief; and I have not since hesitated to push etherisation to complete insensibility, and to continue it, if necessary, during a length of time, provided the pulse remained full and strong. If it be retarded by ether, it is curious to observe with what certainty it recovers force and frequency, after a few inspirations of pure air. It will be inferred from these remarks that the pulse is to be carefully examined during the whole anaesthetic process, and that inhalation is to be temporarily discontinued at its indication."—*Anaesthetic Agents, etc.*, 1848.

SELECTIONS FROM JOURNALS.

SURGERY.

FAUCIAL EUSTACHIAN CATHETER.—Dr. Pomeroy (*New York Medical Record*, July 1, 1873) describes a modification of the Eustachian catheter. The instrument is passed through the mouth, instead of the nostrils. It consists of a hard India-rubber tube, seven and a half inches long, a quarter of an inch broad at its largest part, tapering to the beak, which is little more than one-eighth of an inch thick. At the larger end is a tip for the adjustment of an India-rubber tube. Beyond, at a distance of an inch and a half, is a perpendicular guide, passing in an opposite direction to the bent extremity of the tube. The bent part of the tube is an inch and three-sixteenths long, and forms an angle of 70 degs. to 75 degs. with the straight part of the tube. Within a line of the extremity of the tube, is the aperture for the injection of air or fluids. This is so arranged as to throw the air or fluid from the operator. To use the instrument, it is attached to a Politzer bag by an India-rubber tube; it is taken in the left hand by its extremity, turned on the flat, passed along the dorsum of the tongue until opposite the aperture behind the uvula, when it is suddenly turned upwards and passed to the region of the tube. On turning it so that the guide will stand at 50 degs. to the horizon, the aperture of the beak of the instrument will be opposite the fossa of the Eustachian tube.

RUPTURE OF AXILLARY VEIN DURING EFFORTS AT REDUCTION OF DISLOCATED SHOULDER OF SIX WEEKS' STANDING.—Dr. D. Hayes Agnew reports (*Philadelphia Medical Times*, August 16th, 1873) the following case. The patient, a female aged 60, had a subcoracoid luxation of her right shoulder. Several unsuccessful attempts at reduction had been made before she applied to Dr. Agnew. The dislocation was now of six weeks' standing. Dr. Agnew endeavoured to reduce it by the method of La Mothe. Steady extension was exerted for several minutes, while an assistant's hand was held in the axilla to guide the head of the bone towards the glenoid cavity. Just after this effort was completed, without success, a suddenly and rapidly forming swelling appeared over the right pectoral region, distending the entire right breast, and forming a firm but fluctuating tumour. The patient instantly became cold, clammy, and collapsed; respiration ceased, the eyelids were half closed, and the heart's action was barely perceptible over the apex, and not at all at the radials. Dr. Agnew's thumb at once compressed the subclavian artery, while the tongue was drawn forward by a tenaculum, and cold douches, ammonia, artificial respiration, etc., instantly tried. A current from a strong electric battery was quickly passed along the phrenic nerves, and in a few moments feeble respiratory efforts became visible. The application was continued for fifteen minutes; at the end of which time the pulse was perceptible at the wrist, and the surface commenced to show signs of warmth and life. On removing the pressure from the subclavian artery, it was found that the pulse at the wrist was as strong as that of the other side; the tumour was not tense, it did not pulsate, nor did it seem to be filling with any rapidity or force. It was therefore concluded that the axillary or some other large vein had been ruptured. Firm compresses were applied over the swelling, and confined by a broad bandage, while pressure was kept up for two hours upon the subclavian artery, in order to lessen the supply of blood. Stimulants were freely administered, and artificial heat constantly applied to the extremities; and in three hours the patient seemed out of immediate danger. The swelling, which was accurately defined by the pectoral fascia, extended slowly backward, but did not increase in tenseness. The patient passed a comfortable night, complaining, however, of stinging pains in the arm and breast. Her improvement was rapid, the pain and swelling gradually subsiding, and in ten days she was discharged. The blood gravitated below the fascia, and finally appeared beneath the skin; it was absorbed weeks afterwards. Compression was continued for several weeks, followed by stimulating liniments. Ten weeks afterwards, she had an arm which, although stiff and somewhat painful, seemed to be forming a new articulating cavity upon the inferior costa of the scapula. Dr. De Forrest Willard appends to the report notes of twenty-three recorded cases of rupture of an axillary vessel produced by efforts at reduction of old dislocations of the shoulder, and recorded by Hamilton (*Treatise on Fractures and Dislocations*, 4th ed.); Erichsen (*Science and Art of Surgery*); the *American Journal of Medical Science*, April 1865, and the *Medical News* for April 1873. In Mr. Callender's paper on this subject (*St. Bartholomew's Hospital Reports*, vol. ii) are to be found notes of two cases not included in Dr. Willard's list. On these is a case of rupture of the axillary vein only, in an aged fem

after efforts at reduction according to White's method. In the other case the artery was ruptured by the direct force of twelve or sixteen men, under the direction of a "bone-setter." Mr. Callender concludes that "the occasional occurrence of this accident does not rule against the recognised practice of attempting the reduction of old dislocations, but should make us cautious of using movements calculated to overstretch the vessel, such as circumduction and extreme tension, as by White's method."

CANCERUM ORIS TREATED BY SATURATED SOLUTION OF IODINE.—Dr. J. G. Miller reports (*Kansas City Medical Journal*, August 1873) three cases of cancrum oris successfully treated by tonics and the local application of a saturated tincture of iodine prepared by putting as much iodine into the compound tincture as it would dissolve.

LIGATURE OF THE CAROTID ARTERY.—Dr. L. R. Longworth observes (*Archives of Scientific and Practical Medicine*, May 1873) that ligature of the external carotid, compared with that of the primitive vessel, has been a very rare operation, and would, in all probability, have been still rarer, were it not for the fact that the former operation possesses two advantages: it is more efficient in arresting the circulation in the parts beyond the ligature, unless at the same time the internal carotid be also tied; and it is free from the dangers consequent upon interference with the cerebral circulation. Dr. Longworth discusses the relative advantages and disadvantages of these two operations, and gives the following as his general conclusions. 1. Ligature of the common carotid is the widest in its application, but most dangerous and least efficient. 2. Ligature of the external carotid below the digastric and stylo-hyoid muscles is more limited in application, but less dangerous and more efficient. 3. Ligature of the external carotid above the digastric and stylo-hyoid muscles is the most restricted in application, but also safest and most effectual. 4. Ligature of the external carotid on both sides has hitherto been uniformly successful, and is the most efficient measure at our command for arresting the distal circulation.

PHYSIOLOGY.

THE SOURCE OF GLYCOGEN IN THE LIVER.—In a communication on this subject made to the Vienna Academy of Sciences (*Centralblatt für die Medicin. Wissensch.*, No. 35, 1873), S. Weiss states that he has made experiments on fowls with glycerine—a substance which is easily oxidised, and the direct transformation of which into glycogen is very improbable; while sugar is, he believes, directly transformed. After several days of fasting, the animals were fed with fresh meat for ten days, and for five days with fibrin and common salt. Their livers contained very little glycogen. To hens thus treated, glycerine was given in average quantities of 45 grammes in twenty-four hours. The general result was, that the amount of glycogen in the liver was much increased—varying from 1.8 to 1.1 grammes; while in the animals to which no glycerine was given, the amount varied from 0.301 to 0.06 gramme.

INFLUENCE OF NERVE-LESIONS UPON TEMPERATURE.—Dr. S. Weir Mitchell, in the *Archives of Scientific and Practical Medicine*, April, 1873, gives some interesting observations upon this point. His mode of experiment was this. The temperature was first taken on the ulnar side of the palm. He then drove all the blood possible from the arm. Then he applied a pad and tourniquet, and again took the temperature of the palm. The elbow was then placed in a freezing mixture, the ulnar nerve frozen, and the temperature taken. This observation was repeated many times, and each gave the same general result; namely, that the check of blood-flow, and the reduction of the amount of blood in the limb to a minimum, prevented the rise of temperature which usually follows freezing of the nerve. It must depend, therefore, solely on variations in the size of the vessels, due to palsy of vaso-motor filaments, and not to any direct influence of the nerve on the tissues.

NITRITE OF AMYL.—In a paper on the action of nitrite of amyl (*Archives de Physiologie*, No. 5, 1873, p. 467), which contains an account of numerous experiments in which this substance was administered to various animals by inhalation, subcutaneous injection, and injection into veins, Amez-Droz arrives at conclusions generally in accordance with the opinions usually held. The chief symptoms observed were, general uneasiness, great increase in the rate of the heart's contractions, dilatation of blood-vessels with reduced blood-tension, irreg-

ularity of respiration, lowering of temperature, and paralysis, when the doses were comparatively small; with the addition of convulsive movements, passage of feces and urine, reduction following increase in the rate of the heart's contractions, and finally, coma and death, when the doses were large. His experiments do not support Richardson's statement, that the paralysis results from an action on motor nerves, but they lead him to refer this effect to a stupefying action on the nerve-centres. Amez-Droz also differs from Brunton in his explanation of the dilatation of blood-vessels produced by nitrite of amyl. He argues that it cannot be a result of paralysis of the muscles of the minute vessels; because, after dilatation has been produced, he has frequently observed that the vessels contract momentarily during movements of the animal, and again dilate when these movements have ceased—changes of calibre that could not occur were the muscular sheath of the blood-vessels paralysed. He believes it to be more in accordance with observation to suppose that, by increasing the quantity of carbonic acid in the blood, nitrite of amyl renders this fluid sufficiently irritating to enable it to stimulate the peripheral ramifications of the vaso-motor nerves, and thus to produce a reflex dilatation of the vessels. (No sufficient experimental proof of this theory, however, is advanced; and, besides, it is well known that the changes in the minute blood-vessels during asphyxia are not similar to those produced by nitrite of amyl.) F. A. Hoffmann (*Reichert und Du Bois-Reymond's Archiv*, 1872, Heft 6, p. 746; and *Centralblatt*, 1873, No. 36, p. 374) has made an important addition to our knowledge of the effects of nitrite of amyl. He injected under the skin of rabbits doses varying from 0.45 to 0.66 gramme (seven to ten grains). The quantity of urine voided was increased, and in twenty-four hours it was double the normal amount, and contained from 1.0 to 2.5 per cent. of sugar, which entirely disappeared in from twelve to thirty hours. Diabetes could be produced several times in the same animal, but if the injections followed each other too quickly, the animal died.—*Journal of Anatomy and Physiology*.

TOXICOLOGY.

POISONING BY WILD PARSNIP.—Dr. C. B. White, *Philadelphia Medical Times*, was called on April 24, 1873, to assist E. C., a native of Belgium, aged 49, nearly twenty-one years a resident of California, who was suffering from the effects of eating less than one ounce (estimated) of the fresh root of the wild parsnip. (*Sium Latifolium* of Gray). He found that the patient had received partial relief from vomiting and purging, apparently induced by the root itself, but much excited and very prostrate in strength; pulse 44, skin cold and clammy, pupils somewhat dilated, respiration slow. He complained of great dizziness, lack of mental power, and loss of voluntary motion, headache, sense of fear of death, with a decided burning feeling along the alimentary tract (oesophagus especially), and sense of swelling and flatulence about the bowels. Dr. White examined the excreta, and became satisfied that most of the root had been ejected, and at once gave him two ounces of whisky, mixed up with a raw egg. After this had revived him, he administered one-fourth of a grain of sulphate of morphia, and left a compound ipecacuanha powder for later use. Before Dr. White left him, he was feeling much better in every way; the skin was warmer, the pulse 50, the respiration and the appearance of the eyes nearly normal.

MIDWIFERY.

EXCESSIVE VOMITING DURING PREGNANCY.—Dr. M. A. Pallen relates (*St. Louis Med. and Sur. Jour.*, Sept. 1873) the case of a patient to whom he was called on July 16th by Dr. Alleyne. The lady was in the sixth month of pregnancy and could not retain anything on her stomach. She had a pulse of 96, incessant nausea, vomiting whenever anything was taken into the stomach; sleeplessness at night or during the day; no delirium; no tinnitus aurium; no dimness of vision. Dr. Pallen tried the hypodermic injection of morphia over the stomach, and the injection of beef-essence and brandy into the rectum. On the next day, she vomited as before, the little ice-water she took, and the injections could not be retained. Dr. Pallen ascertained by examination with the finger that there was granular erosion of the cervix. He determined to produce abortion by puncturing the membranes, which he did with a small-sized uterine sound. An hour after the operation, she took, with decided appetite, some beefsteak and retained it; at night she did the same. In the morning, she had slept well, and had a good appetite, having eaten various things for breakfast. About forty-eight hours after the operation, the foetus and the secundines came away, and she made a rapid recovery.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W. C.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 13TH, 1873.

CRIMINAL LUNATICS.

THE recent escape of two men from Broadmoor Asylum, one a noted homicide, has caused the Medical Superintendent to write a memorandum for the information of Mr. Secretary Lowe, having reference, first, to these escapes, and, secondly, to the precautions by which such events may be guarded against in the future. The popular opinion regarding persons known as criminal lunatics is, that they consist of those who are acquitted of crimes on the ground of insanity, and detained during Her Majesty's pleasure. That the population of Broadmoor does consist mainly of such persons is a fact; for, in the Report of the year 1872, we read that there were 268 men and 75 women of this class. But there is also another class, consisting of those removed to Broadmoor from convict prisons whilst undergoing various terms of penal servitude; of these, there were at the same date 138 men and 26 women. The public would be disposed to believe that the former is the more troublesome and dangerous class to deal with, inasmuch as it is chiefly composed of those whose insanity manifests itself in homicidal and personal violence, liable to recur in paroxysms; yet we read that, as the homicidal act is almost invariably preceded by a maniacal state, the latter is recognised, and the consequences averted. Although great vigilance and a large staff are necessary, in other respects the description of treatment required is similar to that approved in the case of other insane persons. The second class, however, consisting of those removed from convict prisons, is widely different. The offences of such persons against law and order are part of their everyday life. They are for the most part habitual criminals, who have acquired habits of lawless violence, of antagonism to order, of contempt for honest work, and the use of language of the foulest description. These, aggregated in considerable numbers, present special difficulties not encountered in dealing with other insane persons. There is yet another difference. Those acquitted on the ground of insanity, or found insane before trial, are kept in confinement during Her Majesty's pleasure; but those from convict prisons, if they recover before the expiration of their sentence, are sent back to the prison to complete the term; so that to them recovery becomes a thing scarcely to be desired, inasmuch as it would be attended by penal consequences; and, lest the exercise of self-control and orderly behaviour might be interpreted as indicating recovery, interest and inclination appear to lead to an opposite line of conduct; and for the safe custody of such inmates the arrangements of an ordinary asylum do not suffice. Those, however, who are confined during Her Majesty's pleasure, have no fear of penal servitude before them, should they recover. Both of the men who recently escaped were of the convict class; and, of fourteen who have escaped since the opening of the Asylum, and were not retaken on the same day, twelve were of the same class.

The conclusion at which the Superintendent arrives is, that arrangements suitable to one class are not suitable to the other, and that the complete separation of the two classes would be highly conducive to the efficiency and order of the Asylum. For this object, however, entirely separate buildings will have to be constructed for the reception of the convict class. The present buildings for men consist of six blocks, detached, but all enclosed within the same wall. Free communication

is maintained, and nothing is done in one block which is not immediately known in all the others. Although such blocks and the present system are suited to the non-convict class, they are unsuited to the other; and the amount of outdoor occupation and exercise of the former has to be restricted on account of the character of the latter class. For these, the facilities for combination, of which they are quite capable, are too great; and the unrestricted association leads to the still further deterioration of the younger inmates. The male wards are now quite full; and the Commissioners in Lunacy, in their Report of 1872, say that, of the men certified during the previous year, forty-one had been known to be insane more than twelve months before their admission; so that, with the majority, the time for successful treatment has passed away, and there is a constant accumulation in prison of insane convicts. We trust that the result of Dr. Orange's report, with which the Council of Supervision entirely concur, will be that suitable provision will at once be made for this troublesome and dangerous class of patients. There is a certain proportion of inmates who require, as a part of their treatment, the outdoor employment which is found to be beneficial in every county asylum, and are capable of being so employed; but the welfare and opportunities of this class are materially prejudiced by the presence of the other. Just as, in every well managed asylum, classification is the basis of all good treatment, so here there should be special provision made for the safe custody of those who are not susceptible of the ordinary care to which the humane system of the present day has accustomed us.

TYPHOID FEVER IN CAMBRIDGE.

THE outbreak of typhoid fever in Cambridge deserves from the residents of that town far more than temporary attention. The general condition of the drainage of that important university town is profoundly unsatisfactory. In proof, we may quote most authentic documents, for it happens that, curiously enough, the town of Cambridge was selected by the Committee on Treatment and Utilisation of Sewage, appointed by the British Association, as an example of "a town having a complete system of underground sewerage for the removal of sewage, with a general water-supply, and, with the exception of the colleges, a general adoption of water-closets;" and a thorough inspection was made of it, on behalf of the committee, in 1870. The result of this inspection, which were very significant and very important, were detailed in the report presented by the Committee of the Association, at its meeting at Liverpool in 1870, and were briefly as follows:

"The town is supplied with water, partly by a private company from springs a few miles off, partly by artesian wells sunk to the gault, and partly (during the dry weather) from 'Hobson's Brook,' which we are told 'rises at a spot called Nine Wells,' about three miles from Cambridge, and terminates in a head near the Botanic Gardens, from which point it is distributed to different parts of the town; namely, first to the public conduit or drinking fountain in the market place; secondly, by two open channels, or 'runs,' one on each side of Trumpington Street; thirdly, by pipes and open course to the Hospital and Pembroke College; and, fourthly, along Lensfield Road to Hyde Park Corner, thence in two open street channels along St. Andrew's Street, and also to Emmanuel and Christ's Colleges. The water from the two channels is discharged constantly into the sewers, at Trumpington Street and St. Andrew's Street, and can, when desired, be diverted into the sewers at a higher level, for the purposes of flushing. These open channels are each provided with a silt-pit just previously to entering the sewers. There is also an ingenious arrangement for flushing, by means of the water supplied to the public drinking fountain in the market place."

In fact, the flushing arrangements seem pretty complete. But the houses are, in almost all cases, provided with water-closets without any system of soil-pipe ventilation; while most of the colleges are provided with cesspools which overflow into the river, and of which it was reported "many of these are in a most offensive condition," while we are told that "most, if not all of the Colleges on the banks of the river, preserve arrangements of the most primitive possible description, overhanging the classic waters of the Cam."

Nearly the whole of the town is provided with underground sewers "which are calculated to meet the demands of the average rainfall, but not of storms nor of periods of exceptionally heavy rains." These sewers are partly old ones of irregular forms, and partly new egg-shaped ones, and they discharge into the river at twelve places. In the Hills Road sewer (incline only 1 in 2,000) there was a deposit seven and a half inches deep at the time of examination, with the sewage running over it six inches deep.

"The outlets of the public and private sewers are all under the level of the surface of the water in the Cam; consequently the sewage is banked up in the sewers for a considerable distance, and the subsoil is constantly saturated with both water and sewage in the lower part of the town."

The subsoil of the upper parts of the town was formerly saturated also, but the sewerage has drained it.

Upon inquiry as to the quality of the water yielded by some of the wells belonging to private houses, it was always found to be contaminated with sewage, "so much so, that the water could not be used for drinking but only for washing."

The subcommittee appointed to consider the matter, made the following remarks thereon.

"It is manifest from the foregoing report, that the sanitary conditions of Cambridge, as regards its sewerage and drainage, are exceedingly bad, and the low level of the greater portion of the town must make improvement both difficult and expensive. The chief general importance of the inquiry into the condition of Cambridge is the proof thus obtained of the pollution of wells, and therefore of subsoil, by the agency of pervious street or house sewers constructed in their vicinity; and the subcommittee desires to give expression to the opinion forced upon it in the course of its inquiries, that all sewers properly so called (that is to say, drains into which refuse from human habitations is admitted) ought to be constructed of materials which are altogether impervious, and that a separate system of pervious drains, similar to agricultural drains, should be constructed, where necessary, to dry the subsoil. The subcommittee is of opinion that the further construction of pervious sewers should be prohibited by parliamentary enactment."

Thus a very complete report of the sanitary condition of the town, especially as regards its sewerage arrangements, was then made public, and the condition of things in some parts of the town was so bad that it called forth the strong expression of opinion that we have just quoted.

We fear that the neglect to remedy the evils then pointed out will be found to afford the reason of the spread of the present epidemic; it would be difficult to imagine a place much better fitted for the purpose according to the above description, especially when we add that we are informed that there is no proper system of sewer ventilation. After such a report as the one referred to, the local authority ought to have at once obtained competent advice as to the best way of remedying the evils described, and ought to have acted upon it promptly. Why is there no Medical Officer of Health appointed there? Surely such an officer is especially necessary in a town of that kind.

THE EFFECT OF FRESH CHOLERAIC EXCRETIONS ON ANIMALS.

DR. ANDREAS HÖGYES, of the University of Pesth, has availed himself of the opportunity afforded by the recent epidemic of cholera in that city, to make a series of investigations on the effects produced on animals by the discharges from persons suffering from the disease. He gives a brief summary of his experiments, and of the results at which he has arrived, in the *Centralblatt für die Medicinischen Wissenschaften* for November 1 and 8, reserving a more complete account for another occasion.

The following are questions of which Dr. Högyes endeavoured to find the solution.

1. Are fresh choleraic discharges capable of exciting a deleterious influence on the organism, and in what form?
2. Does gastric and intestinal catarrh, artificially produced, increase the liability to be affected by choleraic discharges?
3. Is the air capable of carrying with it particles of choleraic evacua-

tions, which act injuriously on the organism; and, if this be the case, is there a difference between non-disinfected and disinfected discharges, simple diarrhoeal dejections and putrid fluids?

4. Are choleraic evacuations, when freed from elementary organisms, capable of affecting animals?

5. What parts of disinfected and of non-disinfected choleraic discharges does a current of air carry with it? What is the further fate of these elementary forms, if they fall on a soil favourable to their development, or on one that is neutral? In what way do they modify the action of this medium?

In his experiments, Dr. Högyes used choleraic evacuations that had been discharged an hour, or an hour and a half. The animals operated on were dogs and rabbits.

Six dogs of middle size were the subjects of experiments bearing on the first and second questions. In three, catarrh of the stomach and intestines was induced by the administration of the sulphate of copper and the subcutaneous injection of a few drops of croton-oil; the other three were allowed to remain healthy. As soon as the vomiting and diarrhoea had ceased in the first three dogs, Dr. Högyes administered to each of two dogs (one healthy and one diseased) fresh urine, intestinal evacuations, and vomited matters, from cholera patients. Both dogs had intestinal catarrh (frequent vomiting and diarrhoea). The dog with the sound intestinal canal was well on the third or fourth day; while one of those in which gastro-intestinal catarrh had been induced died on the second day, having had constant vomiting and fluid evacuations; and the other two were not convalescent until the fifth or sixth day, and remained weak some time afterwards.

To obtain an answer to the third question, Dr. Högyes kept rabbits exposed for some time to currents of air charged, 1, with non-disinfected; 2, with disinfected choleraic evacuations; 3, with ordinary diarrhoea stools; 4, with the fluid of putrid meat. The oxygen necessary for respiration was supplied in abundance. The rabbit in each case was confined in a glass bell-jar, placed in a well ventilated apartment; the bottom of the jar was air-tight, and the air, charged with the evacuations or with the putrid fluid, passed in by one aperture at the top and escaped by another. The air, having been first made to pass through the fluid of which the effect was to be tested, was forced into the jar by a Bunsen's water-apparatus at the rate of 15 litres per minute. To prevent the air from escaping in its foul state through the ventilating tube, it was made to pass through cotton-wool and sulphuric acid; and in this way it was possible, without danger of injuring the health of the operator, to continue the experiment for any time.

Two rabbits, in one of which bronchial catarrh had been induced by the inhalation of ammonia, were subjected for twenty-four hours to a stream of air charged with non-disinfected choleraic evacuation. While under the bell, the animals had slight catarrh, did not eat, and were depressed. In the third twenty-four hours, violent diarrhoea set in, and both animals soon became cold and collapsed; the one in which bronchial catarrh had been induced died first, and the other five hours afterwards—both presenting the same symptoms. A small rabbit, exposed for twenty-four hours in the same apparatus to air charged with choleraic discharges disinfected by carbolic acid, remained healthy. Another animal of similar size was kept without injury for twenty-four hours in a current of air saturated with ordinary diarrhoeal evacuation. A larger rabbit, exposed for twenty-four hours to a stream of air saturated with the fluid of meat that had been decomposing during five weeks, at first lay stupefied at the bottom of the apparatus, but immediately afterwards rose up, and escaped without injury.

The experiments bearing on the fourth question consisted in the injection into the jugular veins of dogs and guinea-pigs, in one case of choleraic discharges containing microscopic organisms, and in other cases of the same discharges after filtration.

With regard to the last question, Dr. Högyes conducted through fresh non-disinfected choleraic discharges a slow stream of previously purified air. The elementary forms brought over with the air-current

were received into two media—one neutral, distilled water; and one suitable for their development, Cohn's fluid. The fluids were drawn off by drops from the vessels, and examined with the microscope. Both distilled water and Cohn's fluid have no action when injected into the vessels; and the question was, whether their action would be changed by a certain amount of saturation. In a short time, a large number of elementary organisms (chiefly bacteria), with which the cholera excreta were saturated, were carried over into the fluid; and, in twelve hours, produced a milky cloudiness in Cohn's solution. At the end of twenty-four hours, the current of air was stopped. At the end of the second twenty-four hours, the surface of Cohn's fluid was covered with a bluish green shiny layer of cryptogamic matter, two centimeters thick; and the fluid itself assumed a peculiar smell, reminding one of decomposing fruit. The distilled water, which remained quite clear, although charged with organisms, and the Cohn's fluid, were injected into the veins of dogs and rabbits. The result was, that both the distilled water and Cohn's fluid produced the same symptoms as the choleraic discharges when injected into the venous system—acute gastro-intestinal catarrh, and, in some of the rabbits, death.

Similar researches with discharges disinfected by carbolic acid showed that the power of development in the elementary organisms was destroyed; the Cohn's fluid still remained clear at the end of twenty-four hours. On injecting the fluids into which the air had been conveyed through the disinfected excreta, the symptoms of poisoning with carbolic acid were produced; this is readily explained, when it is remembered that the current of air in the course of twenty-four hours must have carried with it a large amount of carbolic acid.

While these experiments were being carried on, the attendant, who had been exposed for some time to the emanations from the vessels containing the choleraic excreta, had a severe attack of gastro-intestinal catarrh, which recurred twice within a short period. His little daughter, who slept with him, had vomiting and diarrhoea the day after he became ill. Five days after his illness, two cases of cholera (one of which ended in death) occurred in the house in which he resided, which had hitherto been free from the disease. During the microscopic examination of the choleraic discharges, Dr. Högyes had loss of appetite, a coated tongue, and a constant sensation of oppression in the epigastrium; after the researches were complete, these uncomfortable feelings disappeared.

The following are the conclusions at which Dr. Högyes has arrived.

1. Fresh choleraic discharges exert an injurious influence on animal organisms, and, as it seems, in different degrees in different animals.
2. The principal or infallible evidence of injury after the introduction of choleraic discharges in any way, is more or less of inflammation of the stomach and intestines.
3. An artificially induced gastro-intestinal catarrh renders animals more liable to be thus affected.
4. The same symptoms may be produced by the inspiration of a stream of air charged with particles from non-disinfected choleraic discharges, as well as by immediate action on the stomach, intestines, or venous system; while the particles in choleraic discharge disinfected by carbolic acid appear to be quite harmless.
5. A current of air, passing through non-disinfected choleraic excretions, carries with it cryptogamic elements, which vegetate abundantly in a favourable soil; while the same growths from discharges that have been disinfected by carbolic acid are incapable of multiplication.
6. Choleraic discharges freed from organised elements are capable, by reason of their chemical composition, of producing the same pathological changes as they do when they contain the organised forms.

FOREIGN NOTES UPON PUBLIC HEALTH.

THE reports from abroad which are periodically laid before Parliament, and perpetuated by means of the well known blue-book, frequently contain interesting intelligence with regard to medical matters; and we note that such a report has just been issued from various British consuls resident in foreign towns and cities. Thus we learn from

Ostend, which, it is stated officially, has become "the principal bathing-place for the North of Europe," that a great inconvenience lately experienced there has been the want of a proper hospital. The old hospital was built when Ostend had only a population of about 7,000 inhabitants, whereas now the number is from 18,000 to 20,000. Consequently a large and more commodious hospital became a necessity; and, in order to meet this pressing want, the town, conjointly with the Government, have erected a splendid hospital, which is quite adequate to any demands which are likely to be made upon it. It is certainly satisfactory that this matter was taken up in such an active manner, and that the result has been so successful. Ostend is described as a healthy watering-place, and very largely frequented. From Ostend the reports take us to France, the first place alluded to being Calais. Although in 1871 this port suffered severely from small-pox, the result of the Franco-German war, it has now fully recovered its customary well deserved reputation for salubrity, and is as healthy a place to reside in as possible. Since the war, however, and consequently upon the taxation of every article of consumption, the cost of living at Calais has been very high. Provisions of all kinds have greatly increased in price, which scarcely renders this a very desirable place even for a temporary sojourn. During the past year we also learn that another French port (Dunkirk) has suffered from the small-pox, which prevailed in the town and neighbourhood for many months. At one time it was of a most malignant type; great numbers died of it, and no class of society escaped. We also get bad news from a French colony—Réunion. Of late the public health here has been in a most deplorable condition: intermittent fever has been extremely prevalent, and the only wonder is that, in the absence of sanitary arrangements, and considering the habits and utter indifference of the lower orders, it has not taken a typhoid form. The Government made some attempt to check the evil; but, as unfortunately their system is mainly based on that adopted in other countries when suffering under a similar infliction, and not on the social peculiarities of the people with whom they have to deal, it has not hitherto met with all the success that is desirable. Thus, for instance, it has been ascertained that persons, stating that they were affected with fever, had applied for quinine, and, on obtaining it, had immediately proceeded to the nearest pothouse, where they exchanged the drug for a glass of poisonous rum!

The next report refers to Russia, and more particularly to the town of Kertch. We are glad to learn that of late this town has greatly improved in all its sanitary arrangements, and in its regulations for the preservation of public health. In the summer season this place is very liable to sickness; but in future, it is hoped, this will be greatly diminished by the sanitary improvements which have been effected in the town. The hospital at Kertch has also undergone considerable alteration. It has been purified and ventilated; and important additions (which were greatly needed) have been made to the comforts of its inmates, who also report improvements as to the humane and kind manner in which they are now treated. With regard to the prisons of Kertch, it is significant to note that they remain "unsafe and uninhabitable."

The volume of foreign reports, to which we now allude, refers to many different places; and from Russia we get to Turkey with amazing rapidity. From Bosnia we learn that during the past year the sanitary condition of the province was moderately satisfactory. Croup, however, extensively prevailed amongst children at Serajevo, nearly half the Jewish children having died of it. Turkish and Christian children suffered less. At one period, also, small-pox appeared: and a severe epidemic was dreaded. It commenced in the Herzegovina, and thence reached Serajevo—the Jews being again the greatest sufferers, which is attributed to their poverty, their uncleanness, and the crowded state of their houses. While it lasted, this attack of small-pox committed great ravages, but fortunately it was of only short duration. The deaths which it caused were doubtless the more numerous on account of the want of any effective preventive, while the sanitary arrangements of the province of Bosnia are deserved as not being in a very perfect con-

dition—certainly not of a character likely to diminish the ravages of small-pox. The administration of this province, generally speaking, is very bad. Since the removal of Osman Pasha, about four years ago, no fewer than three governors-general have been appointed to Bosnia; and, even if they had possessed all the good qualities in which they were notoriously deficient, it would still have been almost impossible for any of them, during their short period of office, to in any way benefit the country. Under these circumstances, it can scarcely be expected that any important sanitary improvements will be inaugurated. Experience has shown that such improvements, even under the most favourable auspices, and with a government desirous of most carefully preserving the public health, have not been too quickly accomplished; and, therefore, we must not be surprised that the news we get from Turkey with regard to this subject is not of the most flattering character.

It is understood that Sir T. G. Logan will retire from the office of Director-General of the Army Medical Department, and will be succeeded by Sir W. Muir, K.C.B.

SOME "Russian caviar," lately in the Berlin market, was found to consist of coarse-grained sago and a black fluid of unknown composition.

SOME months ago (see *BRITISH MEDICAL JOURNAL*, vol. i, 1873, page 434), the governments of Germany and Belgium agreed to permit reciprocity of medical practice, under certain conditions, on the frontiers of the two countries. A similar arrangement has lately been made between Germany and Holland.

It is stated that the Earl of Kimberley lately applied to the Admiralty, and also, it is understood, to the Horse Guards, to recommend a competent medical officer to proceed to Jamaica to take up an appointment under the Colonial Government. The fixed salary offered was £1,000 *per annum*, and an allowance of £200 for travelling expenses. The duties expected from the officer selected are not only those of a general sanitary character, but he will also have to discharge those of a school-inspector. The appointment, up to this time, has been declined by all to whom it has been offered.

DR. LYON PLAYFAIR has been unanimously re-elected as Member for the Universities of Edinburgh and St. Andrew's. Sir R. Christison (Conservative) and Principal Tulloch joined in the nomination; and Sir Robert Christison paid a striking and most fully deserved tribute to the remarkable powers of mind and unflagging attention which Dr. Playfair had devoted to all questions affecting university interests, as well as to matters of imperial import. It is not too much to say that Dr. Playfair has been the chief exponent in the House of enlightened knowledge on all matters affecting sanitary and educational interests; and our profession has been under repeated obligations to him for his ready attention, intelligent advice, and weighty influence, on questions of medical importance.

THE WESTMINSTER HOSPITAL.

THE following extract from the Report of the Westminster Hospital for 1873, which has just been issued, will be read with interest by all who desire to see a practical remedy applied to the abuses which now prevail in the out-patient departments of the metropolitan hospitals.

"The Committee deem it necessary, however, to state that their attention having been specially called to the increasing number of out-patients, and the many very serious evils attending the indiscriminate administration of relief, in the out-patient department of the metropolitan hospitals, to applicants, whatever their circumstances or condition, they are convinced of the necessity for a change in this direction, both in the interest of the poor and of the public. With this object, they have nominated a carefully selected sub-committee to take into consideration any such existing abuses of charity, and report on the best means of applying, if possible, in concert with other institu-

tions, an effective remedy. When this report shall have been received and approved by the house-committee, it is in contemplation to make its purport known to the governors and subscribers, together with the practical measures which may be proposed, in the hope of securing both the active co-operation and the public sanction of those most directly interested in the Hospital and its charitable work."

This sounds like an earnest endeavour to grapple with a great evil which has long been recognised among medical men, but which it has been found very difficult to induce the managing committees of the hospitals to deal with in an effectual manner. We should like to see the movement thus originated by the Westminster Hospital joined by St. George's, Charing Cross, and King's College Hospitals, as well as by the dispensaries and special hospitals in the same district, that thus a system might be inaugurated which would secure uniform action among all the medical charities at the west end of the town. Such a combination would not only be necessary for complete efficiency, but, if any machinery were set on foot with a view to systematic investigation, it would no doubt be more economical for a number of institutions to act in concert than for one to bear the whole burden. We shall look forward with interest to the promised report of the sub-committee. The abuse of the out-patient department has been so often pointed out in this *JOURNAL*, that we are prepared to welcome any efficient remedies which can be suggested.

THE METROPOLITAN FREE HOSPITAL.

THE authorities of the Metropolitan Free Hospital have not yet put forth any statement, as was anticipated, in support of the bare denial by their Secretary of the authenticated statements of Mr. Jodrell, describing wholly unjustifiable conduct on their part, culminating in the dismissal of one of their physicians, Dr. John Chapman. This case continues, therefore, to wear the aspect of one of gross oppression. Unless and until the authorities are able to offer explanations of a character altogether unlike anything which now appears, we must counsel the profession to adopt a similar course to that by which they have marked their sense of the misconduct of certain governors of the Royal Orthopædic Hospital. Abstinence from any office in the gift of those governors is, indeed, a very mild, although a very necessary, protest against this misgovernment. We rather gather, however, from the contents of a letter which we have received this week, that the Board will prudently abstain from "declaring" the vacancy in the staff created by the dismissal of Dr. Chapman. In that case, the governors generally will have a right to ask why the staff is left incomplete by the act of the Weekly Board.

CHOLERA IN GERMANY.

WHILE the number of cases of cholera has greatly decreased in most parts of Germany, it has broken out afresh in Munich. In that city, on November 29, 25 cases with 6 deaths were reported; and on the next day, 35 cases with 15 deaths. In Berlin, 21 new cases were reported from November 20 to December 4. The total number up to that time was 1,072, of which 739 were fatal. Five patients remained under treatment.

MALARIA.

SURGEON-MAJOR OLDHAM, whose eccentric views on malaria have been made known to the profession by his publications on the subject, is not satisfied to allow the professional verdict to decide how far his opinions shall prevail, but takes the opportunity of the preparations for the Ashantee expedition to assure the readers of the *Times* that, in his work on Malaria, "he has proved it does not exist." Whereupon Surgeon-General Maclean, in a few well-timed and neatly turned sentences, takes occasion effectually to dispose of Mr. Oldham's statement. He observes that Mr. Oldham's "proof" is not accepted either by the profession generally, or by any one recognised in this country as an authority on tropical disease. "Malaria," says Mr. Oldham, "is only chill." If so, why do we not suffer from agues and their sequels whenever we are exposed to alternations of temperature, to heat by day, and "chill" by night? Why must we go to the marshes of Italy, the

jungles of India, the "bush" of the West Coast of Africa, and such-like localities, before "chill" can produce the class of fevers known from the earliest times to be generated in such places, if there be not a poison given off by the soil, to which, for want of a better name, we give that of malaria? Who that has served or lived in such regions is not familiar with this remarkable type of fever, with its singular stamp of periodicity familiar to the most unlearned in unhealthy climates, with the long catalogue of sequels in the shape of enlarged spleens and livers, broken-down constitutions, and emaciated frames, such as are to be seen in the wards at Netley, and in other hospitals set apart for the reception of sick from hot climates, and only there? Why, in a country where "chills" and fevers of other types abound, are not the hospitals of London filled with men similarly affected? Time was when malaria was as rife in England as it is now in the Pontine marshes or the Delta of the Ganges, and the fevers it causes were as well known as they are now in the regions named. What has become of this poison now? Is it not that by a higher civilisation we have turned the productive energies of the soil to a better purpose than the genesis of a poison to which, for want of a better name, we have given that of malaria? Professor Maclean disposes of Mr. Oldham's peculiar views very thoroughly and very aptly. But it is to be regretted that that gentleman should have taken the step which called down this crushing rejoinder upon his head. It cannot too often be repeated, that the columns of a daily paper are not the fitting place for airing views on subjects of medical science as to which opinions are in any way doubtful. Still less is it permissible for a gentleman holding exceptional opinions on scientific subjects to announce to the public that he has "proved" what he may well remember is a conclusion largely, if not universally, disputed by his medical brethren. If Mr. Oldham is entitled to assure the public that he has proved that malaria has no existence, Inspector-General Smith is not less entitled to inform them that he has proved that cholera itself is nothing else than malarious fever; and Mr. Sanitary Commissioner Cuninghame that he has "proved" that the accepted views of the introduction of cholera have no foundation, and that he has scattered them to the winds and Dr. Bryden.

THE CHOLERA IN HUNGARY.

ACCORDING to reports brought down to November 1st, the number of cases of cholera in Hungary during the year was 433,295; of these 247,718 recovered, 182,599 died, and 2,978 remained under treatment. The above-mentioned number does not include cases in Croatia and Slavonia, and in the military frontier; nor the fatal cases which occurred in Buda and Upper Hungary at the end of 1872. If these be included, the number of victims to cholera in Hungary must be reckoned to have been at least 200,000.

ARSENICAL WALL-PAPERS.

As a warning to those who may inhabit rooms that are covered with paper of a green colour, Dr. Clement Walter communicates to us the case of a lady who for some time has been suffering from *malaise* and headache, etc., with an eruption of boils, which obstinately refused to heal. No cause could be assigned for these symptoms; but, upon looking round the room, he noticed the colour of the paper. Upon examination, arsenic was readily discovered with such ease as to leave no doubt of its presence in considerable quantity. Accordingly, it has been found that removal has sufficed to relieve the patient's symptoms.

SKIN OF A WHITE MAN ENGRAFTED UPON A NEGRO.

MR. GEORGE POLLOCK's well-known and successful experiment, by which he tested the success of Reverdin's valuable method of skin-grafting in surgery, has been repeated inversely in America. Dr. Maxwell, of Newcastle, Delaware, reports in the *Philadelphia Medical Times*, of October 18, that in February, 1872, he was called to a negro, who had been shot in the face with bird-shot. As he was only a few feet from the muzzle of the gun, the discharge passed through the left cheek, in as compact a mass as if it had been ball, and passed out at the posterior portion of the ramus of the lower jaw just below

the lobule of the ear. There was extensive sloughing, and Dr. Maxwell proposed skin-grafting. He conceived the idea of transplanting the skin of a white man; and, the consent of the patient having been obtained, Dr. Maxwell cut from his own arm a piece of skin about the size of a dime. He also took from the patient's arm a similar piece, and, having cut them into pieces of the size of a canary-seed, carefully inserted them on the wound. All the white grafts except one died, and this one increased rapidly in size, till it was more than half an inch in diameter. After the wound had healed, Dr. Maxwell thus describes the patient's condition. "Meeting my patient on the road, I readily distinguished the white patch on the side of the face twenty or thirty yards distant. Upon examination, dark coloured lines, forming a network on the white skin, were discovered. These lines increased in size and in number, deepening the colour of the patch, until, at the end of the third month, the whole of the surface of the wound was of an uniform black colour." The experiment is exceedingly interesting, and it is said to be the first published case of the kind.

THE COMPOSITION OF SHERRY.

WE publish in another column the first of a short series of reports on the Composition of Wines, by Mr. Wanklyn, which has a special relation to the discussion recently initiated on this subject in the daily press by Dr. Thudichum and Dr. Edward Smith, and will be found to furnish the elements for a solid judgment of the character and composition of the wines most commonly sold. In the first part of the investigation, which we publish to-day, it will be seen that wines having the same name of sherry in commerce, and purchased, therefore, probably under the impression that they are really similar in dietetical characters and physiological effects, do really differ as widely as Rhine wine and port could do. The range of variation in fixed organic matter extends from 1.98 in some specimens to 6.41 in others. Thus it is especially necessary for medical men to have some more definite knowledge of the wine they are ordering, than the mere fact that it bears the generic title of sherry.

THE GROWTH OF CICATRICES.

MR. WILLIAM ADAMS read lately before the Medical Society a paper which bears closely upon an interesting question in medical science brought into prominence during the progress of the Tichborne trial. It results from the casts, drawings, and models produced by Mr. Adams, that, for wounds made in early childhood, the resulting cicatrix will be, at the completion of growth to adult life, very much larger than the original wound; but cicatrices of wounds made after the completion of growth maintain through life the same proportions.

CHOLERA IN NEW ORLEANS.

DR. JOSEPH JONES, in a letter to the editors of the *Boston Medical and Surgical Journal* (July 31, 1873), states that this epidemic "which commenced in the early part of February and disappeared in the latter part of June, was less severe than in the two previous visitations of this pestilence in New Orleans. Although the fatal cases were marked by the prominent symptoms of Asiatic cholera, and presented, upon *post mortem* examination, its characteristic lesions, the vast proportion of the cases, 'when taken in time,' yielded readily to treatment, and the mortality was comparatively small. Thus, during February, March, April, May, and June, 117 whites and 116 blacks died from what was registered in the official mortuary reports as cholera sporadica; cholera morbus and cholera infantum destroyed 62 whites and 22 coloured; diarrhoea and dysentery, 109 whites and 48 coloured; total deaths from all intestinal diseases during the past six months, white 366, coloured 234, total 600. This is a comparatively small mortality from cholera in a population of 200,000; and as the whites constitute about three-fourths, and the coloured people only one-fourth, it is evident that cholera, as well as other intestinal diseases, has been much more fatal amongst the coloured population. This difference appears to be due in a large measure to the fact that, as a general rule, the coloured people occupy the more unhealthy and crowded portions of the city, and are

less careful in their habits and diet. The sudden subsidence of the cholera is not to be referred to the sanitary condition of the city, which could not, perhaps, be much worse at this season of the year; nor to the universal employment of any special means of disinfection. Numbers of cases have occurred in localities where no disinfection was practised, and it is probable that only the severe and fatal cases have been reported to the local sanitary officers. The peculiarly mild character of the recent epidemic may be due to certain unknown conditions of the atmosphere and soil, and to the heavy rain-fall, almost twenty-two inches of water having fallen during the past six months."

ARMY MEDICAL DEPARTMENT.

A MEMORIAL to the Secretary of State for War, by the surgeons-major and surgeons of the Army Medical Department serving in India, has been signed by nearly three-fourths of the body. The memorial sets forth the injuries which the Army Medical Warrant of March 1st last inflicts upon the memorialists, and prays for the restoration of the privileges guaranteed by previous Warrants, for compensation for such officers as have suffered pecuniary loss by the action taken under the new Warrant, and for redress of other grievances. Under the authority of the Right Hon. the Secretary of State for India, H.E. the Governor-General has published the undermentioned order as applicable to India, with effect from April 1st, 1872. "The allowance of £80, or 800 rupees a year, will be issued in arrears up to September 30th, and thereafter will be issued monthly, to each regiment of British cavalry and infantry in India maintaining a band. This allowance will be credited to the band fund, and the charge on this account will be vouched by the receipt of the president of the band committee. In the cases of regiments which returned to England from India during the year 1872-73, the proportion of the band allowance of £80 per annum, chargeable to Indian revenues, will be paid and adjusted at home, under arrangements made by the Secretary of State for India." It remains to be seen if this concession be sufficient, or is to be taken only as an instalment.

THE PROGRESS OF SURGERY.

WE are taken to task somewhat sharply for stating, in connection with the history of ovariectomy, that, besides Warne, Clay, and Samuel Lane, the late Baker Brown was a predecessor and preceptor of Spencer Wells. We may as well repeat—what, however, it is not probably at all necessary to repeat to any unprejudiced reader—that we are not concerned to exalt or depreciate any individual reputation; but, as a matter of historical accuracy, we believe the statement to which we originally referred to be wrong in setting forth the name of Spencer Wells alone as the reviver of ovariectomy. Ovariectomy is mainly a triumph of British surgery and of British surgeons, not, of course, losing sight of McDowell, the American pupil of Bell, who was the first successful ovariectomist. Our immediate reason for connecting the impulse to operate and the practice of ovariectomy by Spencer Wells with that of Baker Brown, was the recollection of a statement which we have more than once heard made by Baker Brown, and which is no doubt in the minds of very many others, that Wells had attended more than one of Brown's operations and learnt his whole manipulation before he began to operate; and also that Brown attended to assist at Wells' first operation. That was the fact which we had in mind in speaking of Brown not only as a predecessor, but as a preceptor of Wells. If the statement be incorrect, it may, of course, be with advantage corrected. It does not, in our opinion, detract from the historic fact that Wells quickly carried the operation of ovariectomy to a pitch of success which securely established it amongst recognised operations. But, if we are rightly informed, the first brunt of the opposition raised to ovariectomy was borne by the British surgeons, who were, it is said, threatened with "an inquest" should operations end unfortunately. The friends of Mr. Wells—and we are sure that he will agree with us—can very well afford to discuss the question with perfect good temper. Since the above was written, we have received a note on the subject from Mr. Lennox Brown, who writes as follows.

"I have the very highest regard for Mr. Spencer Wells as a bold and most deservedly successful operator. There cannot, however, be the least doubt that to Dr. Clay of Manchester, and to the late Mr. Baker Brown, the credit belongs of having placed the operation of ovariectomy on a sure foundation. I will, however, confine my remarks to Mr. Brown, and I trust that the following facts will sufficiently prove that 'Baker Brown was not only Spencer Wells's predecessor and his contemporary in the operation, but to some extent his preceptor.' Mr. Baker Brown first performed ovariectomy (having previously, from so early a date as 1840, attempted many less radical measures with varying success) in 1851. His first three operations were unsuccessful. The subject of his fourth was his own sister, and success followed his boldness, the lady having since married, borne a large family, and being still alive. It is quite true that Mr. Brown ceased to operate in 1856; but this abstinence was not due in any degree to doubt on his part as to the value or justifiability of the procedure, but simply because he met with such determined opposition on the part of his colleagues at St. Mary's Hospital, one of whom, indeed, went so far as to threaten him with an inquest the next time a death followed an ovariectomy performed within the walls of that hospital. It may be interesting to note, *en passant*, that this gentleman became afterwards an ardent ovariectomist, and succeeded in having a cottage built at the back of St. Mary's Hospital for the reception of patients who underwent ovariectomy. It was in consequence of this opposition, joined with the conviction that the air of a general hospital is unfavourable to recovery after abdominal section, that Mr. Brown founded the London Surgical Home; and he immediately recommenced ovariectomy. The brilliant success that Mr. Brown attained with this operation at that institution was due (1) to improved sanitary, hygiene, and nursing conditions; and (2) to the employment of the actual cautery. It is 'a barefaced sacrifice of historical accuracy' to state that 'it was not until after Spencer Wells's cases and papers had revived ovariectomy that Baker Brown began to operate again.' Mr. Brown first operated at the London Surgical Home, October 20th, 1858. At that time Mr. Wells had performed only two operations, one on February 19th, 1858, and one on August 11th, 1858. Mr. Wells did not publish any paper until February 1859; meantime, from October 1858 to February 1859, Mr. Brown had performed five operations, or fourteen in all. Mr. Wells's paper was based on the results of four cases. Further, Mr. Baker Brown was present at Mr. Wells's first operation, and, confining myself to the latter gentleman's own words, 'afforded zealous assistance.' There are eye-witnesses living who can testify to the value of this 'assistance'. All who knew Mr. Brown would readily believe how 'zealous' he would have been to encourage and assist a brother surgeon. But, granting that Mr. Brown was not the actual preceptor to some extent of Mr. Wells, the many accounts he had published of his previous efforts to establish this operation, and the frank manner in which he always discussed the causes of failure, must have taught Mr. Wells many valuable lessons. It is the pioneer of an operation who bears the brunt of the opposition. What Mr. Brown suffered—through direct antagonism, to say nothing of apathetic neutrality—from the profession, few only know. It is certain that when Mr. Wells commenced to operate the way was comparatively clear. And here I would ask leave to remark, that this last fact was at least one great reason why Mr. Wells 'soon outstripped his master.' Although, however, Mr. Brown did not operate on anything like the same number of patients as Mr. Wells, his success in his later years would surprise those who had looked upon him as unfortunate in the results of his ovariectomies. The second edition of Mr. Brown's work on *Ovarian Dropsy* contained the results of 111 operations of ovariectomy, performed between 1851 and September 1867. He operated on 10 more patients up to May 21st, 1868 (the date of his last ovariectomy)—in all, 121, with the result of 35 deaths and 83 recoveries. Of his first 50 operations, he had 24 deaths; and only 11 in the last 71. In other words, whilst in the first ten years of his career as an ovariectomist his mortality was 48 per cent., in the last five years it was only 15.4 per cent. Of the last 50 operations, only 4 terminated fatally. To conclude, the successes of Dr. Thomas Keith in Edinburgh, of Dr. Tracy in Melbourne, and of many others, no more detract from the merit of Mr. Spencer Wells, than do his magnificent achievements obscure the fact that Mr. Brown was, from the earliest date of his career—even in his student days—an enthusiastic and consistent believer in the cure of ovarian dropsy by operation; and future impartial historians will not be influenced in this matter by the erroneous statement of a clever popular essayist in a lay review. It may be further noted that it was to Baker Brown that Nélaton came to learn the mode of performing, and the after-treatment of, ovariectomy. On the occasion of his visit, Mr. Brown performed three operations consecutively in one day (October 31st, 1861); he showed two other patients in different stages of

convalescence, and others on whom he proposed to operate. It is not too much to say that this visit of Nélaton led to the establishment of ovariectomy in France; for, whereas in the five years prior to 1862 only 3 ovariectomies were performed, in the year following the publication of Nélaton's clinical lecture, based on the five cases he had seen under Mr. Baker Brown (*i. e.*, in 1861), 15 operations were performed in France, of which 8 were successful, and 3 of these successful cases occurred in the practice of M. Nélaton."

HOSPITAL SUNDAY FUND.

LATELY, at a meeting held at the Mansion House of the Council of the Metropolitan Hospital Sunday Fund, at which Alderman Sir Sydney Waterlow presided, Mr. Henry N. Custance, formerly secretary and superintendent of the Middlesex Hospital, was elected secretary to the fund. There were no fewer than three hundred and twenty-eight candidates for the post, to which the salary attached is £250 a year. In respect of the arrangements for Hospital Sunday in next year—Sunday June 14—it may be mentioned that nearly seven hundred ministers of all denominations have already consented to set apart that day for collections in aid of the fund; and it is confidently expected that on the next occasion the number of places of worship contributing to the success of the movement will be considerably larger than in this year, and that the amount collected will be proportionately increased. It is also stated that the Council have at present in their possession a considerable number of letters of admission to many, though not all, of the hospitals and dispensaries to which grants were made from the fund, and that they are prepared to distribute them to such of the contributing ministers as may make written applications to the secretary at the Mansion House. We are very sorry to hear it.

UNQUALIFIED PRACTITIONERS.

ON Tuesday last, at the Halifax County Court, before Mr. Serjeant H. Tindal Atkinson, the case of the "Apothecaries' Company of London *versus* Richardson" was set down for hearing. Mr. Godfrey Rhodes appeared for the plaintiffs, and Mr. England for the defendant. It appeared from the opening of Mr. Rhodes, that the defendant, Mr. James Richardson, had for some time past carried on the practice of a surgeon and an apothecary at Elland, near Halifax, he not being duly qualified; and that the proceedings had been instituted by the plaintiffs to recover the sum of £20, being the amount of the penalty which the defendant had rendered himself liable to pay by reason of such practices. The defendant carried on an extensive practice; and the leading practitioners, in the parish of Halifax, signed a memorial to the Apothecaries' Company, requesting that these proceedings should be taken with a view to prevent the defendant from continuing his practice, and from invading their privileges with impunity. The defendant had visited patients and dispensed medicines, and had made the usual professional charge for attendances. He had, however, thought fit to pay the penalty, and the matter now came before the court as to the question of costs. Mr. Rhodes stated that the money was not paid five clear days before the court-day, and submitted that he was entitled to costs. His Honour made an order for payment of costs.

THE SALE OF SECRET REMEDIES.

ON the 11th of September, 1873, says the *Australian Medical Journal*, the Hon. J. M. Grant stated in the Legislative Assembly, that a person named Greathead had discovered a specific for the cure of diphtheria, and that it would be disclosed on payment of £5,000. As the Government very naturally required some information as to the value of so remarkable a discovery, they very properly referred the applicant and his advocate to the Chief Medical Officer, and as the Chief Medical Officer required proof of the value of the alleged specific, nothing came of the application. But a few days later Mr. Grant sent the following communication to the three daily papers.

"Sir,—The accompanying letter was handed to me yesterday, with the request that I should read it to the Assembly; but, having been ruled out of order, I was unable to do so. As, however, it may be of the greatest importance to those who are suffering from a disease that

is sending hundreds to an early grave, I do not feel justified in delaying the bringing of this matter under the notice of the public, and therefore place this letter in your hands, hoping that the remedy may be as effectual as my friend, the author, imagines, and, if so, that the country and legislature will not fail to recognise a good service so freely offered.—I am, Sir, yours obediently, J. M. GRANT.

"The Hon. J. M. Grant,—Sir,—Knowing so well as I do that you are ever ready to do good in your capacity as member of Parliament, not only to individuals, but to the public at large, I am satisfied you will do justice in laying the following statement and cure for diphtheria before Parliament at your earliest convenience, viz.:—Having seen and constantly hearing of that direful disease diphtheria, and its awful effects, in bringing such terrible afflictions into so many families all over the colony, I can no longer withhold from the public the cure that I have found to be so perfect in about a dozen cases, not failing in one instance; and I trust that Parliament will reward me if they find the cure effectual. I might make a private fortune of it, as some gentlemen advised me to make a private practice of it; but being the father of a large family myself, and seeing the distress that the disease would bring into so many families in one part of the colony while I might be in another, has brought me to the above conclusion, of giving publicity to it through you in your place in Parliament. The disease is one of an hydatid growth; the insects breed in millions in a few days under a film they make, which swells up in the throat and completely stops respiration. The mixture described below causes the film instantly to contract and break, and kills the insects instantly, and they are all washed down the throat, and the patient is completely well in a few minutes. Only a slight roughness is left in the throat, which soon passes away.

"The Mixture: Give four drops of sulphuric acid in a glass of water. Mix the two well together by pouring out of one glass into another a few times; then give it to the patient to drink. The quantity will not hurt any one, and it is also a good purifier of the blood.

"Any person can get for sixpence as much acid as will serve him for his lifetime.—I am, Sir, yours obediently, ROBERT GREATHEAD.

"33, Chetwynd Street, Hotham, September 17th."

Mr. Greathead's specific has found much acceptance with writers in the Australian press, who laud both his ingenuity and his liberality. Our medical contemporary observes with much truth, that if Mr. Greathead had discovered that white mice instead of insects formed in the throat in diphtheria, and that the playing of a hurdy-gurdy would cause the patient to vomit them, his discovery would have been as much to the point, and it would have been as wise to abuse the profession.

THE PROPAGATION OF INFECTION.

THE following case, which has been communicated to us by Dr. W. Carter of Liverpool, shows the desirability of endowing medical officers of health with some such powers as those suggested at the meeting of the Gloucestershire Branch of the Association, viz.:

"That, in the opinion of this meeting, it is essential to the protection of the public health that all premises on which milk, butter, or cheese are stored or made for sale, should be placed by law under the supervision of a medical officer of health, who shall have adequate powers to deal with such premises in case he shall consider their condition to be at any time prejudicial to health."

A dairyman and two of his children fell ill of scarlet fever. He owned eighteen cows, which were stalled in a shed immediately adjacent to the house, while within the house itself the milk from these cows was stored for sale. Immediately on becoming acquainted with the nature of the disease, Dr. Carter brought sufficient pressure to bear on the man to induce him to send the cows to a distance, to store the milk elsewhere than in his own house, and to permit no communication whatever between the milkers and his household. After this isolation had been maintained for a week, Dr. Carter learned that the owner of the premises to which the cattle had been sent had returned them; and, on consultation with the law-clerk, he found that he had no power to prevent their being received back. Happily, during the interval between their being sent away and returned, he had been able to get the shed thoroughly lime-washed, and other parts of the premises disinfected; but power should be given to a medical officer of health in such a case to insist on so obvious a source of danger to the public health being suppressed. An epidemic of most virulent scarlet

fever prevails in the district of West Derby, in which the dairy is situated. No cases, however, have been certainly traceable to the use of infected milk. Another source of danger, however, and one perhaps not so generally recognised as it deserves to be, is indicated by this epidemic. Three cases were undoubtedly caused by the infection being conveyed in clothes sent home by a laundress whose child had the disease. This laundress only washed for one family. Her child became ill on a Tuesday. On the Saturday following she sent home the clothes; and on the Thursday after that three members of the household to which they were sent were down with scarlet fever. The laundress's child died. From a neighbouring, and much more extensive, laundry, a friend, aged eighteen, had spent some time in nursing this child. In two days afterwards this friend sickened, and two days later died. On Dr. Carter and the inspector visiting the second house, they found the dead body of the young woman lying on one sheet and covered by another, which had been sent by a medical man residing in Liverpool to be washed, while on a table by the bed-side was a tablecloth belonging to a lady in the neighbourhood. The wise practice of providing the medical officer of health with a weekly return of deaths enabled him to interpose in this case; but, if recovery had resulted, he might possibly have remained in ignorance of the fact that there was disease in the house, and its wider distribution through the medium of the clothes have probably resulted. This is but an isolated case, among a great many, pointing to the advantages that might accrue from a registration of, at least, infectious disease.

SCOTLAND.

At a meeting of the Royal Medical Society of Edinburgh, on November 28th, the following gentlemen were elected Presidents:—G. T. Beatson, B.A.; Alexander James, M.B., C.M.; J. Stevenson Forrester, L.R.C.P. and S.E.; and C. Watson M'Gillivray, M.B., C.M., L.R.C.P. and S.E.

EDINBURGH OBSTETRICAL SOCIETY.

The following gentlemen were elected office-bearers on November 26. *President*: J. Matthews Duncan, M.D. *Vice-Presidents*: Angus Macdonald, M.D., R. Peel Ritchie, M.D. *Treasurer*: James Young, M.D. *Secretaries*: J. Andrew, M.D., A. Milne, L.R.C.P. Ed. *Councillors*: L. R. Thomson, M.D., A. R. Simpson, M.D., D. Wilson, M.D. *Librarian*: James Jamieson, L.R.C.P.

THE PHYSIOLOGICAL ACTION OF OZONE.

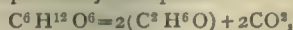
At the last meeting of the Royal Society of Edinburgh, Dr. M'Kendrick read a paper giving an account of an experimental investigation made by Mr. James Dewar and himself on the physiological action of ozone. He described the method of producing the ozone pursued by Mr. Dewar and himself. He then detailed numerous experiments made on frogs, mice, birds, rabbits, and on Mr. Dewar and himself, with the view of determining the action of ozone on the living animal, and the action it exerted on the living tissues of the body. The general facts observed were the following. 1. The inhalation of an atmosphere highly charged with ozone diminished the number of respirations per minute. 2. The pulsations of the heart were reduced in strength, and this organ was found beating feebly after the death of the animal, which showed that life was not destroyed by direct action on the heart. 3. The blood was always found in a venous condition in all parts of the body, both in cases of death in an atmosphere of ozonised air and of ozonised oxygen. 4. Ozone exercised a destructive action on the living animal tissues if brought into immediate contact with them, but it did not affect them so readily if they were covered by a layer of fluid. 5. Ozone acted as an irritant to the mucous membrane of the nostrils and air-passages, as all observers had previously remarked. These effects the authors attributed partly to the fact that the density of ozone was lightly more than that of the carbonic acid of the blood, so that the

diffusion of the gases in the air-cells of the lungs was retarded, and there was a consequent accumulation of carbonic acid in the blood. At the same time, ozone had also a subtle effect on the blood which further experiments might discover. The authors exhibited the apparatus employed in the experiments, and showed how ozone could be readily produced. The apparatus consisted of arrangements by which a diffuse discharge of electricity from a powerful induction-coil could be sent through a stream of air or of oxygen passing through a glass tube, so that during the action of the coil ozone issued freely from the end of the tube.

REPORT ON THE COMPOSITION OF WINE.

I.—SHERRIES.

If the composition of ripe grape-juice be compared before and after fermentation—that is to say, if the juice be compared with the wine which it yields—it will be seen that in becoming wine the juice loses grape-sugar and gains alcohol; moreover, for every two parts of grape-sugar which are lost during the transformation, only one part of alcohol makes its appearance. Thus Dupré found 16.2 per cent. of sugar in ripe grape-juice in Germany; and the wine made from such juice is known to contain 8 per cent. of alcohol. The chemical change is the very familiar one expressed by the equation—



according to which 180 parts of grape-sugar give 92 parts of alcohol. This replacement of sugar by about half its weight of alcohol is the most striking alteration in chemical composition which grape-juice undergoes in passing into wine. All other changes in composition—however important they may be—are quantitatively small in comparison; there is also a marked disappearance of vegetable acid during the fermentation of the grape. Again, to quote Dupré's analysis of the ripe juice, there is 1.53 per cent. of tartaric acid in the juice, and in the wine only about 0.8 per cent. of tartaric acid. The mineral matter (or ash) is not much altered in quantity: the unfermented juice yields 0.2 to 0.3 per cent. of ash, and the wine a little less. Besides alcohol, wines contain ethers, and probably owe to ethers those peculiar qualities for which they are prized. The proportions in which ethers are present in wines are surprisingly small; and whilst the weakest wine contains not less than 7 per cent. of alcohol, present as such, the most ethereal wines do not contain more than 0.07 per cent. of ethers (or, more correctly, not more than 0.07 per cent. of alcohol in the shape of ethers). The average proportion appears to be 0.045 per cent.

The transformation of grape-sugar into alcohol is, in the instance of many wines, very nearly complete. A Rhine wine which I have recently examined contained only 1.20 per cent. of non-volatile organic matter, the ash being 0.12; and many analyses have been published showing almost as little. In a general way, Rhine wine and claret contain very little non-volatile organic matter. Port, on the other hand, contains very much—as much as 7 per cent. Sherry, as is shown by the following analysis, made recently in my laboratory, may contain almost as little as a Rhine wine, or almost as much as port. In one hundred cubic centimetres of sherry, there were as follows:

	Organic matter (fixed). grammes.	Mineral matter. grammes.
E. H. (common).....	2.06	0.40
E. H. (natural)	1.98	0.54
B. "	3.18	0.28
Brown sherry (29s. 6d. per doz.)	6.41	0.31
Pale sherry (38s. 6d. per doz.)	2.61	0.41
Pale sherry (8s. 3d. per doz.)	3.18	0.36

What is the fixed organic matter in wine? It is sometimes the original grape-sugar, the fermentation of which has been arrested; sometimes it is sugar, which has been artificially added to the wine or to the grape-juice. Tannin and other indefinite matters are also comprised by it.

The ash of wines consists mainly of alkaline carbonates—mostly carbonate of potash—derived from the decomposition of organic salts. The ash of sherry, however, as Thudichum has shown, consists mainly of sulphate of potash, which owes its origin to the operation of plastering.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC
INSTRUMENTS, AND RECENT IMPROVE-
MENTS IN THEIR APPLICATION:WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE
MEDICAL PRACTITIONER.VII.—*Electro-Therapeutics.*

THE precise mode in which the various forms of electricity produce their therapeutical effects is still, to some extent, shrouded in mystery; but much more is now known of it than was the case formerly.

A. *Static Electricity*, which is now very rarely used, is a powerful stimulant, especially for the sentient nerves, and may be used with benefit wherever it appears desirable to produce a profound modification of their condition, as in anæsthesia, headache, and certain forms of neuralgia and spasm.

B. The effects of the *constant current* are much more complicated than those of static electricity, but Pflüger's physiological researches on electrotonus appear to us to supply the key to the large majority of the medical applications of the current. Pflüger has shown that a continuous current which passes through a nerve causes certain alterations of excitability in the same, viz., a zone of increased excitability in the neighbourhood of the cathode, and a zone of diminished excitability in the neighbourhood of the anode. Cyon has proved that Pflüger's researches, which were made on frog's limbs, hold good for the nerves of the living man likewise; and the systematic production of catelectrotonus and anelectrotonus for the purpose of increasing or diminishing the excitability of diseased portions of the nervous system, has thus been shown to be a therapeutical possibility. The polarising or electrotonic effects of the current may, therefore, be utilised in certain forms of paralysis and anæsthesia, where catelectrotonus should be produced, and in spasm and hyperæsthesia, where anelectrotonus finds its appropriate sphere of action. We have thus found a scientific explanation for what Remak called the antiparalytic and antispasmodic effects of the current. With regard to the mode of applying it in such cases, it may be laid down as a general principle that for the nervous centres the continuative (Remak's stable) application is under all circumstances the most appropriate; while for the peripheral nerves and muscles the continuative application should be generally combined with an intermittent application, which produces particularly stimulating effects.

This brings us to a second point which we have to consider in using the current. Electro-physiology teaches us that the constant current is a powerful stimulant for all the different portions of the nervous system, and that these stimulating effects become more particularly developed where an intermittent application and voltaic alternatives are resorted to. Passes with the cathode, and voltaic alternatives in the metallic circuit, are, therefore, the necessary complement of catelectrotonus in cases where a powerfully stimulating effect upon certain portions of the nervous system is required.

The refreshing or restorative effects of the current may likewise be utilised in a variety of pathological conditions, particularly in cases of exhaustion of the several parts of the nervous and muscular systems, in consequence of over-exertion. The inverse current is more effective in these cases than the direct.

The electrolytic action of the current is unquestionably one of its most important properties. That such an action takes place during the percutaneous application of the current, is not only *a priori* probable, but is also definitively proved by the peculiar effects of the anode and cathode on the unbroken skin. For, if the cathode be armed with a metallic conductor, a small vesicle is formed which, after a time, projects considerably beyond the surface. Its contents are found to consist of layers of epidermis imbibed with serum, and are strongly alkaline. After a time, this serum assumes a brownish hue, and the vesicle is surrounded by an inflammatory areola. On the anode there is at first ischæmia, which is followed by the formation of a papule containing acid serum. The cathode is not altered, while the anode is oxidised. It is at present not settled what peculiar kind or influence the electrolytic effects of the current, when percutaneously applied, exert in therapeutics, nor in what classes of cases they are practically useful; but a persevering study of this difficult point will, no doubt, in course of time lead to scientific and practical results of the greatest importance.

Remak has called *catalytic effects* of the current those which are produced by direct stimulation of the vaso-motor nerves, which latter

transmit the influence to the blood-vessels and lymphatics. In this way the processes of nutrition throughout the system may be influenced by galvanisation. It appears to us that for catalysis we might substitute the more intelligible term of "catelectrotonus." By catelectrotonus of the vaso-motor nerves absorption is promoted, and effusions may thus be removed into the general circulation. Most probably the therapeutical effects of the current in rheumatism and rheumatic gout, in neuritis, in dropsy of the joints, etc., are owing to what may be called catalysis, or better catelectrotonus of the vaso-motor system of nerves. One of the best modes of utilising those effects of the current is, to resort to the proceedings known as "galvanisation of the cervical sympathetic nerve."

C. The mode in which faradisation acts is not nearly so complicated, and, therefore, much better understood. The faradic current is capable of disturbing the molecular equilibrium of the motor nerves and muscles, so as to produce the state in which they are physiologically active. This disturbance, if judiciously produced, tends to re-establish or to ameliorate the lost or impaired function of the motor nerves and muscles. The faradic current likewise allows the necessary alternate contraction and expansion of the muscles, without which their nutrition is soon seriously impaired, augments the oxidation of the contractile tissue, and causes a more abundant supply of arterial blood to it, which is evidenced by an increase of heat and bulk in the parts which have been faradised. In anæsthesia, hyperæsthesia, and spasm, faradisation acts in the same manner as static electricity, viz., by modifying the condition of the sentient nerves of the parts submitted to its influence.

We now proceed to cast a short glance on the diseases in which either galvanism or faradism may be employed with a fair chance of success.

In certain Disorders of the Mind both currents may do a great deal of good. Faradism is useful where anæsthesia, atony, and want of cerebral activity are prominent symptoms. Abulia and depression are by its means relieved, nervous energy is roused, and circulation improved. Its action on the skin is in many cases useful, as the function of that organ in lunatics is generally impaired, and often nearly lost. Faradisation appears chiefly suitable for apathy and stupor, but may also be employed for overcoming resistance and defiance, and may replace the strait-waistcoat and douche. It should not be used where there is increased excitability, or a high degree of irritable weakness; but chiefly in atony of the brain, depression, and paralysis of function. The stimulation of the diseased nerve-centres produced by faradisation is, of course, not a direct one, but owing to transmission of the faradic influence from the sentient nerves of the skin and the muscles to the brain and spinal cord. Faradism appears, therefore analogous in its action to cold baths, the douche, and other stimulating applications of cold water; in all cases where these answer, faradism will do good, and *vice versa*. It has, however, the advantage over those means of being more manageable and easily controllable in its action, while it is devoid of unpleasant consequences, as patients do not catch cold after it. Dr. Arndt, of Greifswald, who has gone more deeply into this subject than any previous observer, believes faradism to be equally important in the treatment of insanity with iron, quinine, and baths, and much more important than narcotics. He finds that the reason why up to the present time this subject has not been better worked up, is the circumstance that the applications have been unsystematic, and that alienists have not been sufficiently critical in their selection of cases for such a treatment.

The constant current will probably, in course of time, come to be very much employed in the treatment of certain forms of insanity. It has the advantage over faradism of having an immediate effect on the nervous centres; and it may be used both in states of depression and of excitability, catelectrotonus being suitable for the former, and anelectrotonus for the latter. Old cases and structural diseases will be found to resist its influence, while recent cases and functional diseases may be benefited by it.

Cerebral Exhaustion, without actual mental disease, is a complaint frequently met with now-a-days, and is generally owing more to functional derangement, and a bad performance of the finer processes of nutrition, than to structural disease. The condition of anæmia seems to be more prevalent in these cases than hyperæmia; and the almost invariable cause is, not hard work, but worry, anxiety, and affliction, in the middle-aged or the aged. The medical treatment of this affection often yields but unsatisfactory results; while the production of catelectrotonus of the suffering nervous centres is often rapidly successful. Even where symptoms of restlessness and irritability are prominent, these are generally owing to more impaired nutrition of brain-matter than to vascular excitement, and yield, therefore, more easily to catelectrotonus than to anelectrotonus. The results of the first few applications, however, must be decisive, and overrule any theoretical views we may have formed of

the nature of the case. Where catelectrotonus does not answer, or makes the patient worse, anelectrotonus should be substituted for it; and if the patient do not rapidly improve under either plan of treatment, the use of the current had better be given up.

It is, however, chiefly in the various forms of *Paralysis* that faradisation as well as galvanisation find a most legitimate and useful sphere of action. The constant current may be used soon after a paralytic stroke, whether this has been due to cerebral hæmorrhage, to softening, or to embolism of an important cerebral artery. It has been recommended by some recent authors to galvanise the brain and sympathetic nerve as early as seven or eight days after the attack; but we think it necessary to postpone the galvanic treatment until the danger of cerebral fever, which often follows an attack of hæmorrhage, should have passed off; and as this, if it occur at all, comes on in the second or at the commencement of the third week, the application of the current may be considered safe when from fourteen to eighteen days have elapsed since the occurrence of the attack. If we were to wait much longer, the prospects of ultimate recovery would be diminished. The application must be short and gentle; and it is at this stage sufficient to produce anelectrotonus of the injured hemisphere and the cervical sympathetic nerve. In cases where several months have elapsed since the occurrence of the attack, peripheral galvanisation or faradisation must be combined with the central application.

All kinds of paralysis may be benefited by a judicious use of the constant current, even where they are produced by poison in the system, such as lead, syphilis, and diphtheria; or by disease of the nervous centres and motor nerves. The prognosis, however, is always more favourable in recent cases, in the young, and where there is not much structural disease, than in the opposite conditions.

In *Spasmodic Diseases*, electricity is not nearly as valuable as in paralysis, with the only exception of chorea and scrivener's palsy, in which latter the constant current is our best remedy; but the treatment must, in such cases, be persevered with for a long time. In tetanus a few unquestionable successes have been obtained with it; but experience is still very limited in this particular. The production of anelectrotonus of the cord, however, appears a rational remedy for tetanus, and may be resorted to without hesitation.

That the various forms of electricity should be useful in two such apparently opposite conditions as *Anæsthesia* and *Hyperæsthesia*, seems at first singular; but it is explained partly by the circumstance that we may diminish as well as increase nervous excitability, *ad libitum*, according as we induce anelectrotonus or catelectrotonus; and partly by the therapeutical fact that many forms of hyperæsthesia require stimulating rather than depressing treatment. Dr. Anstie's researches on the pathology of neuralgia have been very suggestive in this respect, and point to the conclusion that catelectrotonus may be more effectual in the treatment of some forms of tic and sciatica than anelectrotonus.

In *Asphyxia* and *Syncope* from poisoning by chloroform, charcoal fumes, opium, from drowning etc., faradisation of the phrenic nerves is a ready and excellent measure. Farado-puncture of the heart may be used when the just-named proceeding does not answer. In puncturing the heart, we must take care to hit the apex of the organ, which bears injuries very well; and this may be accomplished by introducing a needle into the middle of the fifth left intercostal space, about one and a half inches from the left edge of the sternum. By acting in this way, the left pleura, the coronary arteries, and the internal mammary are avoided. The puncture should be made perpendicularly, and should be one and a half inches deep; in fat persons rather deeper than that. All unnecessary manipulations of the needle, more especially on taking hold of it when the heart's action recommences, should be carefully avoided. This needle is connected with the positive pole of the faradic apparatus, and a moistened sponge-conductor connected with the negative pole is placed over the pit of the stomach, or over the left seventh intercostal space. The current should be weak, and only act for a second at a time, then be interrupted and used again in a similar manner. Faradisation of the phrenic nerves is performed at the neck, where those nerves are accessible to the electrodes on the anterior surfaces of the scalenus anticus muscles. Moistened sponge-conductors are forcibly pressed for a second or two to the points named, when an artificial respiration is produced; the thorax is expanded, and the air rushes with force into the lungs. Expiration is then effected by pressing the abdominal parietes from below upwards. Faradism is then again applied to the phrenic nerves for a second or two, and again followed by mechanical expiration. It is also useful to faradise the motor nerves of those muscles which act in combination with the diaphragm, viz., the branches which proceed from the cervical plexus to the trapezius, levator scapulae, and serratus muscles.

In *Basedow's or Graves's Disease*, the chief symptoms of which are palpitation of the heart, enlargement of the thyroid body, and exoph-

thalmus, the proceeding known as galvanisation of the cervical sympathetic nerve has been successfully used.

In *Progressive Muscular Atrophy*, *Progressive Locomotor Ataxy*, and *Labio-glosso-pharyngeal Paralysis*, galvanisation of the diseased structures appears to be the most rational treatment. These diseases are rarely, if ever, cured by it; but their progress is generally arrested, and the patient's existence is rendered much more tolerable, especially if the current be used in the commencement of the affection.

In *Rheumatism* and *Rheumatic Gout*, and certain diseases of the digestive organs, owing to atony, faradisation and galvanisation may be employed with a fair chance of success. In paralysis of the bladder, impotency, and spermatorrhœa, chronic metritis, and stoppage of the lacteal secretion, both kinds of current have been frequently used with satisfactory results.

In *Surgery*, the galvanic current finds a continually widening field of action. The old ideas about dissolution of stone in the bladder by the aid of electricity, to which even so acute an observer as the late Dr. Bence Jones attached some importance, and other similar chimeras, have long receded into that obscurity from which they should never have emerged; but both the galvanic cautery and electrolysis have opened up vistas of an easier and more successful treatment of certain surgical affections than could be obtained by other means. The galvanic *écraseur* is chiefly used for removal of the tongue; and other forms of cauteries are employed for nævus, epithelioma, and similar growths. Electrolysis is apparently the only remedy which can be employed with some chance of success in intrathoracic aneurism; while in some forms of tumours, such as nævus, hydatids of the liver, lipoma, and cystic goitre, it seems to be superior to most other plans of treatment. It is by far the most effective remedy for the pain that accompanies cancerous affections; is useful in epithelioma, and may, in course of time perhaps, with improved methods of application, become an important remedy for the treatment of some other forms of external cancer, more especially in relapses after excision.

In *Midwifery*, faradisation is useful for troublesome forms of *post partum hæmorrhage*. It is unable to induce uterine action of itself, while it may increase it considerably after such action has once commenced.

A great deal might be written on *electric quackery*, which is nowadays most rampant. It will, however, be sufficient to say: "Beware of advertisements, and of medical galvanists without a diploma."

PRESENTATION OF A TESTIMONIAL PORTRAIT TO MR. SAMUEL HEY.

A SUBSCRIPTION portrait of Mr. Samuel Hey, painted by Mr. Sydney Hodges of London, to be placed in the Leeds Infirmary, was lately publicly presented to the governors.

MR. C. G. WHEELHOUSE, Senior Surgeon of the Infirmary, being called on, said that, having for a long time been aware that an earnest desire existed in the minds of many of his friends to possess a good portrait of Mr. Samuel Hey, it had been represented to him that he was the fit person to take the initiative in the matter. Mr. Hey was so widely beloved and revered, that it had been determined to limit the subscription to a small sum, and chiefly to his fellow-practitioners, and to old patients who claimed the privilege of being allowed to join. Notwithstanding this precaution, there was a surplus. He eulogised Mr. Hey as a practitioner, generous, kind-hearted, and considerate; as a consultant, in securing whose assistance all felt that the utmost had been done for the patient. Mr. Hey's reputation was indissolubly connected with the institution in which this faithful representation would henceforth find a place of features so heartily welcomed by very many in their time of trouble, as conveying assurances full of hope and comfort.

The CHAIRMAN expressed the pleasure with which the Board accepted the portrait.

MR. SAMUEL HEY said he could not adequately express his thanks for this graceful mode of perpetuating his connection with that beneficent institution. No doubt a portion of the lustre of the merits and labours of those who founded and carried on the duties of the charity, was reflected on all who take part in its working; and of this he reaped the benefit. If ever he wished an honour, it was such as his profession could give. He was infinitely indebted to Mr. Wheelhouse both for the initial action and the extreme delicacy he had observed throughout. The responses had recorded sundry virtues of which he was profoundly ignorant, and the declaration of which he could still only regard with considerable incredulity. Mr. Hey described at length his appreciation of the extreme happiness of a professional life in such a hospital as that: the intellectual interest of the studies involved; the varied gifts and experience of senior colleagues; their kindly recognition of a

junior as an equal; their forbearance and sympathising help for a long series of years; the kindness, delicacy, and attention of new colleagues, renewing the enthusiasm of his youth, adding fresh teachings to old experience, and so affording new interests and additional knowledge. The combined duty of teaching the rising generation brought benefits, it might be hoped, to them, ending in mutual affectionate remembrance. The gratitude of many patients for sorrow and suffering alleviated and cured was earned not by the sole performance of duty, but by heartfelt sympathy in suffering. There was a natural revulsion from the sight of pain. It was only high motives which kept them by the bedside in the hour of distress. "In conclusion," said Mr. Hey, "I will say no more than this, that I am convinced that, if we are all pervaded with simplicity of spirit, singleness of intention, and harmony and unison of feeling, our various offices, high or low, will work together for our great object—the succour of the afflicted in body or in soul. Once more I thank you."

Mr. Hey having resumed his seat amid much applause,

Mr. WHEELHOUSE said that, as Mr. Sydney Hodges had come from London for the purpose of painting the picture, and remained a fortnight in Leeds, he should suggest that, with the approval of the subscribers, the small balance remaining after paying all expenses should be handed over to that gentleman.

This proposition was carried *nem. con.*, and the meeting then separated.

CLUB PRACTICE.

WE would request the attention of gentlemen interested in this subject to the resolutions passed on the subject of Club Practice at the last meeting of the West Somerset Branch. They will be found in the next column; and we shall be happy to publish any suggestions on this subject which are likely to assist the Council of the Branch in their further deliberations.

THE BROWN INSTITUTION.

THE subject of the second and third lectures to be delivered by Dr. Burdon Sanderson at the theatre of the University of London, Burlington House, December 12th and 16th, will be Pyrexia, and its relation to the other Constituents of the Febrile State.

PART I.—Fever is not essentially a disorder of the nervous system. The neurotic theory of febrile pyrexia, viz., that fever has its original seat in the cerebro-spinal nervous system, and consists essentially of impairment of the function of an hypothetical heat-regulation centre. (Virchow, *Handbuch der Spec. Pathologie*, 1852, p. 37.) The essential effect of the theory is, that if it were true it would only account for the continuance of pyrexia, not for its existence. Supplementary theory of "trophic nerves." (Samuel, *Die trophischen Nerven*, 1869.) Recent vindication of the neurotic doctrine by Naunyn. (Beitr. zur Lehre von der fieberhaften Temperaturerhöhung, *Arch. für Pathologie*, Juli 1873.) Criticism of his arguments, a. Production of pyrexia in man by injury of the spinal cord in the cervical region. (Sir B. Brodie, *Med.-Chir. Trans.*, vol. xx, 1837). b. Comparison of the effects of injury of this part of the spinal cord in man with those observed in animals. c. Explanation of the loss of bodily temperature which follows the injury in small animals. d. Rise of temperature which occurs under the same circumstances in large animals.—Naunyn's explanation.—Reasons for adopting a different one. Certain cases of extreme pyrexia are neurotic, e.g., "hyperpyrexia" and "sunstroke." They cannot be identified with febrile pyrexia.

PART II.—Fever is not essentially a disorder of circulation. Physiological prolegomena. Arterial tonus: its variations under the influence of the vaso-motor nervous system. Law which governs these variations, viz.: that the arterial tonus is so adapted to the contracting power of the left ventricle as to secure the greatest possible effect in a given time, that it cannot be increased or diminished without diminution of velocity. Heidenhain's demonstration (1), that increase of arterial tonus does not, as was formerly supposed, retard the blood-stream, but accelerates it; (2), that acceleration of the circulation diminishes bodily temperature and *vice versa*. (Heidenhain, Ueber den Einfluss des vaso-motorischen Nervensystems auf den Kreislauf und die Körpertemperatur. *Pfäfer's Archiv*, iv, p. 77.) a. The increase of vascular tonus supposed to occur during rigor would, if it had any effect, tend to oppose the rise of bodily temperature. b. No effect as regards temperature can be attributed to the diminution of tonus in the subsequent stages of fever.

PART III.—Fever is not essentially a disorder of secretion. Examination of recent views and researches on the reaction of fever.

The subject of the fourth lecture (December 19th) will be "Bacteria and their influence on the organism in health and disease."

ASSOCIATION INTELLIGENCE.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

THE next meeting will be held at the Greyhound Hotel, Croydon, on Thursday, December 18th. Dr. Carpenter will take the Chair at 4 P.M. Papers, etc., are promised by Dr. Dukes, Dr. Parsons Smith, Dr. Adams, etc.

The dinner will take place at 6 P.M.

HENRY T. LANCHESTER, M.D., *Hon. Sec.*

Croydon, December 6th, 1873.

GLOUCESTERSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the County Infirmary, Gloucester, on Tuesday, November 25th. In the unavoidable absence of the President, Dr. RUMSEY of Cheltenham, Dr. SANKEY took the Chair.

The officers for the next year were elected.

Papers.—1. Dr. BOND, the Medical Officer of Health for this portion of the county, read a paper on Drinking Waters and their Impurities.

2. Dr. WILSON (Cheltenham) read a paper on the Value and Uses of Various Disinfectants.

Public Health.—The following resolution was adopted on the motion of Dr. BOND:

"That, in the opinion of this meeting, it is essential to the protection of the public health that all premises on which milk, butter, or cheese, are stored or made for sale, should be placed by law under the supervision of a medical officer of health, who shall have adequate powers to deal with such premises in case he shall consider their condition to be at any time prejudicial to health."

The members afterwards dined together at the Bell Hotel.

WEST SOMERSET BRANCH: AUTUMNAL MEETING.

THE Autumnal Meeting of this Branch was held at the Squirrel Hotel, Wellington, on Friday, November 7th, at five P.M. Fourteen members were present; GEORGE GILLET, Esq., of Taunton, President, in the chair.

Club Practice.—After dinner, the following question (of which due notice had been sent to each member of the Branch) was put from the chair: "Is Club Practice conducive to the interest and welfare of the Profession?" The Secretary read letters from Messrs. J. B. Collyns, J. Cornwall, H. B. Hurman, and E. Stephens (who were unable to come to the meeting); the purport of the letters being to return a negative answer to the question. The responses of the gentlemen present were then given *seriatim*; they were of a very varied and interesting character, as the question was approached from different points of view. The good and the evil, the use and the abuse of clubs, were descanted on; and, as at present conducted, club practice was unanimously disapproved of. A strong feeling was expressed by some speakers that clubs should be abolished, and the provident dispensary system substituted; but, after a long and animated discussion, the following resolutions were passed. 1. That club practice, as at present paid for, is not conducive to the interest and welfare of the profession, but that if proper rules for preventing the abuse of clubs and provident societies were insisted upon by medical men, such institutions are not to be condemned by the profession. 2. That with a view to arriving at some practical conclusion on this subject, the Council be requested to take into their consideration the question of club practice, and to frame such rules as they may consider appropriate, for preventing the abuse of clubs and provident societies, and generally for giving effect to the preceding resolution; and, as soon as they can conveniently do so, to report the same to a general meeting of the Branch.

Inversion of the Uterus.—Mr. G. R. NORRIS, of Wiveliscombe, read a paper on a case of acute inversion of the uterus, which led to a short discussion.

Public Health Act, 1872.—Dr. H. J. ALFORD, officer of health for the sanitary district of Taunton and the Taunton Union, read a paper

"On certain shortcomings in the practical working of the Public Health Act, 1872," for which he received the thanks of the meeting.

Charity Elections.—The PRESIDENT, after commenting on this subject, moved the following resolution, which, being strongly supported by Mr. Winterbotham, was put to the meeting and adopted *unm. con.*

—That the present mode of canvassing for elections to charities is most objectionable, from the most destitute not having the means or ability to canvass with the same success as those who have greater means at their disposal, and in the opinion of this meeting such elections would be better managed by a committee.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 25TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

A CASE OF RENAL CALCULI. BY SAMUEL GEE, M.D.

THIS was a case of calculous disease of both kidneys, in a man who had suffered from gout. In the pelvis of the right kidney there were found—(1) a great stone, weighing 36½ ounces; (2) eight smaller stones, each larger than a cherry-stone, weighing from 19 grains to 50 grains; (3) about a thousand flattened stones, like melon-seeds in shape; (4) a large quantity of gravel. In the pelvis of the left kidney was found a stone weighing 9½ ounces. The chemical composition of the greater part of the large stones, and of the smaller stones and the grit, was phosphate of magnesia and ammonia, nearly pure. The large stone had a nucleus of oxalate of lime, phosphate of magnesia, carbonate of lime, and uric acid.

The PRESIDENT said that a remarkable point in this case was the generally healthy condition of the body.—Mr. CHARLES HAWKINS believed that the condition described originated from the lodgment of a calculus in the ureter. He had removed a mass of uric acid and oxalate of lime calculi, coated with phosphates, from the pelvis of the kidney of a person who had felt but little discomfort during life. He did not think that albuminuria would occur so long as the other kidney acted. A stone retained in the pelvis of the kidney would be liable to phosphatic deposit just as in the bladder.—Mr. ARNOTT said that, four or five years ago, Dr. Murchison showed a very large stone at a meeting of the Pathological Society. The patient, a man aged between 50 and 60, had passed crystallised cholesterine in his urine. He had had a fall when a child, and since then hæmaturia had occurred from time to time. After death, there was found to be a large abscess in one kidney and a large calculus in the other. He believed that it was not detected during life.—Mr. FAIRLIE CLARKE asked Dr. Gee whether there was a stone in the bladder. The removal of calculi from the kidneys had been proposed as long ago as the time of Hippocrates, and the operation had been occasionally performed.—Mr. THOMAS SMITH said that Dr. Gee's case was diagnosed as one of scirrhous disease of the kidney, and, therefore, an operation was not thought of.—Mr. BARWELL asked what was the immediate cause of death.—Dr. GEE said that he did not see the case during life. The patient was only a short time in the hospital. He did not know whether the patient had passed blood in his urine, or had had any symptoms of the passage of a calculus along the ureter. He thought that the opinion as to cancer was mere hearsay, rather than a positive diagnosis. There was no stone in the bladder. He could not say with certainty what was the cause of death.

CASE OF FATTY DEGENERATION OF THE CONTRACTILE TISSUE OF THE UTERUS, WITH SOME REMARKS ON THE NATURE OF THE CAULIFLOWER EXCRESCENCE OF THE OS UTERI. BY T. SNOW BECK, M.D. LOND., F.R.S.

(Communicated by Sir WM. JENNER, Bart., M.D., D.C.L., F.R.S.)

The following case was first seen in October, 1871. A spinster, aged 59, without any appreciable alteration in her previous good health, and in whom the catamenia had ceased for nine years, was suddenly seized with a gush of blood from the vagina, with much thick, slightly yellow-coloured discharge. This discharge, always worse at night, gradually increased, and became very copious. At first it was thin, serous, and slightly yellow-coloured; afterwards it became whitish, slightly yellow or greenish, without any offensive odour until it had existed for about three years. During the fourth year, and especially towards the end, it became very offensive. This discharge was accompanied, at uncertain intervals, with an escape of blood, sometimes so slight as only to colour the discharge red, at other times accompanied by the formation of small coagula. Three or four times, a considerable amount of blood was lost, and, towards the last, severe hæmorrhage occurred. But, from the first

to the last, there was neither ache nor pain. The appetite became impaired, and ultimately extinguished; the tongue red, coated, and tremulous; the bowels were always constipated; she had pains at the epigastrium after eating, much flatulency, frequent sickness, distressing hot flushes, occasional giddiness, and sleepless nights. There was comparatively little loss of flesh, and nothing in the general appearance to indicate the presence of serious disease. After the affection had existed for three years, the lips of the uterus were found swollen, the external orifice open to admit the end of the finger, and several small fleshy prominences a little within it which freely poured out blood, of an arterial character, on the slight pressure of the finger during examination. A month later, the soft growths protruded through the external orifice; and, three months later, the upper part of the vagina was filled with a soft pulpy mass, much resembling, to the touch, the foetal portion of the placenta. The woman became weaker, and died, four years after the first indication of the disease, by a sudden gush of blood from the vagina.

In the examination after death, the uterus was found somewhat enlarged, and the cavities filled with a soft shaggy tissue, which hung down, for about an inch and a half, into the upper part of the vagina, and filled this portion of the canal. With the exception of a thin shell at the fundus, the whole of the contractile or muscular tissue of the uterus was converted into the soft shaggy tissue, which ceased abruptly at the external orifice where the vagina begins. With the aid of the microscope, the contractile fibre-cells at the fundus were seen slightly altered; lower down, they contained, in their substance, a varying amount of fat-globules; still lower down, all form of the contractile fibre-cell was lost, and, instead, collections of large-sized fat-globules mixed with diffluent tissue were seen; and, at the lowest portion, it consisted of structureless diffluent tissue mixed with numerous and various-sized fat-globules.

The symptoms in this case closely resembled those given by Sir Charles M. Clarke as indicating the presence of cauliflower excrescence of the os uteri, yet differed from them in some material points. Cauliflower excrescence was described as being attached to the surface of the os uteri—never extending into the cavity of the uterus—being sometimes so large as to fill the vagina and project through the labia, when it was of a bright flesh colour. It might be completely cured by excision, or even by the assiduous use of local astringents, and had proved fatal at the early age of 20; whilst, in the case recorded, the disease was essentially one involving the cavity of the uterus, was most probably incurable, and probably only met with after the middle period of life.

The preparation of cauliflower excrescence of the os uteri preserved in the Museum of the Royal College of Physicians, presented by Sir Charles M. Clarke in 1829, was examined. This preparation was found to be one of those villous growths which spring from the surface of mucous membranes, well known under the name of "papilloma." Cauliflower excrescence of the os uteri, as shown in this preparation, was essentially distinct from the fatty degeneration of the contractile tissue in the previous case, and also distinct from any forms of malignant disease. Cauliflower excrescence consisting, in the words of Professor Rindfleisch, "of a number of arborescent groups of villi, and of nothing else;" and "having nothing whatever to do with cancer." (*Manual of Pathological Histology*, p. 454.)

A case of cauliflower excrescence of the os uteri recorded by Sir James Y. Simpson was referred to; also seven cases reported under the name of cauliflower excrescence by Dr. Braxton Hicks. (*Guy's Hospital Reports*, vol. vii, p. 245.) But those cases recorded by Dr. Hicks did not present any of the characteristic symptoms of cauliflower excrescence, and were examples, not unfrequently met with, of "encephalomatous," and other malignant diseases of the lower portion of the uterus, attended with the usual severe pains and offensive discharge of these diseases.

Mr. ARNOTT had, during the last year, seen two or three cases of cauliflower excrescence, and had found only villous outgrowths. After the preparation had been kept in spirit, the epithelium became shed, leaving the villi with oval nuclei. He thought that the confusion as to the malignancy, or not, of cauliflower excrescence was explained by the fact that, in some malignant affections of the cervix uteri, the mucous membrane threw out villous processes.—Dr. ROUTH thought that the case described by Sir Charles Clarke was not one of cauliflower excrescence, because hardness is generally felt at the base of the growth and around it. He had never seen a case of the kind described by Sir Charles Clarke. In the case of ordinary mucous growths from the interior of the uterus, something like cauliflower excrescence was at first felt; and there might be gushes of fluid. The same might also occur in hydatidiform degeneration of the placenta. As to the treatment of cauliflower excrescence, removal by the scissors was proper; and he was sure that many cases of epithelioma, not seated too high up, were quite

amenable to cutting or breaking down with the finger, and destroying the base of the growth by bromine or chloride of zinc. He asked why Dr. Beck did not dilate the os uteri by means of sponge-tents, and apply caustics. Remarkable effects sometimes followed the use of astringents; but they could not reach the uterus if they were merely injected into the vagina.—Dr. SNOW BECK had recorded the case simply as an unique one, as far as he could learn. No treatment was adopted, as the case was regarded as hopeless; and the hæmorrhage was not so great as to call for treatment. The preparation in the Museum of the College of Physicians was evidently a papilloma; but whether all cases of the so-called cauliflower excrescence were of this nature, he could not say. The entire absence of pain in his case showed that it was not cancerous.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 3RD, 1873.

Sir WILLIAM JENNER, Bart., K.C.B., M.D., President, in the Chair.

THE report on Dr. DOWSE'S specimen by Dr. George Harley and Dr. Powell was read; the conclusion being that the cricoid cartilage had become ossified, a portion having become necrosed and detached.

Necrosis of Lower Jaw.—Mr. WARE TAY exhibited a boy, aged 4, in whom nearly the whole of the lower jaw, with the exception of the coronoid process and condyle of the right side, had been removed by operation, new bone having been reproduced. The patient was seen as an out-patient at the North-Eastern Children's Hospital by Dr. Cayley. He was supposed to have received some injury, although there was no evidence of it. He had diarrhoea, and typhoid fever was suspected; but bronchitis was the prominent symptom. After attending for three weeks he improved; then ulceration of the gums over the lower jaw ensued, and he was admitted. A considerable portion of the jaw became exposed, the gum slipped away, and the teeth were picked out, some of them by himself. The jaw became dry and black, but still the patient could eat crusts, and his general health was good. At the end of five months, new bone was found to be forming underneath the necrosed portion; and when this latter seemed quite loose, it was removed. The specimen was exhibited and comprised nearly the whole of the lower jaw. The wound healed within two weeks, and the patient now was in good health, and had fair power of mastication. Mr. Holmes, in his work on *Surgery*, refers to this condition as occurring from the influence of phosphorus in match-makers, from sucking halfpence, or resulting from cachexia, a sequel of the exanthemata. Mr. Bryant mentions two cases.—Mr. MAUNDER stated that, about three years ago, he removed a large portion of the jaw from a girl suffering from myeloid tumour, where the periosteum was preserved, but no new bone beyond a mere thin scale was reproduced. In another case, in a female aged 32, no new bone was formed, though the periosteum was preserved.

Softening (Enchondroma).—Mr. NUNN exhibited a large tumour of the pectoral region in a woman. It had been forming about eighteen months, and, when seen, looked like a cystic tumour of the breast. It was tapped, and fluid containing compound granular cells was drawn off. At the examination it resembled colloid, but was found to be enchondroma. The mammary gland was quite free, and was not involved, being separated from the growth by fascia and the pectoral muscle.—Mr. M. BECK said the patient had presented herself at University College Hospital, and the tumour was diagnosed to be softening enchondroma, from a microscopic examination of the fluid, which was very thick and tenacious, containing fatty cells.—Dr. CAYLEY stated it was soft and gelatinous matter.

Lymphoma infiltrating the Trachea: Tracheotomy performed twice.—Mr. ANDREW CLARK exhibited the larynx of a patient aged 25, who was in good health until nine months ago, when she had pain and swelling in the neck, with occasional dyspnoea. There was an enlargement of the size of a child's fist. The thyroid gland was also enlarged. It diminished in size, under lead-ointment, and the dyspnoea became less frequent. On July 10th, she was admitted into the Middlesex Hospital with severe dyspnoea; this was relieved by warmth, stimulants, and the application of ointment of mercury and opium. She had a return of the dyspnoea, and became livid and pulseless. Tracheotomy was performed with some difficulty. The patient was discharged as convalescent on October 3rd, the tumour having nearly disappeared. Three weeks afterwards, dyspnoea returned; and she was readmitted with acute bronchitis. Tracheotomy was again performed, but the patient died. At the necropsy, there was no external evidence of enlargement. The tumour sprang from the third ring of the trachea. The mucous surface of the larynx was studded with small tumours. There was no trace of the isthmus of the thyroid body, and no evidence of pressure on the

trachea to explain the dyspnoea. A section under the microscope presented the usual appearances of lymphoma.

Pouches in Peritoneum giving occasion to Hernia.—Dr. PAYNE exhibited a specimen removed from a woman, who died irrespectively of this condition. The pouches were between the ascending colon and the abdominal wall. There was no obstruction in this case, though they were filled with coils of the ileum. It was a malformation, not a disease, and was not unfrequent.

Thickening of Pulmonary Artery.—Dr. PAYNE showed a specimen where the right lower lobe of the lung was found to be solidified and hepatised, in a manner differing from pneumonic consolidation. The whole of the branches of the pulmonary artery proceeding to that part of the lung had their coats considerably thickened, especially the outer coat. The material by which this was effected was greenish, translucent, and fibroid-looking in some parts, yellow and more opaque, like recent syphilitic gumma. There was no evidence of chronic disease, and no information as regards syphilis. There was solid fibrous material blocking up the air-cells, as in pneumonia.—Dr. PYE-SMITH stated that in the *Archiv für Syphilis* there was a description of this condition.—Dr. GREEN suggested that it might be thickening of the pleura from chronic pleurisy, or thickening of the alveolar walls; the appearance of the lung being that of chronic pneumonia.—Dr. POWELL stated that almost all the arteries visible were blocked up by clot. It was a question whether the bronchial vessels were thickened. The pulmonary artery became thickened in chronic pneumonia.—Dr. PAYNE, in reply, stated that there was a good deal of general induration of the lung, chiefly in the outer parts towards the surface. There were no particular or special marks of pleurisy. It was different from chronic fibroid pneumonia. On section, there was no trace of degeneration of clot; and there did not seem to be any thickening of the bronchial tubes.

Sclerosis of the Spinal Cord.—Dr. LOCKHART CLARKE exhibited a specimen where the blood-vessels seemed to be destroyed, and compound granular cells alone left; this was chiefly in the posterior, but also in the lateral columns. There was extensive disease of the grey substance. The symptoms had been gradual paralysis, with stiff contraction of the upper limbs extending over two or three years. There was no cerebral sclerosis.—Dr. DOWSE had just examined a case (*post mortem*) of a patient aged 45, where the intellect had been previously dull, phthisis being the cause of death. The arachnoid was closely united to the pia mater, there being sero-sanguinolent matter between. The sulci of the brain were not of the normal depth; the grey matter covering the whole of the hemispheres could be peeled off like the bark of a tree, the brain-substance being itself like dough.—Dr. PAYNE had lately met with a case where a woman was brought in almost moribund, and died of a bed-sore. She was said to have dislocated her hip only a few weeks before.

Large Abscess of Liver without Ulceration of Intestines.—Dr. R. KING exhibited the liver and intestines of a man, aged 50, whose previous health had been good. Very little was known of his history. He had bronchitis, and had not been strong since; but it was only during the ten days preceding his death that he complained of great weakness and pain in the epigastrium, and became emaciated, not eating scarcely anything for weeks. There was tenderness over the liver, no bulging or fluctuation detected, no trace of albuminuria. He had a rigor; the temperature rose to 103.4; respirations, 28; pulse, 112. The urine became scanty, the surface cold, the face and extremities livid, and death ensued. On a *post mortem* examination, there was found to be general enlargement of the whole liver (which weighed 5 lbs.); especially the right lobe, which bulged out. On section, thick green pus exuded from a large abscess which was about a quarter of an inch from the surface.

Sarcoma of Omentum in a Child, aged four years.—Mr. ARNOTT narrated a case in which hardness and fulness of the abdomen had been noticed. On examination, there was dullness and increased resistance over an area about the size of an orange, but no pain or tenderness. It was thought it might be the early stage of tabes mesenterica, or possibly fecal accumulation. Near the umbilicus there was a secondary sarcomatous-looking nodule. There was no wasting or diarrhoea. He was admitted into St. Thomas's Hospital, and remained under observation for a month; running about the ward, apparently with little the matter with him, looking pale and languid occasionally. On July 10, there was found to be a mass occupying the greater portion of the abdomen, dull, elastic, lobulated, free from tenderness. On July 20, there were symptoms of sudden collapse and sickness, tenderness of the abdomen, heat of skin, temperature 103.5; perspiration and exhaustion. The right testicle was noticed to be enlarged. The *post mortem* examination was made by Dr. Payne. The abdomen was distended; there was a mass of the size of a cricket-ball; the transverse colon was involved by

the mass, perforation into the gut having taken place. It was soft, white, opaque, and medullary in character. The mesenteric glands were also affected. The liver contained a very similar tumour. The epididymis was also enlarged. The case was instructive, as exemplifying the importance of pathological investigation in the diagnosis of disease; the small nodule externally having led to the diagnosis of serious abdominal disease.

Rare Form of Oxalate of Lime Calculus.—Mr. MORRANT BAKER showed a specimen, of the size of a small marble, of pure crystals. The symptoms had existed for six years. The patient had frequently been sounded, but no calculus detected. At the operation, after its removal, a small pouch or projection of the mucous membrane at the left ureter was detected, in which the calculus had probably lodged. There was no phosphatic deposit on its surface, it had not therefore probably been long in the bladder. There were only three specimens in the museum of the College of Surgeons, which rivalled this, but did not equal it. There was also one in St. Bartholomew's Hospital.

Disseminated Nodular Growths in Liver: Tuberculosis of Lung.—Mr. COUPLAND showed a specimen removed from a patient who had suffered from ascites and cough. He had been a hard drinker, but there was no history of syphilis. It was believed at first to be cancerous peritonitis. The abdomen was found to be full of fluid; the peritoneum thickened and opaque. The liver weighed fifty ounces; it was slightly granular on the surface. On section, prominent white nodules were seen; it was in the early stage of cirrhosis. The mesenteric glands were enlarged and opaque on section, being granular and amorphous within. There were cretified masses of tubercle in both apices. It was a question whether the nodules were syphilitic or tuberculous. In favour of the former view, the nuclear growth extended into the neighbouring tissue. There was an absence of softening, and also of vessels in the growths. Referred.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, NOVEMBER 29TH, 1873.

GEORGE H. KIDD, M.D., President, in the Chair.

The late Professor R. W. Smith.—Before the business of the meeting was proceeded with, the PRESIDENT, in a few words, commented on the irreparable loss sustained by the Society in the removal by death of one of its founders, Professor Robert William Smith. From its origin in the year 1838, Dr. Smith had been the Society's warmest friend, and through all the intervening years he had acted as its Secretary. His last public work was the editing of the *Transactions* of the past year—a task which he might be said to have performed upon his death-bed.

Medullary Cancer.—Dr. BARTON showed specimens from the body of a woman aged 24. About two years ago a small tumour appeared at the external end of the left clavicle. This soon became the seat of a darting pain. In time the swelling increased to the size of an orange, and the skin above it assumed a dark purple colour. The appetite remained good and the circulation quiet (pulse 80). Enlarged glands were noticed in the neck, but the patient had suffered from cervical abscess when a child. The tumour subsequently lessened in size by at least one-half; but early in October of the present year it took on a more rapid growth, and she was readmitted to hospital. The tumour was now as large as a cocoa-nut; the right arm was powerless, and the head and upper third of the right humerus were found enlarged. The patient died on November 11th. The left lung was carcinified. The tumour, an example of medullary cancer, encroached upon it and into the anterior mediastinum. Miliary cancer was extensively deposited in both lungs. The right shoulder-joint was healthy, but the shaft of the humerus below the tuberosity was infiltrated with cancerous matter, was brittle, and readily broke across.

Enteric Fever: High Temperatures: Hemorrhage.—Dr. MOORE exhibited the ileum of a girl, aged 21, admitted to Sir P. Dun's hospital, October 21st, 1873, on the eighth day of enteric fever. The axillary temperature was then 105.5 deg. It remained very high until the thirteenth day, when hemorrhage to the amount of nearly thirty ounces took place, the temperature immediately falling 5 deg. At no period was there any eruption. Before death the temperature rose to 108 deg. The ulceration of the intestine was very remarkable, and the base of one ulcer had almost penetrated the peritoneum.

Ovarian Cyst.—Mr. PORTER showed an enormous cyst which he had removed on the preceding day from an unmarried woman, aged 23. It presented no malignant character, and contained 210 ounces of ordinary ovarian fluid, weighing when emptied after removal 1 lb. 15 ozs. The prominence caused by the cyst was first noticed on the right side fifteen months before.

Tram-Car Accident.—Mr. PORTER presented the bones of the lower extremity of a boy, aged about 13, who had been knocked down and injured by a tram-car. The muscular structures had been torn into ribbons, the wheel having passed down the long axis of the limb; the os calcis was fractured, the epiphysis at the lower end of the femur was separated, and a fracture ran between the condyles of the same bone.

Subject for the Society's Gold Medal.—The PRESIDENT announced that the subject, selected by the Council for competition for the Society's Gold Medal, to be awarded at the close of the session, was "Injuries and Diseases of the Articular Cartilages."

Election of Officers.—The following office-bearers for the session, 1873-74, were elected. *President*: R. D. Lyons, M.D. *Vice-Presidents*: R. Adams, M.D.; Sir D. J. Corrigan, Bart., M.D., M.P.; G. H. Kidd, M.D.; J. Denham, M.D.; G. H. Porter, M.D.; H. Kennedy, M.B. *Council*: A. W. Foot, M.D.; J. M. Purser, M.B.; B. G. MacDowel, M.D.; T. Hayden, L.K.Q.C.P.I.; J. H. Wharton, M.B.; W. Stokes, jun., M.D.; S. Gordon, M.B.; J. Little, M.D.; J. T. Banks, M.D.; H. H. Head, M.D.; W. Moore, M.D.; J. Tufnell, F.R.C.S.I. *Honorary Secretary*: W. Stokes, jun., M.D. *Secretary and Treasurer*: E. H. Bennett, M.D. *Secretary for Foreign Correspondence*: R. McDonnell, M.D.

Vote of Thanks.—Dr. KIDD having left the Chair, and Dr. LYONS, the new President, having taken the same, a vote of thanks to the outgoing President was proposed by Dr. JAMES LITTLE, and seconded by Dr. R. McDONNELL, and carried unanimously. Dr. KIDD returned thanks.

CORRESPONDENCE.

THE ASHANTEE WAR.

SIR,—The friends and relatives of the soldiers and sailors and others now employed on the Western Coast of Africa, will peruse with much comfort and satisfaction the following important extract from Sir Garnet Wolseley's last report, dated from Government House, Cape Coast, November 5th, 1873, and just received in this country.

"I am withdrawing from Abacampa the 50 Marines and Blue Jackets who, after nearly a fortnight on shore, are in excellent health and spirits, not one having been reported sick—a fact which proves once more how possible it is for European troops to be safely employed, under proper conditions, in this country, and how much healthier are the inland stations than the posts upon the coast."

As there can be little doubt that this well-timed opinion of Sir Garnet Wolseley will be fully corroborated by numerous persons competent to do so, I think it may not be an inopportune moment to direct attention to the wide difference that exists between the fevers generated by malaria and those commonly known as contagious fevers. An assurance put forth by the highest medical authority (the medical press), that the former class of fevers may be readily avoided by taking ordinary precautions, and that the visitation of the latter pestilences are happily few and far between, could not fail to be highly encouraging to the gallant men employed in this African expedition, and inspire with a trusting, hopeful, cheering confidence the numerous affectionate friends they have left at home in England.

The malaria of uncleared forests is well known to be endemic, or of a purely local character, clinging tenaciously to the place where it is generated, and not diffusing its poisonous material to any considerable distance. It is highly injurious to the health of strangers to the locality, white men especially, if they sleep or remain, under certain conditions, long exposed to its baneful influence; these conditions being over-fatigue, sudden variations of temperature, scanty supplies of food, and impure or insufficient water, all of which may be more or less provided against. The fevers that prevail in malarious districts are not, as a rule, primarily contagious; but they become so by a change of type, when masses of persons are herded together, and exposure and privations unduly prolonged. These fevers are generally sporadic, and attack pre-disposed individuals, not unfrequently in considerable numbers, though healthy people travelling rapidly over the same district may do so with perfect impunity, and neither become infected themselves nor infect others when they have accomplished their journey. In this respect, they differ materially from those which are commonly known as contagious fevers, cholera, or small-pox.

The railways from New York to San Francisco must pass through districts infected with malaria repeatedly in the course of their transit, and similar railways traversing India must also have been subjected to the same influence. On no occasion, however, has it been verified that

the passengers have suffered detention or isolation. An interesting sanitary problem can, therefore, be most effectually tested by the expedition under Sir Garnet Wolseley in the operations connected with the Ashantee War, viz., the practicability of using artillery to drive avenues through the bush, forest, scrub, or jungle, and levelling the *débris* produced by its fire and forming it into a good military road. This road could be readily converted into a railway hereafter at pleasure, the rough work for such an undertaking being easily performed by natives, of whom the neutral tribes could furnish an ample supply.

It would be a matter of the deepest regret if this grand opportunity were lost of putting to the test the power of artillery to clear the jungle or the forest, and make it the *pathfinder through the bush*. The explosion of heavy charges of gunpowder, the combustion of its component parts, and the velocity of heavy missiles traversing in rapid succession through a district highly charged with malaria, by their combined action on the surrounding atmosphere, could not fail to dissipate its poisonous influence, and, for a moderate time, at any rate, render it innocuous to those employed in its vicinity. The suggestive hints on the best mode of attacking malaria in its densest and most impenetrable stronghold are submitted very deferentially to the military and engineering partners in the triple alliance of soldiers, engineers, and doctors.

I am, etc., JAMES BIRD.

ATTEMPTED SUICIDE.

SIR,—From the remarks which appeared in the JOURNAL of December 6th, with regard to the case of a man charged with an attempt to drown himself, which was recently brought before the magistrate of the Lambeth Police Court, I find you have been informed as to a portion only of the facts. It is due to the house-surgeon to state that he has been acquitted both of inhumanity and of carelessness. At the most, he was guilty of an error of judgment in giving way to the urgent desire of the policeman in charge to remove the patient to the police-station. House-surgeons do not always know their powers in these matters, or a peremptory refusal to allow the removal of the patient until later in the day would have prevented the occurrence.

I am, etc., GEORGE COWELL,

Dean of the Westminster Hospital Medical School.
Westminster Hospital, Dec. 10th, 1873.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

NOTES ON REPORTS OF MEDICAL OFFICERS OF HEALTH, 1873.

HOLBORN.—In presenting his report on the sanitary condition of the Holborn district during the past year to the Board of Works, Dr. Septimus Gibbon states that, notwithstanding an increase of population, which had raised the number of residents per acre from 392 to 410 in ten years, the state of public health had been unusually satisfactory. After making the necessary corrections for those dying in hospitals and workhouses, the death-rate was 21.95 per 1,000, as opposed to 24.25 for the previous year. The rainfall was 30 inches, the mean temperature 2.2 deg. Fahr. above the average, and complete saturation of the atmosphere, with moisture being represented by 100 degrees; the mean amount of humidity amounted to an ordinary average of 82 degrees. The only diseases which prevailed in an epidemic form were measles and whooping-cough. Viewing the infantile death-rate of a locality as the surest and most delicate test of its salubrity, Dr. Gibbon refers with pleasure to its gradual diminution in his district; and he specially notes that, whereas four years ago one child under five years of age died for every 2.29 that were born, only one died for every 2.87 born during the past year. The pauper sickness returns for the year exhibit a diminution under the head of all diseases, except syphilis and congenital syphilis; and advantage is taken of this circumstance by Dr. Gibbon to point out the large amount of damage which syphilis does to the population, and how this disease, according to Sir Thomas Watson, "counts its victims not only amongst the vicious and self-indulgent, but amongst virtuous women and innocent children." He expresses the opinion that it is the duty of the legislature to limit as far as possible the prevalence of a disease of such a character; and, after pointing out the valuable results which have attended the application of the Contagious Diseases Acts to certain naval and military stations, he hopes that these Acts will not only be maintained where they are now in force, but

will ultimately be extended to all large cities and communities. The report concludes with a series of statistical tables and a summary of sanitary work performed, including an account of action taken under the Artisans and Labourers' Dwellings Act, which resulted in the demolition of some houses which were unfit for human habitation, and the thorough repair of others.

MOUNTAIN ASH.—Mr. E. W. S. Davis, the medical officer of health for the Mountain Ash Local Board district, reports a mortality at the rate of 25 per 1000 per annum during the past quarter. In the Llanwanno portion of the district the mortality had been greatest, and pulmonary affections were frequent. This is, to a great extent, attributed to the wetness of the soil and air, consequent upon the marshy character of the valley about Abercwmboy and the overflowing of the river, added to which the changes of temperature are frequent and sudden. Mr. Davis informs the authority that enteric fever, which exists in Aberdare, appears to be approaching the Mountain Ash district, and he urges that the local unsanitary conditions, which favour the spread of that disease, should receive immediate attention.

SALE.—Dr. Renshaw reports a mortality, at the rate of 18.55 per 1000 per annum, in Sale during the quarter ending Michaelmas last, and he draws the attention of the Local Board of Health to the principal unsanitary conditions which have come under his notice. One of the remedies proposed is the thorough draining of the ash-pits; but, as we have before pointed out, middens should be so constructed as to exclude rainfall and slop-water, and, under these circumstances, drainage becomes unnecessary, for the contents are kept dry, decomposition is retarded, and both nuisance and injury to health are avoided. The Local Board have themselves recently undertaken the removal of all night-soil and refuse from premises, because the work was in Sale, as elsewhere, never efficiently performed by contractors. The change, as might have been anticipated, is stated to have operated beneficially.

STROUD.—Mr. Partridge, the newly-appointed medical officer of health for Stroud, reports that, after a preliminary inspection of the district, he has found numerous circumstances, the prevalence of which tend to increase mortality and to favour the spread of infectious diseases. The town water-supply is insufficient for the requirements of the population, and hence not only is cleanliness neglected, but drains and closets are inefficiently cleansed and flushed. Some of the water-supply is derived from wells, which, being sunk in a polluted soil, contain contents which cannot be used without risk to health and life. The neglect to remove refuse from premises leads, in certain parts, to a pollution of the atmosphere which seriously affects the inmates of neighbouring houses. After receiving Mr. Partridge's report, the Local Board expressed their intention of dealing with the matters brought under their notice, and instructions were at once given to that effect.

THE PUBLIC HEALTH ACT.

PROPOSED APPOINTMENTS.

THE declaration lately published by the members of the medical profession practising in Derby, protesting against the offer of so paltry a sum as £20 a year for the services of a medical officer of health, has so far been attended with the desired result. No one, we are glad to say, has made any application for the appointment, and, for the present, the matter appears to be at a standstill.

At a meeting of sanitary authorities held at Crewe, it has been determined to appoint a medical officer of health, at a salary of £800 a year, for the Altrincham, Congleton, Nantwich, and Northwich unions, and the Sandbach, Nantwich, Northwich, Middlewich, and Witton Local Board districts. The appointment, which, in the first instance, is to be made for two years only, is to be subject to the regulations and approval of the Local Government Board. A resolution was proposed at the meeting, to the effect that candidates must be medical men who have hitherto not practised in any portion of the proposed district; but it was very properly negatived.

THE township of Ashton-on-Mersey has determined to apply to the Local Government Board for power to adopt the Local Government Act. If, however, the grounds on which the application is to be made be those which formed the subject of debate at a recent meeting where the resolution was come to, we fear that the step proposed is not to be taken with a view to real sanitary progress; for its adoption has evidently been due to the alarm felt in the township at the proceedings which have recently been taken by the rural sanitary authority, and which are preliminary to the provision of a proper system of drainage for the place.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1873. Pass List.

First Division.

Addy, Boughton, St. Thomas's Hospital
Barlow, Thomas, B.Sc., University College
Benham, Henry James, University College
Bird, Cuthbert Hilton Golding, B.A., Guy's Hospital
Bomford, Gerald, King's College
Cockburn, John Alexander, King's College
Colgate, Henry, University College
Coupland, Sidney, University College and Middlesex Hospital
Dodson, Andrew, Birmingham and Guy's Hospital
Dyson, William, B.A., University College
Firth, Charles, St. Bartholomew's Hospital
Harvey, Charles William, University College
Petch, Richard, King's College
Pope, Harry Campbell, Liverpool Royal Infirmary and University College
Railton, Thomas Carleton, Manchester and St. Bartholomew's Hospital
Rayne, Charles Alfred, University College
Skerritt, Edward Markham, B.A., University College

Second Division.

Appleyard, John, University College
Raber, Edward Cresswell, St. George's Hospital
Bindley, Philip Henry, University College
Cornelius, Walter Bernard, University College
Lewtas, John, University of Edinburgh

Examination for Honours.—Medicine.

First Class.

Addy, Boughton (Gold Medal), St. Thomas's Hospital
Skerritt, Edward Markham, B.A. (Gold Medal), University College } equal
Dodson, Andrew, Birmingham and Guy's Hospital
Cockburn, John Alexander, King's College
Barlow, Thomas, B.Sc., University College } equal
Benham, Henry James, University College }

Second Class.

Coupland, Sidney, University College and Middlesex Hospital
Rayne, Charles Alfred, University College

Third Class.

Dyson, William, B.A., University College
Pope, Harry Campbell, Liverpool Royal Infirmary and University College

Obstetric Medicine.

First Class.

Addy, Boughton (Scholarship and Gold Medal), St. Thomas's Hospital
*Skerritt, Edward Markham (Gold Medal), University College
†Dodson, Andrew, Birmingham and Guy's Hospital
Benham, Henry James, University College } equal
Bomford, Gerald, King's College
Colgate, Henry, University College }

Second Class.

Petch, Richard, King's College
Bird, Cuthbert Hilton Golding, B.A., Guy's Hospital
Barlow, Thomas, University College
Cockburn, John Alexander, King's College
Dyson, William, University College

Third Class.

Rayne, Charles Alfred, University College
Pope, Harry Campbell, Liverpool Royal Infirmary and University College
Firth, Charles, St. Bartholomew's Hospital
Railton, Thomas Carleton, Manchester and St. Bartholomew's Hospital
Coupland, Sidney, University College and Middlesex Hospital

Forensic Medicine.

First Class.

Colgate, Henry (Scholarship and Gold Medal), University College
Bird, Cuthbert Hilton Golding (Gold Medal), Guy's Hospital
Benham, Henry James, University College
Barlow, Thomas, University College
Cockburn, John Alexander, King's College
Coupland, Sidney, University College and Middlesex Hospital

M.D. Examination, 1873.

Anderson, Tempest, B.Sc., B.S., University College
Aveling, Charles Taylor, M.Sc., St. Thomas's Hospital
Barnes, Edgar George, St. George's Hospital
Burn, William Barnett, B.Sc., St. Bartholomew's Hospital
Cane, Leonard, B.S., University College
†Carr, William Ward, B.S., University College
Dalton, Benjamin Neale, Guy's Hospital
Humphreys, John Henry, University College and Middlesex Hospital
Langmore, John Wreford, B.S., University College and Middlesex Hospital
Oliver, George (Gold Medal), University College
Roberts, James, Queen's College, Birmingham
Sawyer, Alfred, University College
Shewen, Richard Thomas, University College
Smith, Alfred John, B.S., St. Mary's Hospital
Wall, Francis, King's College
Wyman, John Sanderson, St. Bartholomew's Hospital

* Obtained the number of marks qualifying for the Scholarship.

† Obtained the number of marks qualifying for a Gold Medal.

‡ Obtained the number of marks qualifying for the Medal.

Logic and Moral Philosophy only.

Ingoldby, Joseph Theodore, Guy's Hospital
Price, William, University College
Spencer, George Owthwaite, University College

B.S. Examination. Pass List.

First Division.

Barlow, Thomas, B.Sc., University College
Colgate, Henry, University College
Lucas, Richard Clement, Guy's Hospital
Rayne, Charles Alfred, University College
Skerritt, Edward Markham, B.A., University College

M.S. Examination. Pass List.

Godlee, Rickman John, B.A. (Gold Medal), University College

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRMINGHAM AND MIDLAND EYE HOSPITAL—House-Surgeon: £100 per annum, apartments, board, and attendance. Applications, 20th instant, to J. C. Gell, Secretary.
BRIGHTON AND HOVE DISPENSARY—Honorary Physician in Ordinary. Applications, 3th January.
BUCKINGHAM RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £100 for one year. Applications, 20th instant, to Henry Hearn, Clerk to the Rural Sanitary Authority.
CARDIFF URBAN AND FORT SANITARY DISTRICTS—Medical Officer of Health: £250 per annum.
CHESTER GENERAL INFIRMARY—House-Surgeon: £80 per annum, residence and maintenance. Applications, 31st inst., to J. Jones, Sec.
DRIFIELD UNION, Yorkshire—Medical Officer for the Weaverthorpe District: £13 per annum.
FROME UNION—Medical Officer: £95 per annum and extras.
GERMAN HOSPITAL, Dalston—Honorary Medical Officer to the Eastern Dispensary. Applications, 29th inst., to A. Walbaum, D.D., Hon. Sec.
HALSTEAD UNION, Essex—Medical Officer for District No. 5: £62 per ann.
HARTLEY WINTNEY UNION—Medical Officer and Public Vaccinator for the Hartley Wintney District: £70 per annum, and fees.—Medical Officer for the Workhouse at Winchfield: £30 per annum, and fees. Applications, 24th inst., to Wm. Brookes, Clerk, Odham.
INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.
MANCHESTER ROYAL EYE HOSPITAL—Three Assistant-Surgeons. Applications, 15th instant, to P. Goldschmidt, Chairman of the Board.
NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.
NORTH DISPENSARY, Liverpool—Dispenser. Applications, 20th inst., to W. Lister, Secretary.
NORTH STAFFORDSHIRE INFIRMARY, Hartshill—Dispenser: £90 per annum. Applications, 23rd instant, to Ralph Hordley, Sec.
NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.
ROYAL LONDON OPHTHALMIC HOSPITAL—Assistant House-Surgeon.
ST. GEORGE'S PROVIDENT DISPENSARY, Mount Street—Physician. Applications, 20th inst., to Col. Alcock, Hon. Sec.
ST. MARY'S HOSPITAL—Resident Registrar and Chloroformist.
SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, board, etc. Applications, 24th instant, to Dr. J. C. Hall, Hon. Sec.
SMALLBURGH UNION, Norfolk—Medical Officer for the Bacton District: £37:16 per annum.
SUNDERLAND AND BISHOP WEARMOUTH INFIRMARY AND DISPENSARY—Surgeon. Applications, 18th instant.—Senior House-Surgeon: £80 per annum, board and residence. Applications, 25th instant, to John Kitts, Secretary.
SURREY DISPENSARY, Great Dover Road—Dispenser: £80 per annum, furnished apartments and coal.—Assistant Dispenser: £52 per annum. Applications, 15th instant, to R. G. Minshull Jones, Sec.
TEWKESBURY UNION—Medical Officer and Public Vaccinator for the Forthampton District: £55 per annum, and fees. Applications, 16th inst., to George Badham, Clerk.
UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.
WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon: £100 per annum, furnished rooms, board, fire, lights, and attendance.
WESTMINSTER HOSPITAL—Assistant-Surgeon.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

CUNNINGHAM.—At Campbelltown, on December 8th, the wife of John Cunningham, M.B., of a son.

MARRIAGE.

EATON—BARRIE.—On December 4th, at Hamilton Place, Motherwell, N.B., by the Rev. Jas. Dunlop, M.A., of the U. P. Church, Motherwell, assisted by the Rev. W. Reid, Broomknoll Free Church, Airdrie, John Eaton, M.D., C.M., Trumpet House, Cleator via Carnforth, to Maggie, eldest daughter of J. T. Barrie, M.D., F.F.P.S.G., Motherwell.

DEATHS.

RICHARDS.—On Dec. 1st, Dinah, widow of the late Joseph Richards, Esq., Surgeon, formerly of St. Clement Danes, at 17, Oxford Terrace, Islington, aged 70.
WHITAKER, Thomas Harper, Esq., J.P., Surgeon, at Kirkby Lonsdale, aged 61, on November 14th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Farquharson, "Cases of Infectious Tonsillitis"; Dr. Pearson, "An Epidemic Sore-throat; with marked constitutional symptoms" (communicated by Dr. Farquharson); Dr. Dowse, "On Cerebro-spinal Meningitis, with Clinical Records."

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Frederick Taylor: Leucocythemia with Lymphadenoma. Dr. Crisp: Imperforate Anus. Mr. Godlee: Ossifying Enchondroma. Dr. Dowse: Renal Calculi. Mr. Nunn: Cast of an Enchondroma. Mr. Nunn: Pendulous Tumour of the Pubes of a Man. Mr. James Adams: Deformity of the Knee joint. Mr. Godlee: Peri- and Myo-Carditis from a Case of Blood-poisoning following Whitlow. Mr. Cripps: Spleen and Lymphatic Glands from a Case of Adenoid Disease.

FRIDAY.—Medical Microscopical Society, 8 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MADGE.—Shall have early insertion.

BRITISH GUARDIAN LIFE OFFICE.

SIR.—It is a pity that the British Guardian Life Office should not have the advantage of publicity in the BRITISH MEDICAL JOURNAL, so that although the enclosed note is marked "private", I hope you will publish it, and show the world what a noble-hearted man the manager is, and how truly he sympathises with the profession. He proposes to allow us double fees for every life we may introduce to the office. Mr. Yelland's noble offer should not be private, but should be published, so that the whole of our profession may have an opportunity of knowing how to get an extra fee, and to become attached to a wonderful undertaking—such as the British Guardian must be—to be able to afford to be so generous.

December 1873.

I am, etc.,

A REFEREE.

"British Guardian Life Assurance Company (Limited),
17, Garrick Street, W.C., London, Dec. 3rd, 1873.

[Private.] "Dear Doctor,—The directors, believing that it will be not only for the interest of the company, but also of advantage for yourself, have resolved to allow you double fees upon each and every case of assurance you may introduce to this company, until a duly qualified agent is appointed in your neighbourhood. Hoping to have your co-operation, and assuring you of our prompt attention to any communication you may make, I remain, faithfully yours,

"E. V. YELLAND, Managing Director."

OUR IRISH CORRESPONDENCE.

SIR.—In reply to an abusive paragraph in this week's *Medical Press and Circular*, I may remark that, by a natural mistake in the hurry of business, those candidates for the Council of the College of Surgeons were mentioned by me as competing for the Examinership, and so inserted in your JOURNAL. As regards the other allusion, Dr. Jacob will scarcely deny that the hospital appointments in the City of Dublin Hospital are sold, the price usually being £500. Can he also deny that, when he vacated the ophthalmic surgery in the same hospital, he got a considerable sum of money (rumour stating it as considerably more than £500) from Dr. Stoney, who succeeded him? An answer to these two queries will much oblige

A DUBLIN CORRESPONDENT.

It will be perhaps better understood what the *Homœopathic Review* means, by admitting that for "homœopathic" we must now often read "massive" doses, when we state that we are informed that there is a homœopathic liquid preparation of camphor containing three-fourths of a grain in one minim of spirit.

ERRATUM.—In the notice of Dr. Moon's paper on Typhoid Fever, read at the East Sussex District Meeting (BRITISH MEDICAL JOURNAL, Nov. 29th, page 645, col. 2), it should have been stated that the paper was founded on seventy cases under Dr. Moon's care since 1861—i.e., during the last "twelve years" (instead of "four years").

BURIAL LAW.

SIR.—Would you kindly answer the following questions in the BRITISH MEDICAL JOURNAL? 1. How long time after death must a body be buried in an ordinary and in a contagious case? 2. What course is to be followed in the case of a poor family inhabiting only one room? 3. Are there any dead-houses? 4. Where can I find information of the laws with regard to burials? I am, etc.,
November 1873. Z. Y. X.

* * * 1. In a contagious case, as soon as possible; in an ordinary case, as soon as you consider it a nuisance and injurious to health. In case of refusal, write a certificate to that effect and give it to the inspector, who will then be able to get a magistrate's order for removal to a mortuary and burial within a certain time. 2. If they are much overcrowded, you can send a notice to the landlord to discontinue letting the room to them; but you must be guided by the circumstances of the case. 3. Certainly, but not so many as there should be. 4. As far as it relates to your duties, in the Sanitary Act (1866).

THE LATE DR. G. HARRIES.

SIR.—Since the appearance of my letter touching the case of the late Dr. G. Harries, I have received a letter from Dr. F. G. Mahomed, Resident Medical Officer of the London Fever Hospital, complaining of my report to your JOURNAL. I gather from his statement that the management and removal of the body was entirely out of the hands of the hospital authorities, consequently they were in no way responsible for anything after his death. It appears, therefore, that unintentionally I have imputed blame to them, which I regret, and at once withdraw my imputation of culpable negligence on their part. In making the painful facts known I had but one motive, and that was by giving publicity to this case to prevent, if possible, a recurrence of what seemed a want of due caution on the part of some one in future cases of the kind. I am, etc.,
Haverfordwest, Dec. 9th. ED. PICTON PHILLIPS.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The North British Daily Mail; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courier; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Sir Henry Thompson, London; Sir Robert Christison, Edinburgh; Mr. Jonathan Hutchinson, London; Sir James Paget, London; Sir William Jenner, London; Mr. Lister, Edinburgh; Mr. Holthouse, London; Dr. Corfield, London; Dr. J. Hell, Edinburgh; Mr. MacDowall, London; Dr. Louisa Atkins, Birmingham; Dr. Eaton, Cleator; Mr. W. Adams, London; Dr. Edis, London; Dr. George Johnson, London; Mr. Reeves, London; Dr. J. W. Moore, Dublin; Dr. Dyce Duckworth, London; Mr. G. Eastes, London; The Secretary of the Hunterian Society; Mr. T. Holmes, London; Mr. Jeaffreson, Newcastle-upon-Tyne; Our Dublin Correspondent; Dr. Farquharson, London; Mr. W. D. Napier, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. Whitehead, Manchester; Surgeon-Major Coolan, Brecon; Dr. Crighton, Tavistock; Dr. Madge, London; The Secretary of the Clinical Society; Mr. Ryalls, London; Dr. Quinlan, Dublin; A Member; Mr. Howard Marsh, London; Dr. Keith, Edinburgh; Mr. Poole, London; Mr. G. H. Smith, Layton; Dr. Burdon Sanderson, London; Dr. F. J. Brown, Rochester; Mr. Parsons, Bridgewater; Mr. Eason Wilkinson, Manchester; Dr. Hayem, Paris; Dr. Orange, Broadmoor; Mr. C. C. Walter, Dover; Mr. Lawson Tait, Birmingham; Dr. Axeling, London; Dr. Cobbold, London; Dr. Ramskill, London; Dr. Theodore Williams, London; Mr. Bellamy, London; Dr. R. Living, London; Mr. John Wood, London; Dr. S. Fenwick, London; Dr. Philipson, Newcastle-upon-Tyne; Dr. J. W. Egbie, Edinburgh; Dr. B. W. Foster, Birmingham; Dr. G. Johnson, London; Mr. W. B. Dalby, London; Mr. J. Hinton, London; Dr. F. T. Roberts, London; Dr. Hudson, Dublin; Dr. G. Buchanan, Glasgow; Dr. Latham, Cambridge; Mr. Annandale, Edinburgh; Dr. London; Sir H. Thompson, London; Dr. Sieveking, London; Dr. Duckworth, London; Dr. Crichton Browne, Wakefield; Dr. Hare, London; Mr. C. Bader, London; Mr. Morrant Baker, London; Dr. E. Harris, London; Dr. Burrows, London; Mr. W. Bowman, London; Dr. Durrant, Ipswich; Dr. Burrows, London; Dr. M. Foster, Cambridge; Dr. Fraser, Cupar; Dr. Horace Haynes, Evesham; Dr. Joy Jeffries, Boston; Dr. Richardson, Boston; Dr. Cundell Juler, London; Mr. Lennox Browne, London; Mr. Holland, London; Dr. B. Black, Edinburgh; Mr. Vincent; Dr. Bradbury, Cambridge; Dr. Carpenter, Croydon; Dr. Rumsey, Cheltenham; Dr. Tripe, London; Mr. Fairlie Clarke, London; Dr. E. Long Fox, Clifton; Dr. R. P. Cotton, London; Dr. Sturges, Dublin; Douglas Powell, London; Dr. Herbert Davies, London; Dr. Clifford Allbutt, Leeds; Dr. Wilson Fox, London; Mr. Savory, London; Dr. Macnamara, Dublin; Mr. Wheelhouse, Leeds; Rev. Dr. Houghton, Dublin; Dr. J. Russell, Birmingham; Dr. Sankey, Cheltenham; Dr. Foot, Dublin; Mr. J. Dixon, Lon don; Dr. Handfield Jones, London; Dr. Ogston, Aberdeen; Dr. Cooper Rose, Hampstead; Dr. Lanchester, Croydon; Dr. Percy Boulton, London; Dr. Bickers, Dr. Carter, Liverpool; Mr. Spencer Wells, London; Mr. Erichsen, London; Dr. John Moore, Belfast; Dr. Edis, London; Dr. J. W. Moore, Dublin; Mr. Alford, Weston-super-Mare; Dr. Skinner, Liverpool; etc.

OBSERVATIONS

ON THE

ACTION AND USES OF CROTON-CHLORAL HYDRATE.

By OSCAR LIEBREICH, M.D.,

Professor of Materia Medica in the University of Berlin.

I HAVE the honour of directing attention to a new remedy, which serves to corroborate the theory I have propounded with respect to the action of hydrate of chloral.

When chlorine gas acts on aldehyde, croton-chloral is formed, as has been demonstrated by Dr. Krämer and Dr. Tinner. In order to avoid a mistake which is apt to be caused by the name, I must here remark that this body possesses no relation whatever to croton-oil, although its chemical constitution proves it to be the chlorated aldehyde of crotonic acid. Croton-chloral differs in its outward appearance from hydrate of chloral, by its being dissolved with difficulty in water, and by its crystallising small glittering tablets. Its action, though similar to that of hydrate of chloral, differs widely from the latter with regard to its physiological effects. Four *grammes*, or a drachm, of this substance, dissolved in water, and introduced into the stomach, produce in the course of from fifteen to twenty minutes a deep sleep, accompanied by anaesthesia of the head. Whilst the eyeball has lost its irritability, and the nervus trigeminus shows no reaction whatever on being irritated, the tone of the muscles remains unaltered.

I have experimented with this remedy on maniacs during an attack of mania. They remained quietly sitting on their chairs in a deep sleep, their pulse and respiration being unchanged for two whole hours together. If anaesthesia had reached so high a degree in consequence of the application of hydrate of chloral, the patients would have dropped from their chairs, and both their pulse and respiration would have been considerably retarded. I have seen croton-chloral acting in the same way on healthy individuals. In some cases of tic douloureux, the remarkable phenomenon is exhibited that pain ceases before sleep sets in. I am sorry to say, however, that this remedy acts only as a palliative in this dreadful disease. I nevertheless prefer its action to that of morphia, because it has effects as good as the latter remedy, without being so detrimental to the constitution in general. I have never observed any unfavourable effects of croton-chloral on the stomach or any other organ, although I have made frequent experiments with it.

The indications for the use of this remedy are to be found—1. In cases where hydrate of chloral is inapplicable on account of heart-disease; 2. In cases of neuralgia in the district of the nervus trigeminus; 3. In cases where very large doses of chloral are necessary to produce sleep. I there recommend the addition of croton-chloral to hydrate of chloral.

Whilst examining the difference between the action of hydrate of chloral and that of croton-chloral, I have discovered the remarkable fact that it is not the first, but the second, product of decomposition of the latter substance which is brought into action, on account of the first being too rapidly destroyed. Croton-chloral, when subjected to the influence of an alkali, first forms allyl-chloroform, a trichlorated body, which is rapidly decomposed into a bichlorated substance called bichloro-allylene. Now, both chloroform and trichlorated substances act, as I have shown, in their first stage on the brain, in the second on the spinal cord, and in the third on the heart. The retardation of respiration is to be explained by the agency of these substances on the last mentioned organ. Bichlorated substances act differently, as is proved by bichloride of ethylene. Even if the circulation of the blood in an animal have been stopped by this latter agent for one minute, life may be restored by artificial respiration, which is impossible whenever trichlorated substances have produced this effect, in which case the muscles of the heart remain paralysed. Well, in animals poisoned by croton-chloral to such a degree that both circulation and respiration are stopped entirely, artificial respiration is able to restore the action of the heart immediately, and the life of the animal may thus be saved. Bichloro-allylene, inhaled by the lungs, produces the same effect on animals as croton-chloral. We thus see these bichlorated substances acting on the brain, spinal cord, and medulla oblongata, but not on the heart, which explains the fact that both respiration and circulation remain unaltered

in man by a medicinal dose. It is a highly interesting fact, however, that under favourable conditions, we still are able to produce in animals the effects of the first product of decomposition of croton-chloral—i.e., of the trichlorated substance or of allyl-chloroform. In order to observe these effects, it is necessary to introduce immense doses of croton-chloral into the body, when paralysis of the heart actually does ensue.

CURRENT VIEWS

ON THE

TREATMENT OF STRICTURE OF THE URETHRA.

By WILLIAM S. SAVORY, F.R.S.,

Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital.

IN no affection which comes under the notice of the surgeon has so much mischief been done, in the way of treatment, as in stricture of the urethra; no instrument has, in practice, been so much abused as the bougie or catheter. An eminent and very skilful surgeon is reported to have said, in his blunt, forcible manner, that "more people are bungled out of their lives in the treatment of stricture than in any other way;" and another distinguished surgeon, not given to rash expression, affirmed that, "had bougies never been invented, it would, on the whole, have been a great gain to humanity." Whether one is prepared to endorse these opinions or not, the fact that they have been formed by observant and experienced men renders them worthy of serious attention. Nay, let anyone, who has seen much of surgery, recall what he has witnessed in the treatment of stricture by the employment of instruments, and reflect on the result. There is, in truth, a wide difference between actual practice and what is called the literature of the subject—a difference embarrassing to the practitioner and mischievous to the student. Records of rapid and complete cures of stricture by all sorts of mechanical means are abundant enough. Each of the very many plans of treatment which have been extolled is reported to be successful beyond any other—the one means by which the most obstinate strictures may be satisfactorily cured. But, if a surgeon of the largest experience were asked, how many cases of complete and permanent cure of bad organic stricture, by mechanical means of any sort, he could recall, what answer must he give? Is not the history of the subject strongly suggestive of another question? Are the views which have been, and are even still current of the pathology of stricture of the urethra sound ones? No doubt, in this case, practice has been worse than precept; but surely, even in what has been written on the subject, too mechanical a view has been taken of the nature of the disease. Of course, in our books, different forms of stricture are described as occurring either alone or in combination. We read of organic, inflammatory, spasmodic stricture, and so forth; but what is the impression left on the mind of anyone by the perusal of any treatise on the subject? That the treatment of stricture, in the great majority of cases, must be by mechanical means of some sort; by the employment of instruments. All other means, short of the use of instruments, are represented as exceptional or subordinate. But, in practice, matters have been, and still often are, far worse. Here, not unfrequently, the introduction of instruments constitutes the sole means of treatment, and, even when other measures are suggested, they are not often insisted on as of much importance.

This comes of the current view of the nature of stricture. Ask any advanced student or young surgeon, whose acquaintance with the subject of stricture is necessarily, for the most part, second-hand, what he understands by the term. He may, or may not, mention, in passing, the various causes of stricture; but it will soon become evident that his idea of stricture is simply a mechanical one; that stricture of the urethra is, to all intents and purposes, a constriction of a portion of the canal, due to thickening and contraction of a deposit in its walls, just as any tube or pipe may be blocked up, to a greater or less extent, by foreign matter; and the worst of this is, that it at once suggests to him the notion of treatment by purely mechanical means; that the obstruction must be overcome by force, either gradually and more cautiously by the repeated application of less force, or rapidly and violently by the sudden application of much force. Stricture of the urethra is too often regarded as a simple physical condition, to be treated only by physical means. But, even when a somewhat larger view is taken of the subject, when other means are employed, they are too often regarded as merely subsidiary or preparatory to the chief one—the dilata-

tion of the stricture by instruments. Nor can there be any doubt that this mischievous practice has been much fostered by the limited view which has been taken of the result of such treatment. When the passage is dilated forcibly by some instrument, of course the effect will be, for a time, marked by the increased size of the stream of urine. The improvement in this most obvious result is so striking, as to be at once accepted as success, and, for a time, it may be kept up by the repetition of the same or other mechanical means. But again, I would ask, what ultimately becomes of these cases? Is there a complete and permanent removal of all sensible obstruction, or a mere temporary improvement, with every probability of relapse? My experience of the treatment of stricture by instruments of various kinds is this—and I do not think it will be regarded as at all singular by impartial men:—I have seen very many cases of bad stricture—cases, I mean, where there has been obvious difficulty of micturition, or where only a small catheter—No. 3 or 4—could be introduced, treated by instruments of various kinds and in various ways; but I can hardly refer to any one in which the cure has been complete and permanent. Again, I have seen many cases with little or no symptom of stricture, but in which I have been informed that stricture of the worst possible kind existed. The evidence offered of this, however, has not been, to my mind, conclusive. I know very well what some will say to this—that my experience has been unfortunate. To this I reply, Does it not accord with that of others? Is it not the experience of most surgeons who have seen much of stricture?

The point I am anxious to impress is this: this plan—the usual plan—of treating stricture is founded on a misconception. Excluding from consideration now those cases of so-called stricture in which there exists no structural changes, even in the simplest cases of organic stricture, the condition is hardly ever, practically never, a purely physical one. With the structural change, there is associated an active morbid state, either some inflammation or congestion of the parts, and almost always more or less of spasm. The evidence of this seems plain to those who will read it.

How otherwise can one account for the varying size of the stream, even when permanently diminished? Very few instances of stricture occur in which, upon investigation, it does not appear that the stream of urine varies much in size; that, at certain times, and under favourable circumstances, the urine is passed much more easily and quickly than at others. This fluctuation in the size, and other characters of the stream, which is so very common in cases of stricture, cannot be due to any permanent alteration of the canal, but must be referred to some temporary cause which is capable of modifying its size and shape. Then the greater facility with which instruments may be introduced at some times, and under certain circumstances, than at others, irrespective of skill; and the speedy improvement which follows measures that can hardly, in so short a time, affect a permanent stricture—such as rest, warmth, aperients, and opium—can only be explained in the same way. And again, would an organic stricture, in a passive state, account for tenderness and disposition to bleed of the portion of the urethra which is the seat of the obstruction?

So, too, is evidence of the same kind offered by the effect of removing the pressure of the urine from behind, as by tapping the bladder. This is often at once followed by partial relaxation of the contracted portion of the canal. Beyond the immediate relief which is afforded by the operation, this appears to be the great advantage which is derived from puncturing the bladder or urethra behind in retention of urine from stricture. The urine is no longer impelled against the obstruction by straining, and the urethra is placed at rest. So also the evidence of the effect of enlarged prostate. Brodie remarks, "Where a simple chronic enlargement of the prostate gland supervenes on stricture of the urethra, the latter usually becomes less liable to spasm, and is more easily dilated, and altogether more tractable than it was before." Because now the pressure of the urine, which was a constant source of irritation, is intercepted by the prostate.

How otherwise can one explain the fact of complete retention of urine suddenly supervening upon stricture, with the fact, often verified after death, that the degree of organic contraction will not account for the degree of obstruction which exists?

Thus, it may be understood how the controversy about impermeable stricture has arisen. Much discussion has been expended on the question, whether such a condition as a really impermeable stricture ever occurs. That the canal of the urethra is ever so permanently closed and sealed up by organic stricture as to be altogether impervious to urine, may very well be denied; but no position can be less tenable than that taken by those who argue that, where urine can pass out, an instrument may be passed in. In some cases, indeed, neither urine nor instrument can pass; but, even if the former can somewhat freely escape, it by no means follows that the latter can be passed through. This is a very

different matter; for, setting aside other considerations, everything may depend upon the presence or absence of spasm or muscular contraction. There may be a passage for the urine, but it may be closed against an instrument.

Therefore, in the treatment of stricture, the employment of instruments should never be an early, only a late resource. Of course, I am not speaking now of retention of urine in consequence of stricture—that is another subject—but of the direct treatment of stricture of the urethra. In these cases, I submit that we should turn our attention more to the cause and less to the effect. The new matter, the lymph, which has been deposited or formed, and has subsequently contracted, causing stricture, is the result of a morbid process, which has either passed away, or which is still active, or lingers.

If such action be still present, what can be conceived more mischievous than irritation by an instrument of any kind? What can be more opposed to all that are recognised as sound principles of surgery? What would be done in an analogous case elsewhere? Would it not be deemed of the first importance to remove all causes of irritation—to obtain as far as possible absolute rest—to meet at once and directly the cause of the mischief, and assuredly not by rash meddling with the effect to aggravate the cause? Surely this is sound in reason, and I will venture to say supported by the results of the practice founded on it.

Foremost among the means at our command is rest—absolute rest in the recumbent posture. I do not pretend to say precisely how long this should be persevered in, or how strictly it should be enforced in every case; but I venture to assert that in the treatment of every case of stricture it should have a fair trial before any other means are resorted to. I do not think mere avoidance of business or confinement to the house sufficient; it should be continuous rest in the horizontal posture. Much good must be attributed to the effect of position. In short, the patient should be kept in bed, for this not only secures rest in the right position, but uniform warmth, which is a great point also. No doubt, many patients with stricture will object to this, just as surgeons neglect to enforce it, because its full value, and all the cost and trouble it saves, are not recognised, but I believe that, in proportion as experience is gained of the practice, so will it be esteemed—that those who carry it out most strictly and perseveringly will be best pleased with the result.

Beyond the all-important means of rest and recumbency, assisted by warmth in the form of baths or otherwise, there are remedies of great power in allaying irritability. Opium, which in these cases is so often valuable, as a rule perhaps is best administered, as laudanum, by the rectum; but this, or some other form of it, whether solid or liquid, may be given, when required, by the mouth, or morphia may be injected under the skin. Belladonna, too, or its alkaloid atropine, is sometimes useful, especially when locally applied; but, as a rule, I think they bear no comparison in efficacy to opium.

Active aperients also are often strikingly serviceable. The urine, which up to the period of their action had been obstinately retained, will sometimes pass freely during a brisk action of the bowels. The escape of urine, which is often simultaneous with the action of the bowels, and usually then most free, is a fact which should be always borne in mind. And it may be remarked that the success which attends the use of such remedies as those which have been indicated, is an additional proof, and a strong one, of the nature of the case. But, except in extreme and urgent cases, the use of drugs and of all active remedies may well be dispensed with, and reliance placed on simple measures of hygiene, such as wholesome food, warmth, and, above all, rest for a while even in bed.

But suppose a case in which all morbid action in the way of cause has passed by, and in which nothing remains but the effect, the thickening and contraction, what then? Now, in the first place, I say—and here, no doubt, I shall be at issue with many—that such a case in actual practice is, to state the least, extremely rare; that a troublesome stricture, due simply to a mechanical cause, apart from all morbid action of any kind, is to be regarded as a clinical curiosity; that this condition of things, which so often exists in idea, is hardly to be found in fact. But assuming it to be, even then I would repeat, still keep instruments in the background until other measures have been fairly tried. No one, I think, who has properly tested the value of these measures will be disposed to treat them with indifference in any case. Is it so anomalous an event for this new matter, this lymph, this outcome of inflammation, or of some kindred morbid process, to yield to time, when the parts thus for awhile hampered in their function are placed under conditions favourable to recovery; when causes provocative of still further mischief are carefully excluded? At all events, I would repeat the statement that these simple measures seldom if ever fail to effect improvement of the stricture. Of course one cannot pretend to measure in a given case how much, if any, active mischief may still be lingering there. In many cases it may be very little, in some possibly

even none. But this I can affirm: I cannot call to mind a case in which a stricture that gave trouble was not relieved by rest, recumbency, and the other means which have been mentioned. If this be so, should it not form an essential and primary part of the treatment of stricture? Should not the most be got out of these measures before we resort to instruments?

If it be urged that this would be waste of time, which may be saved by employing instruments at once, it may be replied that chiefly out of such mischievous practice have arisen such convictions as those to which I referred at the commencement of this paper. But then it will be argued that after all you come at last to instruments to accomplish the cure. Not always—very often not. I do not pretend that, under the sole influence of these measures, which are simply hygienic, all traces of stricture usually disappear; but the patient is very often, and sometimes speedily too, restored to such comfort, he is so relieved from every trouble, the stream of urine flows so naturally, that he is well satisfied with the result, and declines any further interference.

But by these means you have not thoroughly cured his stricture: you have given him only temporary relief, and his troubles may at any time return. That will in many cases depend on himself, and the care he takes of his health. No doubt in most cases of severe stricture these simple means are only palliative. Frequently, indeed, they will succeed so well that the patient himself is no longer conscious of anything amiss, yet the passage of an instrument will still detect an abnormal condition. But supposing you fall back on instruments, what then? How much more than this can you do? Dare you, in the majority of cases of severe stricture, promise by their aid a complete and permanent cure? Can you do more than restore a patient to a condition of comparative comfort, yet still with liability, under unfavourable circumstances, to relapse?

The sum of my argument, then, amounts to this: while I am not suggesting that instruments are never to be employed in the treatment of stricture, I venture to affirm that they have been, and still are, grossly abused; that an untold amount of mischief is perpetrated by their abuse; that the routine employment of instruments in the treatment of stricture is in the highest degree unscientific and improper; that, in a word, in the treatment of stricture, instruments of any kind should never be employed in any way except as a last resource.

REMARKS

ON

CASE OF INTESTINAL OBSTRUCTION FOLLOWING OVARIOTOMY.

By THOMAS KEITH, F.R.C.S., Edinburgh.

THE subject of the following history was my 160th case of ovariectomy. She was a young Irish lady in her 20th year, of a highly nervous temperament, thin, and fragile looking. For some months, she had suffered severely, and had been much pulled down by the disease. She had been tapped in February by Dr. Wallace of Parsonstown; and, when he sent her to me in the end of March last, she was already as large as before.

Ovariectomy was performed on the 1st of April, 1873. Dr. Zell of New York and other friends were present. There was nothing unusual in the operation. Omental and general parietal adhesions were separated, several catgut ligatures applied, and, as a good deal of blood had been lost during the breaking up of the semi-solid portion of the tumour, I did not follow my usual practice, in young subjects, of letting ten or twelve ounces of blood escape from the pedicle before securing it. In this case, both ovaries were diseased. The pedicle of the right was of fair length; that of the left was extremely short. Both were divided by the cautery, and, after waiting till all oozing had ceased, the wound was closed by silk sutures in the usual way. Ether was given during the hour and a half that the operation lasted. The weight of the broken down cyst-walls and contents was upwards of 40 lbs.

She did not do well from the beginning. From the afternoon of the operation, there was an amount of restlessness, such as I have never seen after ovariectomy. The pulse rose the first evening to 140, and continued so for the first five days; the temperature ranged from 101 degs. to 102 degs.; the limbs were rarely for a moment still; the nights were restless as the days, and were spent tumbling and tossing about. There were thirst and dry tongue; yet elimination went on well. There were an unusual amount of clear urine, and free perspiration from time to time. Flatus first passed twenty-six hours after the operation, and

continued to pass fairly well, yet the abdomen became distended, and, on the fourth day, there was much vomiting. On the fifth day, fluid was for the first time detected in Douglas's space, on examination by the rectum—for no vaginal examination was, in this case, at any time practicable. The fluid collected rapidly, and, on the seventh day, there was distinct fluctuation above the pubes; on the ninth, this reached to within an inch of the umbilicus. The wound, though much stretched, was healed, and the general condition improved. In the evening, as tension, which had hitherto been slight, had suddenly become great, and the patient was very uneasy, a small trocar was pushed by the rectum into Douglas's space, and, after six ounces of thick dark blood had flowed, the cannula became choked by clot, and was removed. This so far relieved the tension, that the patient had some hours' sleep. Next morning—the tenth day—a long syphon trocar was used, and thirty-six ounces of thick syrupy blood, not the least fetid, were removed by the rectum as before; then about three ounces of clot were sucked out by a powerful syringe, care being taken to admit no air. This gave much relief; the pulse fell to 100; the abdomen became soft; a large deep hollow being left above the pubes, very distinctly arched over by a roof of adherent intestine.

It was now that the anxieties of the case began; for it soon became evident that, as the roof of the hæmatocele fell inwards, a trap had been formed somewhere from folds of intestine adhering at angles; and, though the solid contents of the bowel moved downwards, or were moved by medicines, yet no air was allowed to pass. The fault seemed to be not far from the lower end of the colon.

The eleventh day after the operation was spent quietly, though scarcely any flatus escaped; and, by the twelfth, this had ceased altogether to pass outwards. Towards evening, the abdomen became distended, and windy pains were troublesome. On the thirteenth day, the bowels were freely moved by oil and an enema, without any relief to the flatulence. Douglas's space was again punctured, and ten ounces of bloody purulent matter, with broken down pieces of clot, were removed. The abdomen was raised by coils of distended intestine. On the fourteenth, the pulse was again up to 120; the distension was general and excessive; the rectum was dilated and empty; all attempts to pass a tube into the colon failed, as they had done before, and changes of position gave no relief. Enemata brought away some solid feces, but never any gas followed. By evening pain was severe, and opiates were, as on previous days, necessary to moderate the increasing peristalsis.

On the morning of the fifteenth day, a little fluid was again felt in Douglas's space, and five ounces of thick pus were removed by the syringe. The cavity was then washed out with warm water, as the matter was a little fetid. This was the last of the hæmatocele. The distress and pain were this day great, and she was restless exceedingly. The distension was now enormous; the girth at the umbilicus was 52 inches, greater than before the removal of the tumour; the ensiform cartilage was turned upwards, and the stretched, though firm, cicatrix was almost at a right angle to the pubes. Prominent amongst the ever-restless coils of intestine, the colon—now as big as one's arm—from the thinness of the parietes, was easily traced upwards and across the epigastrium, but lost below and to the left of the umbilicus. By evening, the patient was much exhausted; the pulse was 140; and it was clear that the heart could not much longer bear the tension upon it. Late at night, my brother and Dr. Sidey gave me their help, and we agreed to make one more attempt to get a tube into the colon, and, should that fail, to open the abdomen up. At her request—for she disliked the smell of ether—chloroform was given. The hand was put into the rectum, and the fingers were with ease passed above the brim of the pelvis; but, farther than two inches beyond, no tube could be made to go. This took some time, and, on turning the patient round to proceed with the proposed operation, respiration was found to have ceased, and it seemed for a time that we had to do with a death from chloroform. She slowly recovered, however; but the feebleness was so great, that such a severe proceeding as opening up the abdomen was not now to be thought of. The finest needle of an aspirator was then pushed into the transverse colon; it was put in several times, but seemed to be at once choked. I then punctured with a small trocar, and a very large quantity of air escaped through the cannula. Some nepenthe was injected under the skin, and she was left at midnight in a deep sleep; the pulse was then 140, though steadier since the relief given to the heart by the puncture.

Next day—the sixteenth after operation—there was less pain, and the abdomen was not so full. Some flatus passed in the forenoon, and several times during the day; pulse, 136; temperature, 101.8.

On the nineteenth day, much flatus passed, and the bowels were moved six times. She was nervous and feeble all day, with a tendency to faintness, and free stimulation was necessary. Towards evening, flatus again ceased to pass downwards, and the spasms became severe;

pulse, 140; temperature, 102 degs. On the eighteenth, the abdomen was again distended, and, though discharges of fluid faeces went on during the day, not a particle of air was suffered to escape. The next five days were spent without change; the tension again became frightful, and the sufferings during these weary days were very great. Sometimes the peristalsis was allowed to have its full swing; generally it was kept within bounds by opium or belladonna, and a light poultice over the abdomen gave much relief. On the night of the twenty-fourth, chloroform was carefully given, and the colon was again punctured. The cannula was passed well downwards, and then held against the abdominal wall to prevent its slipping, as it had done before. It was retained for some time; much gas escaped, and, as the peristalsis came and went, there were great discharges. The tension was immensely relieved; opium was again injected, and, as before, she slept all through the night.

During the next day, and the day after, she was feeble, scarcely able to speak. The pulse had fallen to 120; the bowels had been moved freely by oil, and, soon after, flatus passed in great quantity. Preceding this improvement, there was a profuse diuresis, sixty ounces of urine having been passed within twelve hours. On the twenty-ninth day, the belly was quite flat; there was no return of distension, and, though reduced nearly to a skeleton, she rapidly gained flesh. Seven weeks after the operation, she returned to Ireland, and remains well.

There can be little doubt that the puncture of the intestine saved this patient. It did so by gaining time; for, as already stated, it was pretty certain that a portion of the adherent bowel, which formed the roof of the hæmatocele, had become trapped as it fell downwards after evacuation of the fluid. It was hoped, if the patient could only live long enough, that more or less absorption of the connecting lymph would soon take place, and lead to some change of position in the arrangement of the part at fault, that would allow of air to pass along with the solid contents. Fortunately, this happened. The profuse diuresis, which occurred just before the relief, I have seen take place once before in a case of obstruction, which terminated favourably.

I do not guess at the source of hæmorrhage in this case. Some might, perhaps, blame the cautery, or the slipping of some of the catgut ligatures; but there have been similar cases of hæmatocele after ovariectomy in which the clamp was used, and in which no adhesions existed.

I have never seen any harm in puncturing hæmatocèles or collections of fluid in the pelvis by the rectum. If, on the occurrence of tension, I wish to empty Douglas's space, I prefer to do so by the rectum rather than by the vagina. With a proper instrument, this is a safe procedure. What I have long used for this purpose is the ordinary trocar and cannula, of the size and length of a No. 6 catheter. The shoulder of the cannula is moved an inch forwards from the end, so as to allow of a long India-rubber tube being slipped on as the trocar is withdrawn. With the slightest attention, no air can thus enter. The operation can be repeated as often as necessary, and, if the fluid is too thick, it can be sucked out with a syringe. Of course, I would not drain by the rectum; but drainage by the vagina is a very imperfect way of keeping Douglas's space free. With a patient on her back, and a dilated recto-vaginal pouch, a tube passing through the vagina will not keep Douglas's space empty, but will leave ample room for the stagnation of fluids, which can hardly help becoming putrid. It seems to me, therefore, that Dr. Marion Sims's scheme for the drainage of the abdomen by the vagina, in all cases of ovariectomy, will not satisfactorily accomplish his object. Even if it did, it would almost always be unnecessary, and it might, by carrying putridity inwards, not seldom lead to blood-poisoning of the patients.

THERAPEUTIC MEMORANDA.

ONYCHIA MALIGNA.

I WAS much interested in perusing Mr. Mac Cormac's remarks on this distressing malady, and having met with many cases of this and the allied disease "ingrowing nail," I was delighted to find what I considered, and experience has proved, a perfect cure. Rest and attention to the state of general health having preceded, the fungous growth is then burnt with strong nitric acid, washed with water, and poulticed. The relief is certain, and the repetition of the application seldom necessary. If there should be any trouble with the nail, the tender flesh may be protected by the insertion of a thin piece of compressed sponge, kept in its place by strips of plaster applied longitudinally to avoid compression.

BENJAMIN BLOWER, Liverpool.

CLINICAL LECTURE ON CONVERGENT SQUINT.

By R. LIEBREICH,

Ophthalmic Surgeon and Lecturer, St. Thomas's Hospital.

I SHOW you to-day three patients with strabismus convergens, who represent three forms of strabismus, different with regard to treatment. In the first case, the squint shows itself only while the look is attentively fixed upon an object, whether near or remote. If, however, the patient look absently before him, contenting himself with an undefined image of the object, his eyes remain perfectly straight. This state is characteristic of the first stage of the ordinary strabismus convergens based on hypermetropia. In order to see distinctly with eyes the refraction of which is not sufficiently strong, it is necessary to make a great effort of accommodation. There is a connection between the accommodation of each eye—that is, of the power of the eye to adapt itself to different distances—and between the muscles which make the two eyes converge to a single point. On account of this connection, a hypermetropic eye can only make the effort of accommodation necessary to correct its fault of refraction, by making at the same time a very great effort of the two recti interni—that is, by producing too high a degree of convergency, which, in fact, constitutes the strabismus. So the periodical squint becomes a means by which hypermetropical children succeed in seeing distinctly. It is true that, by doing so, they give up the binocular vision; but they see better with one eye sharply fixed than with both eyes incompletely adapted to the distance of the object. If, in these cases, the optical fault of the eyes be corrected by adding glasses which make the vision equal to that of a normal eye, the squint will disappear; for then every distance requires only the normal quantity of effort of accommodation, as well as the normal degree of convergency. The first indication of treatment is to find out the degree of hypermetropia and of the astigmatism which may be combined with it, and to advise the use of spectacles which correct these optical faults. This is not always easy. The principal difficulties we meet with are the following.

1. The youth of the patient. There are cases where the affection begins as early as the second year, and even earlier, at a time when the use of spectacles is out of the question. In such cases, one must be content to draw the attention of the parents to the matter, in order as far as possible to prevent the child from fixing his eyes on small near objects; and, later, reading must not be attempted without the use of the right spectacles.

2. A difficulty based on spasm of accommodation. In order to ascertain the refraction of an eye—that is, to find out which is the farthest point to which it can accommodate itself—it is necessary to suspend the accommodation. It is, however, not always possible to obtain this in eyes which, on account of hypermetropia, are in a constant state of tension of the accommodation. On being examined, they either appear not at all hypermetropical, or at least not so much as they really are. Their hypermetropia is then called latent. In order to make it manifest, different ways may be adopted: either the accommodation may be entirely suspended by the instilling of atropine, and then the refraction is easily ascertained; or, choosing a slower way, we may diminish by degrees the effort of accommodation by the use of convex spectacles. These spectacles are to be chosen first approximately; then gradually stronger ones must be used, until they are in accordance with the degree of hypermetropia.

3. A third difficulty will often be found in the strong aversion of parents to seeing their children wear spectacles. They often urge to have an immediate operation performed, in order that the deformity of squinting may be removed at once. Some surgeons give way to such wishes; but let me earnestly caution you against this. The result of an operation in such a case is, that the convergent squint is, in the most favourable case, removed; that is, during the fixation, under the conditions which produced the convergence before, the axes of the eye are now more or less well adapted. On the contrary, while the look is not definitely fixed on an object—that is, under the conditions which, before the operation, made the axes of the eyes stand more or less parallel

—there is now a divergent squint produced. If now you were to attempt to correct this divergent squint by a tenotomy of the rectus externus, the movement of both eyes would become irregular in every direction; and the final result of such untimely surgical interference you would find to be this: irregularity of the movement and restriction of mobility; too strong prominence and difference in the size; and, lastly, amblyopia of the eye operated upon. If we compare with this the perfect correction of this position, the conservation of the sight, and its power of endurance, which are obtained by a timely and constant use of the right spectacles, we must come to the conclusion that, wherever the convergent squint is purely periodical, no operation should be performed.

It is quite otherwise with that category of squint which is represented by the second case introduced to your notice. Here we find a permanent deviation of the axis of the eye, but in a different degree, according to the effort of accommodation. During the fixation the degree of the convergency increases, and in such cases the necessity of an operation is indicated; but care must be taken not to produce so strong an effect, that, even during the fixation, there will be no deviation at all; for, by so doing, we should cause divergency during the vague look which we mentioned before. The operation is only intended to correct the constant deviation. That deviation which shows itself during the fixation can only be rectified by the spectacles which correct hypermetropia.

The third case shows a constant and very high state of convergency, which must be corrected as far as possible by operation. How can this be best performed?

If the internal rectus muscle be divided in the ordinary way, it is possible to correct a squint of from two to two and a half lines in adults, and from two and a half to three lines in children. But, if the deviation exceed this extent, it will be necessary to perform two, three, or even more, successive operations.

Whilst the division of the effect between the two operations, one on each eye, offers certain advantages with regard to the symmetry and uniformity of the movements of the eyes, the performance of a third or fourth operation—i.e., its repetition upon a muscle which has been already divided—is attended with great disadvantages. In fact, by such a repetition of the tenotomy, anything like an approximative calculation of the result is rendered impossible. In some cases the effect will be *nil*, in others excessive.

This is probably owing to the cicatricial adhesions which are formed after the first operation, as they prevent the performance of the usual simple tenotomy. For, if we are not careful to divide these adhesions completely, it may easily occur that a small band, which has escaped our notice, will mar the effect; or if, in order to ensure their complete division, we have been obliged to incise the parts freely, a divergent squint (in division of the internal rectus) not unfrequently results, with considerable loss of mobility inwards, sinking of the caruncule, exophthalmus, etc.; in short, all the disadvantages of the old and now abandoned operation. About nine years ago, I felt anxious to remedy, if possible, these defects by an alteration in the mode of operating; and I then determined to investigate with greater accuracy; (1) the anatomical relations of the muscles, with regard to the capsule of Tenon, the sclerotic, conjunctiva, caruncle, etc.; and (2) the mechanical effect of the operation for strabismus.

[To be continued.]

THE ETIOLOGY OF DIPHTHERIA.

I HAVE just read in this week's JOURNAL an article by Dr. Thursfield on the etiology of diphtheria, in which, while inclining to the opinion that there is a definite connection between it and local unsanitary conditions, he seems to consider that sufficient evidence has not been adduced by any writer on diphtheria to prove this conclusively. I beg to refer him to a paper by me in the *Edinburgh Medical Journal* for February 1860, in which the causation of the disease is clearly traced to defective sanitary arrangements. In one house mentioned, typhoid fever attacked one of the inmates and proved fatal. Immediately afterwards, three children suffered from diphtheria, and were scarcely convalescent, when the mother and a servant girl were seized with typhoid fever. An abstract of the paper will be found in the *Year Book* of the New Sydenham Society for 1860. Subsequent experience has amply confirmed the conclusions at which I then arrived. Very recently the subject has again been brought under my notice by Mr. Sleman, Medical Officer of Health for Tavistock. He has clearly traced the origin of an epidemic of the disease in Morwelham, an outlying hamlet in his district, to very defective sanitary arrangements.

R. W. CRICHTON, M.D., Tavistock.

INFLUENCE OF MEAN TEMPERATURE ON THE PREVALENCE OF SMALL-POX.

By J. W. MOORE, M.D. Dubl.,

Diplomate in State Medicine and Ex scholar of Trinity College, Dublin; Assistant Physician to Cork Street Fever Hospital, Dublin; etc.

PROBABLY it would have been more correct to have headed this paper with the title, "Influence of Season on the Prevalence of Small-pox," but it will be conceded that temperature is the most important factor in the complex series of phenomena we denominate "season," and I wish to restrict myself on the present occasion to a consideration of its apparent influence on small-pox.

The subject is not a new one, for just one thousand years ago the Arabian physician, Rhazes, wrote to the following effect: "I am now to mention the seasons of the year in which the small-pox is most prevalent; which are, *the latter end of the autumn, and the beginning of the spring*; and when in the summer there are great and frequent rains with continued south winds, and when the winter is warm, and the winds southerly." (*A Treatise on the Small-pox and the Measles*. By Rhazes. Translated from the original Arabic by William Alexander Greenhill, M.D., London: printed for the Sydenham Society, 1848. P. 33.) Avicenna also states that small-pox prevails most at the "turn of the year" (*apud alterationem temporis*), and especially in spring, the cases becoming numerous during a continuance of southerly winds (*variola multiplicatur in successione austrinorum, quando multiplicatur eorum perfatio*. Liber iv, tractatus 4, caput vi, *De Variolis*.)

Passing on to modern times, we find that of late years the relations between meteorology and disease have attracted the attention of many thoughtful writers upon medical and sanitary science. Among other writings on the subject, Dr. Ballard's able analysis of the Islington "Records of Sickness" (*Eleventh Report of the Medical Officer of the Privy Council*, 1868. No. 3), will always hold a foremost place. In that work he clearly traces the dependence of the prevalence of small-pox upon season. The latest contribution to our knowledge of this dependence of the disease on climatic influence is found in a paper (*On the Seasonal Prevalence of some Eruptive Fevers in India*) by Dr. John Macpherson, late Inspector-General of Hospitals, which appeared in the *Medical Times and Gazette*, for July 12th, 1873. The author quotes various passages from recent Sanitary Reports, to show that in India small-pox increases during the earlier months of the year, and reaches a maximum in May, simultaneously with the setting in of hot and dry weather towards the end of the N.E. monsoon. It then rapidly declines with the advent of the rains attending the S.W. monsoon. Dr. Macpherson's remarks would go to prove that moist cool weather in India (that is, weather with a mean temperature of about 70 degs.) checks the spread and prevalence of small-pox. In fact, weather which closely resembles our northern and Atlantic summer, except that it is even hotter, is inimical to any great epidemic diffusion of the disease. Dr. Ballard, speaking of the result of twelve years observation in Islington, says (*loc. cit.*, p. 73): "The rule has been for small-pox to prevail least in the summer, to increase through the autumn and winter, and to prevail most in the spring of the year. The smallest number of cases on the whole was observed in the months of September and October; the wave rose gradually through the succeeding months (with a slight check in February), to attain its highest point in the month of May. From this point it sank rapidly through July and August to attain its lowest point again in September. Small-pox is, therefore, clearly a disease the extension of which is promoted by cold weather and checked by hot weather."

These remarks would, at first sight, seem to be contradictory of Dr. Macpherson's statements as to the seasonal prevalence of small-pox in India. But, as I have already observed, the cool weather of India corresponds closely with our summer weather; and, as regards climatic influences, the absence or deficiency of moisture in the air, rather than the presence of very intense heat, would appear to be the chief determining cause of the greater prevalence of small-pox towards the close of the north-east monsoon. Again, we may well imagine that defective vaccination among the millions of Hindoos and other natives, has told with terrible effect on the death-rate from small-pox; a death-rate which, there is every reason to believe, would be reduced to a minimum, owing to the warmth of the climate, were vaccination more generally carried out.

Dr. Ballard, in his paper, writes as follows: "The mean temperature of about 52 degs. is that which marks off the conditions, favourable or unfavourable, to the extension of small-pox. A temperature below this

promotes its spread, and a temperature above it tends to check its spread. It is clear, however, that this observation can apply only to the country in which it has been made, or to one presenting similar climatic conditions." Another remark of the same author is well worthy of being quoted, especially in relation to Dr. Macpherson's observations, namely, that "in all seasons of the year comparative atmospheric dryness is more conducive to the spread of small-pox than comparative humidity of the atmosphere."

Dr. Arthur Ransome has kindly furnished me with a copy of curves of the weekly number of deaths from various diseases in Manchester, during ten years ending December 1870, which he has projected with infinite pains and accuracy. From the small-pox curves in his diagrams, we learn that the seasonal prevalence of the disease indicated by Dr. Ballard, holds good in the case of Manchester also; that is to say, it holds good as a general rule, and making due allowance for the influence of an increasing or decreasing epidemic tendency from time to time.

In a paper on "Excessive Infant Mortality," read before the National Association for the promotion of Social Science, at York, in 1864, Dr. W. S. Trench, analysing the statistics of the mortality of Liverpool, in the decade ending December 31st, 1863, writes to the following effect: "Small-pox was least prevalent in the third or September quarters, when the range of the thermometer is highest. It was most prevalent in the first and second quarters of 1858, and almost absent during the second and third quarters of 1861. The mean heat during the former period was 48.5 degs.; during the latter 57.4 degs.; the range of the barometer and dew point difference being almost identical, and the only other difference being amount and duration of rain, which was greatest in 1861. As we know from experience that a high degree of atmospheric heat soon exhausts the power of the vaccine-pox, it may be a reasonable question to ask whether the virulence of the contagion of small-pox in the clothes of patients is not weakened by summer heat, and one mode of its propagation thereby lessened."

The suggestion here thrown out by Dr. Trench, as to the disinfectant power of warmth, appears to be well worthy of consideration; but I believe that a far more powerful agent in the diminution of small-pox during summer is to be found in the freer ventilation of the dwellings of the poor, and in the consequently lessened dangers of overcrowding and ochlesia, at that season of the year.

In Sweden, as shown by Dr. Wistrand, in his annual reports on the mortality and morbidity in that country (published in *Hygeia*) the greatest prevalence of small-pox is, on an average of several years, observed in May, the cases in that month being 13.7 per cent. of the total cases occurring in the year; while the least prevalence is observed in September, when only 3.9 per cent. of all the cases in the year occur. The mean temperature of April and May, at Stockholm, on an average of seven years (1862-68 inclusive), was 42.9 degs., and about the end of May the mean temperature reaches and passes 50 degs. From May, a rapid decline in the number of cases of small-pox takes place, while through the winter, from November to May, the number is high.

TABLE I.—Showing the Prevalence of Small-pox in Sweden by Months in the Years 1862-69 Inclusive.

Year.	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1862..	28	55	43	40	56	53	66	67	46	42	25	52	573
1863..	35	60	64	56	99	124	152	91	54	85	122	108	1050
1864..	163	148	157	222	267	314	187	130	160	163	244	317	2477
1865..	323	417	504	662	806	662	441	210	187	248	399	422	5290
1866..	647	484	498	636	619	530	315	184	89	101	254	159	4516
1867..	260	289	396	468	551	427	401	321	227	281	321	456	4308
1868..	595	544	620	813	770	567	471	228	211	186	373	608	5985
1869..	635	464	641	855	1005	678	609	309	199	141	252	277	6073
Totals	2686	2461	2930	3752	4773	3355	2642	1549	1173	1252	1999	2399	30,362

Small-pox is, indeed, essentially a disease of winter and spring; and my object in writing this paper is to show how true are Dr. Ballard's observations, as tested by the course followed by the recent epidemic of the disease in London, Liverpool, and Dublin.

In an accompanying table I have entered the weekly number of deaths, during the epidemic period, in each of these cities, with the mean temperature of three weeks before set down opposite each entry. It will be seen that, in attempting to trace and to estimate the influence of temperature on the prevalence of the disease, I allow an interval of three weeks for 1, the period of incubation of the disease; 2, the length of the illness; and 3, the delay in the registration of the deaths. In doing this, I am justified by precedent, as all writers on the subject have followed this course. I wish, here, to express my indebtedness to the columns of the *Medical Times and Gazette*, for the vital statistics

and meteorology of the epidemic period in London, and for the weekly mean temperature at Liverpool; to Dr. W. S. Trench, the distinguished Medical Officer of Health of Liverpool, for the statistics of the disease as observed in that city; and to the Registrar-General for Ireland, and Dr. W. M. Burke, for the Weekly Returns of Births and Deaths in Dublin, which have supplied me with the requisite information about that city.

[To be continued.]

CASE OF RUPTURE OF THE AORTIC VALVES BY ACCIDENT.*

By BALTHAZAR FOSTER, M.D., F.R.C.P.,

Professor of Medicine in Queen's College, and Physician to the General Hospital, Birmingham; Consulting Physician to the West Bromwich Hospital; etc.

ACCIDENTAL rupture of the heart-valves is a lesion which has been long known to pathologists, who have divided the cases into two classes, in accordance with the previous condition of the valves. The tear of a valve previously diseased is not very rare, but the laceration of a valve previously healthy is a much less common accident. It usually occurs from some severe muscular effort, and is produced by the extra tension of the aorta under such conditions, associated probably with some jar to the main arterial trunk. The following case is a very good illustration of this form of heart-mischief, and I therefore bring it before the Section. It is the third case of rupture of previously healthy valves which I have met with in eight years.

Henry Horton, aged 33, was admitted to the General Hospital on November 7th, 1873, suffering from great dyspnoea and palpitation, with cedema of the legs. On auscultation, a double aortic murmur was detected.

Previous History.—He had originally been a jeweller, but, fourteen years ago, he enlisted in the Royal Marines, and served his time (twelve years), part of which he spent in Abyssinia. On the expiration of his twelve years of service, he was discharged at his own request, having enjoyed good health during the whole period. He returned to Birmingham, and for a time worked at Soho; but, in February, 1872, he left home for America, and, on his arrival in that country, finding no occupation, he joined the American navy as a marine. Before admission to the service, he was examined medically, and passed as sound. His ship was ordered to Valparaiso, and, during the voyage, he volunteered to act as cook, which he did up to the time when he met with the accident which disabled him. This occurred as follows. One day, during some very heavy weather, when coming up on deck, he was thrown violently forward by a lurch of the ship; he endeavoured to save himself by clutching the side of the hatchway, and partly succeeded. He was struck, however, sharply on the left side of the chest, and felt inwardly hurt and faint. He was ill for two days, and then felt well again, and resumed his work, but found the cooking too much for him. He gave it up; soon afterwards, when on watch one night, and all being quiet, he lay down on deck, he found that the horizontal posture made his breath very bad. The next day, he was examined by the surgeon, and, when at Valparaiso, was invalidated and sent back to the States. On his arrival there, he was discharged and sent home to England. On the homeward voyage, he was very ill, and, on his landing at Liverpool, he was sent to hospital. He recovered there sufficiently to get to Birmingham in August last, but had ever since been ailing with shortness of breath, palpitation on exertion, cough, and some cedema of the feet. He never had rheumatic fever or any serious illness. He drank freely while in the service, but never felt any ill effects.

On admission, his difficulty of breathing amounted to orthopnoea; his cough was frequent and dry, and harassed him so, that he had not slept for days. Pulse jerky, 112; respirations 48. His expression was anxious; his face pale. The carotid pulsations were visible. On examination, the chest percussion-note was natural over the lungs anteriorly, and the breathing free from morbid sounds. Posteriorly, both bases were dull, especially the left, on which side the dulness extended to the inferior angle of the scapula, and laterally into the axilla, so as to merge into the area of cardiac dulness. Over the whole dull region behind, the breath-sounds were diminished; and, on the left side, the vocal vibration was lessened. The heart's area of dulness was increased, reaching close up to the second rib, and downwards to a little below the seventh; laterally, it extended, as far as we could make out from the lung-dulness, from the nipple-line to an inch beyond the

* Read before the Pathological and Clinical Section of the Birmingham and Midland Counties Branch.

right edge of the sternum. There was no distinct apex-beat, but a diffused heaving, most distinct between the fifth and seventh ribs. On auscultation at the base, there were heard two murmurs; a short blowing and softly flapping murmur with the first sound, and a loud harsh murmur with the second sound. The systolic murmur was heard most distinctly at the mid-sternum, opposite the third rib and above it, but was not heard at the apex. The diastolic murmur was loudest at the third costal cartilage of the right side, and was also distinct up and down the sternum; it replaced the second sound in the carotids, but was not propagated towards the apex of the heart. At the apex, over the mitral area, was heard a murmur with the first sound, longer and somewhat harsher than the systolic murmur heard at the base. The urine was scanty, high-coloured, and albuminous. The liver was enlarged, reaching three finger-breadths below the costal arch, and was tender on pressure. The abdomen was somewhat tense; the lower extremities were slightly cedematous.

After admission, he improved slightly, and got some rest under the use of morphia hypodermically. He had, however, a bad syncopal attack on the third day; and, although these attacks were warded off by the use of stimulants and liquor ammoniac, internally, up to the morning of the 14th, he then died suddenly from syncope.

The *post mortem* examination was made by the resident pathologist, Dr. A. H. Carter. On opening the chest, the lungs were seen to be widely separated by a very large heart. The pericardium contained no fluid, but the right pleural cavity contained half a pint, and the left somewhat more. There was also about half a pint of fluid in the peritoneum. *Right Lung.*—The upper lobe was emphysematous; the lower lobe nearly solid, from large hæmorrhagic extravasation, not very recent, and undergoing inflammatory changes. There were several smaller and more recent spots of hæmorrhage in the same lobe. *Left Lung.*—The upper lobe was emphysematous; there was a large recent wedge-shaped hæmorrhage in the lower anterior angle of the lower lobe. The liver was somewhat contracted, firm, and granular; it weighed 47 ounces. The kidneys were large and congested, but in other respects healthy. The heart was much enlarged; it weighed 18 ounces. There was a white friction-patch on the anterior surface, near the apex. All the cavities were dilated and full of uniform black blood-clot. Both auriculo-ventricular orifices were dilated; the left admitting four fingers. The mitral valve was healthy, but its papillary muscles were thin and undergoing degeneration, and therefore, with the dilated orifice, accounted for the regurgitant mitral murmur. The pulmonary valves were healthy. On further examination of the heart (which was exhibited), the following lesion of the aortic valves was found. The posterior aortic segment was torn down at its angle of attachment to the left segment five-sixteenths of an inch, and remained this distance below the left segment. The posterior segment was also torn down at its other angle of attachment, together with the right segment, to a similar extent. The right angle of the posterior segment, in giving way, had been torn as far as the middle of the valve, so that a contracted and somewhat thickened and irregular fold flapped loosely in the blood-current, giving rise to the systolic aortic murmur. The right segment was torn down at its posterior angle of attachment, but was very slightly torn at its junction with left segment, so that the valve sloped from its corpus Arantii down to its abnormal attachment with the posterior segment. The posterior segment was retroverted somewhat towards the ventricle, and the regurgitation took place freely, from the unnatural position of this and the right segments. The left segment was the only healthy one. There was a little atheroma of the aorta just above the valves, but higher up the vessel was healthy. The left ventricle was greatly dilated, measuring four and a half inches in length, and in diameter, at widest part, three and a quarter inches. The aortic orifice measured three and one-eighth inches in circumference. The walls of the ventricle, which were not hypertrophied in proportion to the dilatation, measured at apex three-eighths of an inch in thickness, at the midpoint eleven-sixteenths of an inch, and at the base three-quarters of an inch. The cardiac muscle generally was undergoing degeneration.

The points of most interest in the case, are the manner in which the accident occurred, and the short duration of the man's life after the rupture. The rapid progress of the case was due to the great injury which the valves sustained, but more especially to the fact that, by the position of the rupture, the coronary circulation was robbed by the regurgitant current. On this account the cardiac nutrition was unable to keep up the hypertrophy necessary to compensate for the valve defect. The man's history was singularly perfect, inasmuch as it afforded very strong evidence of the healthy condition of his heart a short time before the accident. In this respect, it was corroborated by the *post mortem* conditions.

ON THE DETECTION AND REMOVAL OF VESICAL CALCULI.*

By WILLIAM DONALD NAPIER, M.R.C.S.

UNABLE to devote any but my contracted leisure moments to the study of this subject, in which I have taken vivid interest, I have found eight years not more than sufficient to work out, to my satisfaction, the various schemes that have at different times suggested themselves to me, and that have resulted in the instruments that I am about to lay before you, hoping, as I do, that they possess at least the merits of simplicity and originality. One of them I have already been permitted to bring before the notice of this society; but as I did so hurriedly and without previous notice, and as it has since been greatly improved in manufacture and is intimately connected with the others to which I am anxious to call your attention, I must hope for your pardon for including it in the series, which would be incomplete without it.

There has at no time, I believe, been any hesitation in the mind of the profession as to the rank amongst operations of importance that should be assigned to the one commonly practised for the relief of persons suffering from stone in the bladder. But perhaps its pains, its perils, and its jeopardies were never fully appreciated by the general public until an illustrious life lay in the balance about a year ago, and the newspapers were teeming with surgical details, variations of symptoms, and auguries as to the chances for and against the termination of the struggle that was known to be going on between science and disease in that quiet room at Chislehurst. And then, gradually but persistently, the gravity of the malady forced itself on men's minds.

I have alluded to the place held in professional estimation by the operation for the removal of stone; but were any testimony required in proof of it, none more convincing could be found than in the enormous number and almost incredible variety of the instruments immediately connected with it, that were lately exhibited at the International Exhibition, each bearing silent witness to a fresh effort to divest the operation of some cause for anxiety, spare the sufferer some suffering, avoid some complication, attain some desired end, ward off some dreaded result. Taken collectively, as they may fairly be, and tested by the laws that regulate supply and demand, what do they prove? Three points appear obvious to me:

1. The difficulty of early diagnosis.
2. The danger to life involved by the operation of lithotripsy as now practised.
3. The impediments to convalescence consequent on its successful performance.

Under this last head I should be disposed to class, the continuance in the bladder of fragments of stone too large to find their exit in a natural manner; the premature repetition of the first operation which the intense distress caused to the patient is apt to render compulsory; and the protracted suffering consequent on abrasion of the mucous membrane, from portions of the calculus being caught and drawn away, a process that not only considerably retards recovery, but occasionally results in permanent stricture.

I am taking in this rough grasp only such obstacles as may present themselves to the skilful operator; the man whose sense of hearing is quickened by constant use, whose touch is rendered delicate by familiarity with the cause of suffering, whose mastery of the instruments he handles renders his manipulation steady, gentle and deliberate, and whose experience anticipates some of the evils he may not be able to avoid. Given these impediments, or embarrassments, or perplexities, whichever you choose to call them, under such circumstances as these, there need be little fear of overrating the complications that may arise under less expert direction.

This view of the subject having commended itself very strongly to me as the one that should be kept constantly before anyone who sought to improve the present method, I have worked continuously with one especial aim: viz., to produce instruments that by their simplicity of mechanism and manipulation should ensure efficiency in the hands of the less experienced practitioner. I think I am correct in stating that there are few investigations into the primary cause of suffering in which accuracy is of greater importance in its bearing on the result, than in that for discovery of stone in the bladder; its removal in the first stage being comparatively simple, but, after a length of time, so complex as to rank, when entirely successful, with the greatest triumphs of surgical art.

And there is, in addition to this argument in favour of early detection, another, hardly less obvious. I mean the aggravated misery in-

* Read before the Medical Society of London.

flucted upon a person suffering from stone by mistaken diagnosis, and the consequently mistaken treatment that is apt to follow it. An instance comes to my mind of a patient with stone in his bladder being treated, although a young man, for enlarged prostate, and the application of a blister to the perinaeum being ordered for him, entirely in consequence of unsuccessful sounding.

That there is some imperfection in the present system of investigation, is evidenced by the failure of one surgeon to detect the presence of a calculus which is discovered immediately afterwards by a man only his own equal in ability, or possibly less experienced than himself. And this—being by no means a rare occurrence—points conclusively, I think, to something defective in the agent rather than in the operator.

To render a doubtful result to investigation conducted with ordinary care more exceptional than hitherto—and I imagine that it is in the first stages of the disease that the percentage of uncertain issues is by far the greatest—it seemed necessary to devise an instrument of peculiar sensitiveness, and capability of application to minute objects. Whether the one before you will fulfil these conditions in all instances, remains

to be proved. It has not failed me yet in the experiments to which it has been subjected. I believe it to be unique in its mode of action, depending, as it does, upon ocular instead of oral proof; and I cannot help hoping that, by reason of its exquisite susceptibility of impression, immediate manifestation of the existence of a foreign body may follow with absolute certainty its introduction into the bladder.

The Calculus Detector (Fig. 1.), for that is the name I have given it until a better can be found, is precisely similar in form to the ordinary sound. It is composed of steel up to the commencement of the curve, where it is reduced in diameter, and a coating of pure lead is cast round the smaller part, of sufficient thickness to render the surface perfectly smooth and even along the entire length. The leaden extremity is then polished as highly as possible with a leather, and rendered keenly sensitive to the slightest contact with any rough or hard substance, of which it would be now found to bear visible trace. On some of these instruments I tried to increase the susceptibility by dipping the leaden end in a weak solution of nitrate of silver, or what is better, chloride of platinum, which produces a black pigment on the surface; but further experiments have almost convinced me that this preparation is unnecessary, and that the pure lead is perfectly efficient. The instruments that I showed before were coated with pewter, on which the use of lead is a great improvement, by reason of its readier impressibility.

Before the introduction of the detector, it should be carefully rubbed with a leather, and submitted to the test of a magnifying glass, so that no slight scratch or indentation previously incurred should, on its withdrawal, mislead the operator, who will find it satisfactory again to apply the same means for discovering the marks which contact with a hard substance may have produced during its employment in the bladder.

With regard to the other instrument, which I call the Calculus Extractor (Fig. 2), I may premise that I incline to confine its use to the removal of small stones—I trust that the day of large ones is at an end—and fragments of stone; and this because I do not myself believe that lithotripsy should ever be resorted to when a stone has from any cause, such as absence from available medical assistance, or the dread of the sufferer to submit to the necessary test, been allowed to attain to large dimensions. Then the patient's chance for recovery must lie in lithotomy.

To be as concise as I can, I shall simply describe it as an instrument intended to withdraw from the bladder either a stone intact, or crushed into fragments, so enveloped in a delicate elastic wrapper—I use the term advisedly, for as you will see, it literally folds itself round the substance in question—that injury to the passage will be simply impossible. It consists of a soft India-rubber tube, terminating at one extremity in a funnel-shaped orifice, greatly resembling the ordinary convolvulus flower, and it is capable of containing a calculus or portion of calculus of considerable dimensions. When it is inserted into the bladder, its form and position render it the receptacle of such foreign substances as would from the position of the

patient and the flow of urine determine towards the natural outlet. This receptacle, enclosing such bodies in the folds of its delicate membrane, and permitting itself to be gently withdrawn, retains them in its elastic envelope, and protects the urethra from direct contact with them.

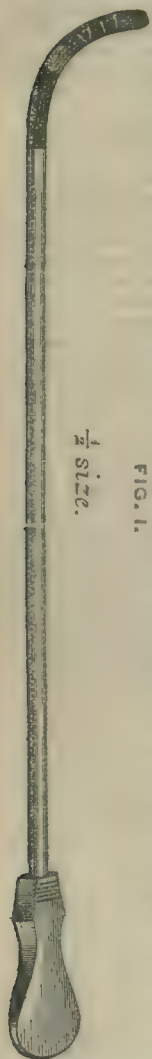


Fig. 1.—Calculus-Detector: the curved end showing marks on its surface such as would result from contact with a hard substance.

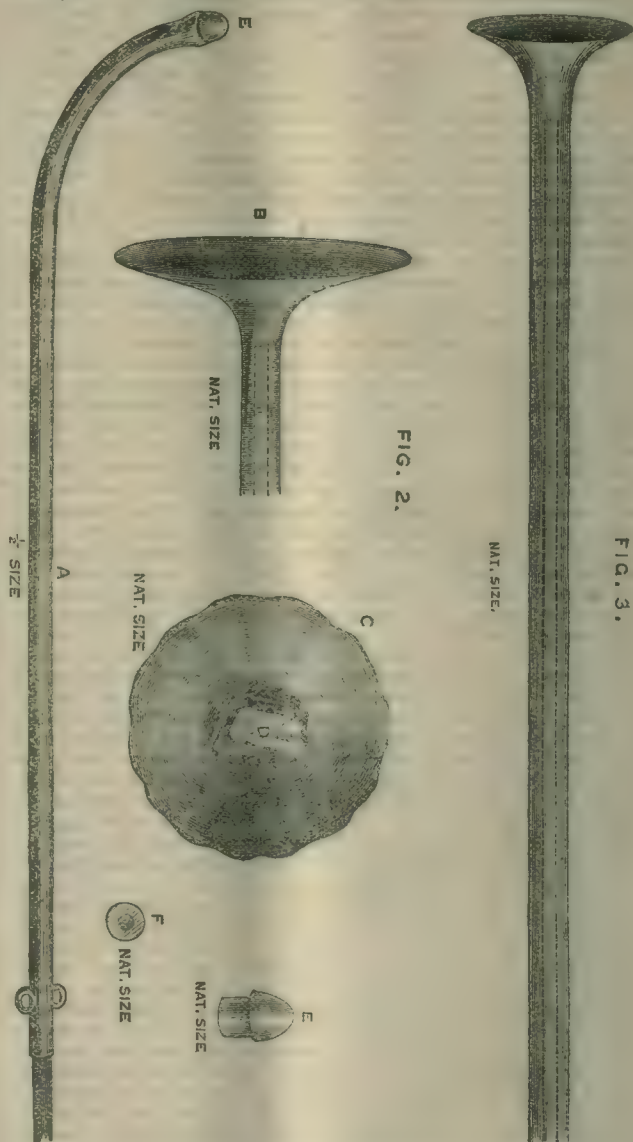


Fig. 2.—The India-rubber Tube, with its convolvulus-like opening at the end.

A. Silver Cannula, into which the India-rubber Tube is (after being soaped) drawn. B. Cocoa-butter Point, which closes its orifice. C. Convolvulus open, as it would be in the bladder. D. The same commencing to fold itself round a portion of calculus, marked D. E. Section of India-rubber Tube.

Fig. 3.—Same sized Tube, with a smaller Convolvulus, intended to be used as a self-retaining Catheter.

After bringing it to the state of completeness in which you now see it, I was very much and very long perplexed as to the best means of introducing it into the bladder; and it was only after many trials and as many failures that I was able to see my way to the accomplishment of this, without which my instrument would be useless.

My first idea had been to insert the convolvulus-shaped cup folded in the form and manner of a bud, and retained in its position by some adhesive substance that should permit it to expand after its introduction. But there were several objections to this. At last it struck me that, inserted in a fine silver cannula, it would be entirely at the direction of the manipulator; and I was successful in reducing my idea to practice; but then I was met by a difficulty that I feared at one time would be insurmountable. How was it possible to avoid the trouble to which

the insertion of a cannula open at the end could not fail to give rise? An artificial point appeared to be the only solution; and it seemed to me that cocoa-butter was possessed of a peculiar fitness for the purpose; for this reason; for a hard dense substance, its dissolubility under moderate heat is, I believe, quite without parallel. Subjection to a temperature of 96 degs. dissolves such a portion of it as my purpose requires with curious rapidity—in as nearly as possible one minute. There is besides the additional advantage that it serves as a lubricator in its passage to the bladder. But it is not in connection with my instrument alone that this application of it will, I hope, be found to be a profitable discovery, but in every operation where it is expedient temporarily to close the mouth of a catheter or cannula. I mean that I consider the cocoa-butter point *per se* worthy of attention.

I would now briefly suggest to you a further adaptation of the principle and form of the Extractor that may be found useful. As a self-retaining catheter (Fig 3), I cannot help thinking it would prove as simple and effective an appliance as could be used; and I know that the increased demand for these instruments of late has called forth various improvements and emendations in the means both of introduction and of retention.

After speaking so long of myself and my own labours, it is especially pleasant to me to turn from them to the more agreeable task of acknowledging, which I will do as briefly as possible, the obligations that I am under to those who have generously afforded me assistance, which has been invaluable to me in surmounting the difficulties with which I have had to contend.

Amongst my medical friends I must mention Mr. Barnard Holt, to whom I am indebted for sound practical advice. To Dr. Robert John Lee I owe more than I can express, for the unwearied patience and kindness with which he has assisted me in my experiments on the dead subject; also to Mr. Warrington Haward of St. George's Hospital, who deserves my warmest thanks not only for facilities and personal help afforded me in the *post mortem* room, but for the preparation now on the table, by which I hope to be able to exemplify practically the processes I have described.

The success that has attended the manufacture of the instruments is due in part to the care and attention bestowed on them by Mr. Charles Maw, of the firm of Maw and Son, Aldersgate Street; and in part to Mr. Jaques, the representative of the firm of Messrs. Warne and Co., Tottenham India-rubber Works, who, in the cause of science and suffering humanity, spared neither time nor trouble in bringing to perfection the India-rubber tube and convolvulus, devoting his best energies to the work in hand, with unflinching interest, until the end was accomplished.

The Calculus Detectors which I have brought with me this evening, were made by Mr. Hawksley of Blenheim Street, who has taken especial pains to carry out my instructions.

For assistance in procuring suitable chemical agents for the solutions I have alluded to, my best thanks are due to Mr. Gale, of the firm of Bell and Co., Oxford Street, and to Dr. Flite, of the British Museum.

It remains only to commend the inventions to your criticism, and, if they meet with approval, to your adoption. That they are faultless, it would be too much to hope. Time and use would doubtless suggest improvements, modifications, and additions; but if the principles be sound, a step will have been gained. It would have been more satisfactory for you, and certainly for me, had I been able to bring evidence of successful operations effected by their means; perhaps on a future occasion some of the gentlemen present may be able to supply this omission. Meantime, I am content to hand them over to the profession—for what they are worth.

NOTES ON CONSUMPTION.

By RICHARD PAYNE COTTON, M.D., F.R.C.P.,

Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton; etc.

IV.—CONSUMPTION AND HÆMOPTYSIS.

SOME years ago, there was an interesting discussion at the Medical Society of London, respecting the significance of hæmoptysis; and I quite well remember the general impression at that time, that phthisis and hæmoptysis were so essentially related to each other as to justify the conclusion that they were but different terms for expressing the same condition. It was, in fact, simply but significantly put by one of the speakers, and received the general assent of the meeting, that "hæmoptysis meant phthisis." Those who, like myself, were in the habit of seeing a vast number of consumptive patients at a special chest-hospital, might very fairly have joined in such a conclusion, the two conditions being in such institutions constantly associated. A

further reflection upon this point, however, must make it sufficiently obvious, that the value of hæmoptysis, in a diagnostic point of view, cannot be exclusively studied in consumptive patients, but that the expectoration of blood must be taken as a separate condition or symptom which must be traced backwards to its cause or origin.

My own opinion may be thus briefly stated. I consider that phthisis must claim hæmoptysis as one of its most frequent and important symptoms; but that expectoration of blood is very often indeed quite unconnected with tubercular disease.

I propose, in the first place, to consider hæmoptysis in its non-tubercular relations.

1. Any cardiac obstruction, whether from excessive or diminished action of the heart, or from any defect in its valvular structures, may produce hæmoptysis, which may be either small or large in amount, and either pure or mixed with bronchial secretion. Perhaps the most common and severe cases of hæmoptysis from heart-disease occur in connection with mitral obstruction; but cardiac derangement of any kind, by disturbing the normal balance of the pulmonary circulation, is liable to be attended with this symptom. What was formerly known as "pulmonary apoplexy," and which is generally due to heart-obstruction, is often attended and relieved by the occurrence of hæmoptysis.

2. Hæmoptysis from the rupture of an aneurism of the general circulation is occasionally met with; but it is, of course, usually to a large and rapidly fatal amount; although the final rupture is sometimes preceded by small and occasional discharges of blood, arising either from local pressure or the congestion of surrounding parts.

3. Hæmoptysis is an occasional but far from common attendant upon intrathoracic malignant growths; but in such cases it is usually small in amount.

4. Simple bronchitis, whether acute or chronic, sometimes, but not often, gives rise to hæmoptysis. I remember two such cases in which the loss of blood was extreme, and in one of them nearly fatal; but the more common form of bronchial hæmoptysis is of moderate quantity, and is evidenced rather by tinged or streaky sputa than by pure or abundant blood.

5. Bronchial congestion, or that state of lung short of actual pneumonia, is often attended, and indeed relieved by, more or less hæmoptysis. Such condition is frequently to be met with in low febrile states, in which the pulmonary organs have become implicated.

6. True pneumonia, as is well known, is a constant occasion of hæmoptysis; but in this disease the blood is seldom pure, but intermixed with pulmonary secretion in the well known form of "rust-coloured" expectoration. Pneumonia, which has passed into a chronic form, is also often attended with hæmoptysis.

7. Hæmoptysis is occasionally met with in connexion with an impoverished or thinned condition of the blood, the bleeding not being limited to the pulmonary or bronchial membranes, but proceeding also from the throat or gums or other parts. In one such case which fell under my notice, there was likewise a sanguineous exudation from several parts of the body, and even from the extremities of the fingers. In this form of bleeding, which has sometimes been called *spurious* hæmoptysis, but which is nevertheless a reasonable source of alarm, and may occasion doubtfulness even to the medical mind, the blood is never pure, but of a thin watery character, much resembling, as I have elsewhere described it (On Hæmotysis, *Lancet*, vol. 2, 1865), a mixture of red currant jelly and water.

8. Not infrequently a congested state of the pharyngeal mucous membrane or of the tonsils is attended with an escape of blood, either pure or mixed with mucus from the surrounding parts. I have frequently seen this occasion great anxiety, as it is often associated with a defective state of the general health, which may easily be construed into consumptive symptoms.

9. Many writers have treated of a form of hæmoptysis which they have styled "vicarious," as being either supplementary to, or taking the place of other discharges, but especially the catamenia. I do not deny the possible existence of such cases, but I confess that I have never met with what have been to me satisfactory instances of the kind. Hæmoptysis must, of course, sometimes be coincident with the catamenial or other discharges of blood; but I have never met with an unequivocal instance of the one superseding, or being interchangeable with, the other.

From these few observations, briefly but perhaps sufficiently put, it will, I think, be apparent that in practice, we must meet with many cases of blood expectoration, which are quite unconnected with consumption, and that the idea once prevalent, and which I think to some extent still remains, that hæmoptysis is practically but another name for phthisis, must be erroneous.

I have next to consider hæmoptysis in its bearing upon phthisis.

[To be continued.]

THE ANTICIPATION AND TREATMENT OF POST PARTUM HÆMORRHAGE.

ABSTRACTS OF PAPERS BY DR. BASSETT, DR. BOYD MUSHET, DR. HEYWOOD SMITH, DR. TALFOURD JONES, ETC.

[A PAPER by Dr. Whittle (Liverpool) on the anticipation of *post partum* hæmorrhage by the employment of ergot, published in the JOURNAL of September 27th, was followed by exhaustive remarks of Dr. Lombe Atthill of Dublin in the JOURNAL of November 1st, wherein he recorded his opinion that ergot is not to be relied on exclusively, but the forceps applied as an aid to the uterus, not as a substitute for its action; ergot and strychnia in combination being then resorted to. These papers have attracted much attention; and, in the JOURNAL of November 15th, Mr. Moorman advocated the employment of cold affusion to the face and abdomen, not in anticipation, but as treatment of *post partum* hæmorrhage, asking for the experience of others as regards the intrauterine injection of a solution of iron. This was answered the following week by communications from Dr. Bassett of Birmingham, who preferred giving iron internally during the last few weeks of pregnancy, with the view of anticipating hæmorrhage, to injecting the solution of iron into the uterus as a mode of treatment—the latter not being so innocent an agent in his hands as he had supposed from what had been written about it; from Dr. E. Whittle, supplementing his previous paper by endorsing Dr. Atthill's suggestions as to not emptying the uterus too rapidly; from Mr. De Berdt Hovell, advocating his uterine truss; and from Dr. W. B. Mushet, inculcating the "novel" method of injecting cold water into the uterus, ascribing the virtues of the perchloride of iron injection mainly to the employment of water as a vehicle. This elicited a reply from Dr. Barnes in the JOURNAL of November 20th, insisting strongly upon the difference between cold and styptics, and referring to his already published views on this important subject. Dr. L. Atthill also wrote in praise of the injection of a solution of iron, believing that he had saved several lives which were in great jeopardy. Dr. Percy Boulton drew attention to the employment of the abdominal binder before delivery; to which Dr. A. B. Steele replies, that "it is vastly inferior to the hand, and less trustworthy." Further manuscript communications on this subject have been forwarded to us in such profusion, that we find it impossible to publish them *in extenso*. The following are abstracts of some of the more important manuscripts, which we regret to be unable to publish as sent, according to custom. We reserve for publication a communication by Dr. Snow Beck.]

Dr. JOHN BASSETT, Professor of Midwifery in the Queen's College, Birmingham, in a paper read before the monthly meeting of the Birmingham and Midland Counties Branch on November 13th, advocates strongly the preventive treatment of uterine hæmorrhage. He regards granular degeneration of the kidneys with albuminuria, and general debility from insufficient nourishment or defective power of assimilation, as very frequent causes of the tendency to hæmorrhage. Andral and Tyler Smith directed special attention also to the anæmia occurring in pregnant women. After referring briefly to the various researches upon the increased volume and altered condition of the blood during this period, he enters upon the consideration of hæmorrhage itself. The worst cases, he considers, are those in which there is alternate contraction and relaxation of the uterus, or where there is irregular contraction, following, as frequently happens, from tardy or precipitate labours. "For more than twenty years," he says, "it has been a rule of practice with me to pay careful attention to the health of all pregnant women who come under my notice, well knowing that a healthy pregnancy is followed by a natural labour and a favourable recovery. This led me to examine very carefully into the condition of those who were in the habit of flooding. I found them uniformly out of health; they all suffered from impaired powers of assimilation in one form or other; they were weak, dyspeptic, nervous, with diminished muscular power...I always prescribe iron in combination with an alkali or an acid, as the particular circumstances may indicate. As regards anticipating *post partum* hæmorrhage at the time of labour, ergot, given shortly before the birth of the child, answers sometimes, but is uncertain; a moderate dose being better than repeated larger doses. Pressure is generally and deservedly relied upon for ensuring detachment and expulsion of the placenta, contraction of the womb, and arrest of unnecessary flow of blood. It is the readiest and most effective means we have at hand; and, in the majority of cases, it is all that is required to check hæmorrhage. Grasping the uterus with the hand, and holding it firmly, is the method in common practice; but when the flow is very severe, and does not yield to this proceeding, it is well to transfer the pressure to the aorta—a practice which is, in my opinion, of the

utmost value, and the importance of which is by the present race of accoucheurs undervalued." "Where the hæmorrhage is less severe, the binder, with a triangular-shaped pad underneath, is more effective than pressure by the hand, preventing the uterus from rising in the abdomen and filling with blood, and allowing a coagulum to form in the interior." He does not approve of constantly removing the clots from the interior of the uterus whilst hæmorrhage is going on, regarding these as the consequence, and not the cause. Cold acts at first as a powerful stimulant, producing shock in the system; but as a sedative, if used for a longer time. Opium, where spasm or alternate contraction is the predominating feature of the case, is of the greatest value. "If, then, ergot, cold, pressure, and opium, have failed to check the hæmorrhage, we are called upon to take the next step, and inject a solution of the perchloride of iron into the uterus....My experience of it has not been great. I judge it to be a remedy of great efficiency, but of doubtful safety." When the hæmorrhage has been controlled, and the patient passing from a state of shock into one of syncope and collapse, transfusion is the one resource.

Dr. W. BOYD MUSHET, in replying to Dr. Barnes's communication, still asserts that the injection of cold water into the uterus was first "definitely mentioned" by himself. "Novel" (not familiar) differs materially from "original" (previously unknown), with which Dr. Barnes would appear to confound it. He still maintains that the cold water produces the benefit, and diminishes the irritant action of the iron salt. He has seen desperate and fatal cases of *post partum* hæmorrhage, and imminently fatal ones, in both which classes neither cold water internally nor the perchloride was employed. In one patient, the wife of a medical man, the hæmorrhage was intermittent, and the uterus did not firmly contract. "I did not use cold water except externally; but some idea of the gravity of the case may be furnished from the fact of the husband entreating me to perform transfusion from his own arm; whilst the wife was pulseless, nearly blind, and delirious. She nevertheless recovered under what I now regard as inert treatment—namely, ergot, brandy, pressure, introduction of the hand from time to time to remove coagula, with nutritious cold drinks as early as possible, which I always persistently administer, to refill the vessels and diminish the risk of septic absorption." "I mention these instances in proof of experience of severe cases of hæmorrhage, and to testify that patients apparently moribund may recover without the perchloride or even cold water injections." "From the discrepancy of views existent on the subject of the perchloride of iron, it must be conceded that its utility is still *sub judice*; and I think, without misjudging Dr. Barnes, that he has not proved this salt to be more valuable than, and as little injurious as, cold water." "I have to repeat that I have never met with pyæmia after cold water injections, and have not found them fail. Spite of cold or iron, I believe fatal cases of hæmorrhage will occur when there is undue delay of remedies, from want of promptness or unavoidable circumstances." "In conclusion, I unite with Dr. Barnes in the desire to appeal to clinical facts. Let every case of fatal *post partum* hæmorrhage, with its history, in which the perchloride or cold water injection has been used, be duly published, and an emphatic verdict may be arrived at; but I contend that the time is not yet ripe for the delivery of an ultimate decision."

Dr. HEYWOOD SMITH suggests that the records of all cases in which the injection of iron has been employed should be recorded, the several issues being stated; and, in cases of apparent failure, an attempt being made accurately to point out the cause of such failure; carefully tracing out the cause of death in all fatal cases; giving due consideration as to whether the agent employed was really the offender, or whether the fatal issue was owing to the severity of the flooding that led to its use, or to some morbid condition that arose, or might have arisen, independently of any treatment for its arrest. He thinks the employment of ice, passed into the uterus, one of the most valuable agents we can employ—better even than the injection of iced water, as this entails delay and produces more shock. Incidentally, he alludes to the great advantage of feeding by the nostril in cases of extreme exhaustion. It does not seem to induce the vomiting, or repeated efforts at swallowing, that fluids taken by the mouth apparently do.

Dr. TALFOURD JONES of Brecon communicates two cases in which he employed the intrauterine injection of a solution of perchloride of iron for *post partum* hæmorrhage. In the first case, a full dose of ergot was administered just before the child was born; but the uterus did not contract at all well until after a good deal of compression and manipulation, relaxing again in about half an hour, when several clots were removed; the hæmorrhage being marked. This was repeated; and subsequently snow-water was injected freely, with only temporary relief. Faradisation was then tried, but without appreciable effect. The patient being now in extreme danger, cold, pallid, restless, the pulse faltering, the sight failing, and deglutition impracticable, injec-

tion of equal parts of tincture of iron and water was resorted to, and the patient made a good recovery. In the second case, a primipara, flooding ensued, and injection of the perchloride diluted with water was successfully resorted to, after compression, ergot, and cold had been tried in vain. The patient recovered perfectly. ✕

[To be continued.]

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORTS FROM THE METROPOLITAN HOSPITALS ON THE USE OF TORSION IN SURGICAL OPERATIONS.

TORSION of arteries is a proceeding largely but very unequally adopted by modern surgeons. The procedure is commonly adopted at some of the metropolitan hospitals, but is rarely witnessed at others; in explanation of which fact it will be noticed (upon perusal of the following reports) that the opinions of the value of torsion entertained by different surgeons are widely divergent. Gentlemen who have most largely employed it are generally found to be those who most commend it; whilst dread of secondary hæmorrhage, or other mishap, seems to deter many from even entering upon its use. Such theoretical fears, however, appear to be groundless, as the anticipated mishaps do not occur in actual practice. Mr. Callender, of St. Bartholomew's Hospital, remarked, in a lecture published in the *BRITISH MEDICAL JOURNAL*, on January 20th, 1872, "there is no record, where the operation has been properly practised, of any sloughing of the twisted end, or of any abscess along the track of the vessel; and whilst the presence of a foreign body in the wound is avoided, the patient escapes the anxiety which the prospect of the removal of ligatures entails. And to add one other, and this a strong argument in favour of torsion, it is free from all risk of that secondary bleeding which is sometimes associated with the separation of a ligature." The opinion of Mr. Birkett of Guy's Hospital is equally strong in favour of torsion; he always uses it in his operations, and has never met with recurrent or secondary hæmorrhage after its employment, nor with suppuration extending up the sheath of the twisted vessel. In fact, if the bleeding be once thoroughly arrested by torsion, it never recurs. Torsion requires considerable manipulative skill for its successful employment; a circumstance which young operators are apt to forget. Much time also is consumed where all the small arteries are twisted; consequently the catgut carbolised ligature is sometimes used for small vessels, and torsion is restricted to the main arteries—the very reverse, as Mr. Forster observes, of the precepts formerly inculcated. Want of space will not permit all the replies which have been received to appear now; the remaining reports will be published next week. Our thanks are due to the surgeons who have favoured us with the communication of their experience and opinions on the subject.

Sir JAMES PAGET writes: I have not any large experience of torsion of arteries. My impression is that we ought to learn which cases are best suited by each of the chief means of stopping hæmorrhage—ligature, carbolised ligature, acupressure, torsion; and in each case to use the most appropriate means.

MR. JOHN WOOD, of King's College Hospital, is of opinion that, although torsion is undoubtedly of value in arresting bleeding from the smaller arteries, especially in plastic operations on the surface of the body where extensive primary union is essential, yet its application to the larger arteries does not present so many advantages as that of the ligature. The grounds of his opinion are as follows.

1. Torsion is not so certainly effective against primary and intermediary hæmorrhage as a well applied ligature. A surgeon obliged to leave his patient without immediate surgical supervision after an operation, cannot be so confident about his safety from bleeding as when ligatures have been employed.

2. The ligature is more speedy in its application in cases where many arteries are bleeding at once, and it is important to prevent much effusion of blood without other means of restraining it. However dexterously torsion may be applied, it occupies more time than the ligature.

3. In instances where the artery is cut off short in a hollow part difficult of access, as between the bones of the leg in amputation below the knee, and when the vessel and the tissues in its immediate contiguity

are diseased, thickened, and consolidated, the process of isolation necessary for torsion is tedious, and sometimes involves much loss of blood, and a good deal of violence to the diseased parts; while, on the other hand, the ligature, including perhaps a small portion of the parts adherent to the vessel, and thus supporting and strengthening it, is usually a quick and effective proceeding.

4. Arteries of unusual delicacy of texture, or softened and rendered friable by disease (constituting the most trying tests of any hæmostatic proceeding) are apt under torsion, especially unlimited torsion, to have so much injury inflicted upon their sheath-attachments and *vasa vasorum* for a considerable distance, as to become subject to disorganisation, suppurative inflammation, and burrowing of matter along their sheaths. In limited torsion, the pressure of the forceps applied transversely above the twisted part, necessarily inflicts a certain amount of damage upon the arterial coats at that point, rendering them more likely to slough or yield to the forces of the circulation, than when a ligature is applied, and such pressure is not needed. This is especially important in the not uncommon cases where an efficient internal clot is not formed.

5. Where a branch issues from a large artery close above the point of section, torsion involves the probability of such a branch either preventing sufficient and effective twisting, or becoming itself detached from the parent trunk, and thus forming a source of hæmorrhage from the aperture of its exit, and perhaps also from its torn off distal end. Under the same circumstances, a ligature is usually easily and effectively applied.

6. In instances where torsion is hurriedly or roughly performed upon a large artery, the vein in its immediate neighbourhood, and often closely connected with it, is apt to be pulled about, dragged out of its sheath, or torn, in separating those connections. So the vein is rendered more prone to assume unhealthy inflammation, or pouches and interspaces are left, which may become the seat of putrefactive or suppurative processes in dangerous contiguity to the open end of the vein.

7. Neither limited nor unlimited torsion removes the possibility of necrosis of the twisted end of the artery, which would, in case of its occurrence, interfere with and prevent primary adhesion at that point, just as much as a ligature or any other foreign body, and leaves a less direct way for the escape of the slough, than a ligature does when left hanging out of the wound.

8. A metallic or hempen ligature placed upon a large artery, and left hanging out at the nearest and most dependent part of the wound, acts beneficially in conducting the discharges to the surface from the dangerous vicinity of the large associated and contiguous vein, and this advantage more than compensates for the small interference with primary adhesion to which it may give rise. In very many cases also, these larger vessels lie in close proximity to a cut bone, which, from the shape in which its section is usually left, preventing close contact of the surrounding soft parts, is the least likely place in the whole wound for primary union to take place, and is the most usual seat of deep suppuration during the process of healing after amputation. In such cases, the ligatures may be made use of as valuable conductors of purulent discharges from a dangerous and often inaccessible neighbourhood. Mr. Wood usually utilises ligatures in this manner by passing carbolised drainage-tubes alongside or over them. When hempen ligatures are used by him, they are usually first well waxed and steeped in carbolised oil. In plastic operations, especially those involving the urinary organs, acupressure and silver wire sutures are employed.

9. Lastly, Mr. Wood is of opinion that, after amputation and excision, entire adhesive union is not so usual a result as to render it a matter of essential importance to avoid the presence of a few ligatures, which may interfere with it in their linear course towards the surface, but that, on the contrary, they have the more important advantage of acting as direct drains, providing, against the not unfrequent deep retention of discharges which prolong the convalescence, and often seriously imperil the safety of the patient.

MR. SAVORY (St. Bartholomew's Hospital) thinks torsion, which is an old practice recently revived, is one of the best means of arresting hæmorrhage in certain cases; but, as a rule, for the arrest of hæmorrhage from important vessels, he prefers ligature. He considers that we are not yet justified in assuming that torsion affords the same degree of security as ligature, and he believes that the objections to ligature when properly applied have been exaggerated.

MR. COOPER FORSTER (Guy's Hospital) writes: The subject of torsion, so far as I am concerned, is pretty well used up, and I have nothing further to add to the subject. It is much more applicable to large than to small arteries, and easier to apply; this is quite contrary to what I was taught in my student days, when the twisting of large arteries, or of one larger than the radial, was never thought of. Mr. Morgan, how-

ever, taught us to twist a vessel of that size if we liked, though he never did it. The smaller vessels are troublesome sometimes to twist, and then the catgut ligature comes in very well, as it saves time. I never use any other plan than torsion for all my operations when hæmorrhage has to be arrested, except as stated above.

Mr. THOMAS SMITH (St. Bartholomew's Hospital) writes: I have used torsion in surgical operations enough to know that in skilled hands it is an efficient and safe method of arresting hæmorrhage from divided arteries, and that, in cases where a speedy union of the operation wound is desirable, torsion is superior to silk ligature, inasmuch as no foreign body is left in the wound. I rarely use torsion, on account of the time that is often consumed in securing the smaller vessels. I much prefer, and therefore employ, carbolised catgut, cutting off both ends of the ligature. This can be employed, without difficulty or loss of time, by an unskilled person, to all bleeding vessels; and it has the chief advantage that torsion possesses, namely, that no noxious foreign body is left in the operation wound.

[To be continued.]

MIDDLESEX HOSPITAL.

CASES OF TYPHOID FEVER WITH VERY HIGH TEMPERATURE:

I. FATAL; II. TREATED BY COLD BATH—RECOVERY.

(Under the care of Dr. ROBERT KING.)

Reported by Mr. R. Z. PITTS, Resident Physician's Assistant.

CASE I.—*Typhoid Fever with very high Temperature, fatal on the twentieth day: No Ulceration of the Intestines found.*—S. H. aged 17, a domestic servant, was admitted under Dr. King on July 27th. She stated that she had generally enjoyed good health, but for a few weeks previous to her admission had not felt quite as well as usual. Still she did not feel ill till July 23rd, when she was seized with chills, vomiting, and aching in the back and limbs. Diarrhoea came on next day, and had continued since.

On admission, the pulse was 108, temperature 103.4 deg. (9 P.M.) The chest was clear; the tongue furred, but moist. She still had occasional vomiting, and considerable tenderness of the abdomen. The bowels were relaxed; they acted three or four times daily. During the next three days her temperature varied from 102.5 to 104.5 deg., the other symptoms continuing.

August 1st (tenth day). The diarrhoea continued; tongue brown and fissured. She had slight delirium during the night. There were numerous rose-spots on the abdomen. The patient was becoming deaf; the sickness had ceased. She was taking a mixture of sulphuric acid and catechu. She was ordered to have three ounces of brandy, in addition to her eight ounces of port wine, daily.

August 2nd. The patient was very deaf; her expression was stupid; she had muttering delirium. There was an abundant crop of rose-spots on the abdomen, chest, and arms. She passed her motions into the bed. Pulse, 104; temperature, 103.

During the next week the patient continued in much the same state; the pulse varied from 100 to 108, and the temperature from 102.5 to 104.5 deg. The diarrhoea was kept in check by occasional opiate enemata.

On August 9th (eighteenth day), the patient was not so well; pulse, 120; respirations, 36; temperature, 104 deg.; tongue dry, almost black. The bowels had acted five times during the night; the urine had to be drawn off by a catheter. Muttering delirium continued, with great restlessness and subsultus tendinum. The stimulants had been gradually increased to eight ounces of port and ten ounces of brandy in twenty-four hours. Next morning the pulse and temperature were the same, but in the evening the pulse had risen to 132, and the temperature to 105.2 deg. The patient was quite unconscious. During the night the temperature continued to rise steadily, until at 9.15 A.M. on the 11th it reached the maximum, 108.4 deg. She died at 10.45. Half an hour after death, the temperature in the axilla was 105.5 deg.

Post Mortem Examination.—There was hypostatic congestion of the lower half of both lungs posteriorly, but no pneumonia. Peyer's patches were very vascular and much thickened, but only two small erosions were to be seen; no deep ulceration or sloughing. The mucous membrane of the ileum and first part of the colon were deeply injected, and the solitary glands over the same area were much enlarged. The liver and spleen were both large, congested and soft; the former being, moreover, far advanced in fatty degeneration.

CASE II.—*Typhoid Fever, with very high Temperature, treated with Wet Packing and Baths: Recovery.*—A young butcher, aged 19, was admitted on August 9th under Dr. King. He had been taken ill, with shivering, etc., on July 26th, but remained at his work until August 2nd. During the following week he was able to get up daily, and at-

tended at the Welbeck Street Dispensary; but becoming steadily worse, he at last came to the hospital.

On admission (fifteenth day), the pulse was 100, soft; respirations, 32. He had slight cough; a few bronchitic rales were heard over the back; temperature, 105 deg. There were about a dozen characteristic rose-spots on the abdomen. The patient had been growing deaf during the last few days. The bowels had been relaxed, but he then had no diarrhoea. The tongue was covered with thick white fur.

For the next ten days the case ran the usual course of a severe attack of typhoid fever. Delirium, at first violent, commenced on August 10th, but after a few days it was gradually replaced by coma. On the 15th the tongue was dry and brown; there were sordes on the teeth; the abdomen was much distended; the bowels acted two or three times daily; he passed his motions under him. Pulse 104, soft, dicrotous; temperature, 105 deg. From his admission until August 19th, his temperature varied from 103 to 105 deg. Quinine was given on several occasions, first five and then ten grains at a time, but without producing any very marked diminution of the pyrexia. He was ordered, on admission, eight ounces of wine daily, and the amount of stimulant was gradually increased until, on the 19th, he was taking eight ounces of brandy in the twenty-four hours. On the morning of the 20th, at 9 A.M., his pulse was difficult to count, about 140, and his temperature 104.5 deg. During the day the latter rose steadily, in spite of frequent sponging of the body, until at 2 P.M. it was 107 deg. The patient was quite unconscious; there was constant subsultus tendinum, and no pulse could be felt at the wrist; in fact, he appeared clearly moribund. Still, as there was no pneumonia, no albuminuria, or complication of any sort, Dr. King thought that it would be as well to try the effect of artificial cooling, as a last resource. He accordingly ordered the patient to be packed in wet sheets; but this produced so little effect that at 2.45 he was placed in a bath at a temperature of 87 deg. His pulse was then uncountable, respiration 60 per minute, and temperature in the rectum 107.3 deg.

The following table shows the result.

August 20.	Temp.	Resp.	Pulse.	
8 A.M.	104.4			
9 "	104.4	48	140	
11 "	105.0			
12 (noon)	105.0			
1 P.M.	107.0			Wet packing.
2 "	107.0			
2.30 P.M.	106.7			
2.45 "	107.3	60		Uncountable. Patient immersed in bath; temperature of water, 87 deg.
2.55 "	106.6	56		Temperature of bath, 81 deg.
3.0 "	104.2	48		" " " 81 "
3.15 "	104.2	48		" " " 78 "
3.20 "	103.2	44	136	" " " 77 "
				Patient sleeping quietly.
3.32 "	101.9	36	120	Temperature of bath, 77 deg. Pulse stronger; less dicrotous. The patient was awake and looked more intelligent; he had taken six ounces of brandy since he had been in the bath.
3.38 "	101.0	32	112	Temperature of bath, 76 deg. Patient removed from bath.
3.40 "				Sleeping quietly.
3.48 "	99.7	28	112	Pulse firmer and less dicrotous.
3.55 "	98.6	28	112	
4.30 "	96.1	24	100	
5.0 "	95.4	20	100	Face rather livid; extremities cold; hot bottles ordered to be applied to the feet, sinapisms to legs, and to be wrapped in warm blankets.
5.30 "	96.5			
6.0 "	97.3	24	112	
6.30 "	97.6			
7.0 "	99.0			
7.30 "	101.0	28	120	
8.0 "	101.3	32	120	
8.30 "	101.6	30	124	Slight return of subsultus.
9.0 "	101.4	32	124	
10.30 "	102.3	32	128	
12.0 "	102.0			

August 21.

1.0 A.M. 102.4 40 124

In spite of frequent cold spongings, the patient's temperature rose steadily during the night. At 2 A.M. it was 103.6; at 6 A.M., 104.4;

and at 8 A.M. the thermometer in the rectum stood at 106; the pulse could not be counted; respirations, 60; subsultus tendinum. The patient muttered unintelligibly, but took not the least notice of what was passing. He was again placed in the bath.

Temp.	Resp.	Pulse.	
8.0 A.M. 106.0	60	About 150	Cardiac pulse.
8.10 „ 106.0	50	„ 140	
8.15 „ 105.5	36	„ 140	
8.22 „ 104.5	30	„ 140	
8.32 „ 102.0	30	„ 144	
8.35 „			Removed from bath.
8.40 „ 100.6	30	„ 120	

The teeth were chattering, face rather livid, patient shivering, heart-sounds very weak. He was ordered friction of body, hot bottles, sinapisms to the legs, etc.

Soon after being put into the bath, the patient said, in reply to a question, that he was "very comfortable, and liked it very much". At 9 A.M., the temperature was 97.6 deg.; respirations, 24; pulse, 104, it could be felt at the wrist. The patient's temperature was noted every half-hour throughout the day. It rose steadily after 9 A.M., until, at 11.30 A.M., it stood at 103 deg. About 1 P.M. it began to fall, and at 5.30 P.M. the thermometer marked only 100 deg. After 7 P.M. it was 101.5 deg. At 9 P.M., pulse 112; respirations, 36. The patient had been sleeping quietly nearly all day, but had taken plenty of nourishment, including six ounces of *mistura spiritus vini galici*. The skin was moist, and the general appearance improved.

August 22nd, 10 A.M. Pulse, 116; respirations, 36; temperature, 102.2. The patient was more sensible; he protruded his tongue, when told, and said he felt better. He slept feebly. The skin was moist. The bowels had acted once only in the last twenty-four hours.

August 23rd. The patient was restless and wandering during the night; he muttered when awake, but answered rationally when spoken to. Pulse, 120; respirations, 32; temperature, 103 deg.—10 A.M. Tongue very dry and brown, thickly coated in the centre, and fissured; sordes on lips; slight subsultus.

After this date the patient continued in much the same state for several days. His temperature was generally about 103 deg.; but on the afternoon of the 24th it rose to 104.5, and remained at that point for some hours.

On the 27th, there was a decided improvement. The thermometer stood at 101 during the greater part of the day; the patient was more intelligent, and his tongue evidently cleaner. Next day, there was a further fall of temperature, and this was the commencement of a very slow but steady convalescence. The termination of the fever left him in a state of complete prostration both of body and of mind; and it was not until October 14th that he had sufficiently recovered to be able to leave the hospital.

REMARKS BY DR. KING.—There are one or two points in the above cases to which I would call attention. Both patients were young and healthy, both were taken ill about the same time, and both derived the poison from the same source, inasmuch as they were both victims of the milk epidemic. In both the fever was intense but uncomplicated; both were treated in a similar manner as regards stimulants and medicine, yet one died and the other recovered. That the latter owes his life to the artificial cooling to which he was subjected, no one who saw him at the time could for a moment doubt; and the reason for resorting to the cold bath in his case was, that the *post mortem* examination of the previous case revealed little or nothing to account for death. It is true there was hypostatic congestion of the lungs, but much of this occurred, in all probability, after death, as the body long retained its heat and the blood its fluidity. Frequency of the respirations, in cases of hyperpyrexia, must not be regarded as of itself an indication of pulmonary engorgement; for, in such cases, the breathing is usually both rapid and shallow to an extent far beyond what is accounted for by the congestion of the lungs. As the temperature falls in the bath, the pulse usually becomes fuller and slower, while the respirations gradually diminish in frequency and increase in depth. Although the bath, in such cases, affords the only chance, it is not altogether free from dangers of its own; of these the most important is fatal collapse. It should never be forgotten that the temperature continues to fall for a variable period after the patient is removed from the water; for this reason, it is well not to attempt too much at first, and on no account should the temperature be allowed to fall below 102 degs. in the rectum before the patient is taken out. Even then he must be carefully watched, and, should any symptoms of collapse appear, hot bottles, warm blankets, sinapisms, etc., must be at once resorted to.

I cannot conclude these remarks without expressing my thanks to

Mr. R. H. Lucas, the resident medical officer, and to Mr. Robert Pitts, the physician's assistant, to whose care and attention my patient is mainly indebted for his life.

REVIEWS AND NOTICES.

ON DEFECTIVE TEETH, AS THE UNSUSPECTED CAUSE OF VARIOUS FORMS OF CONSTITUTIONAL DERANGEMENT: with Numerous Cases. By ADAMS PARKER, Senior Surgeon-Dentist to the Birmingham Dental Hospital. Birmingham: Cornish Brothers. 1872.

THIS pamphlet will doubtless prove useful, though chiefly so to its author. According to the preface, a portion of the matter appeared in the *BRITISH MEDICAL JOURNAL* (May 1863), and formed part of two clinical lectures delivered at the Queen's Hospital, Birmingham. On the first page, we are told that, so far as the author is aware, "very little in dental literature has been published in this country in a form that can readily be understood by every one." So far as we are aware, that little will receive no very valuable addition from the publication of the pages before us. Appealing to the medical profession in the body of the paper, it explains in the preface the relation of the teeth to the rest of the system; and as, out of the forty pages, there are fourteen devoted to extracts bearing upon the subject, the term "unsuspected," which appears on the title-page, seems scarcely justified by the evidence given in the work itself. It would have been wiser if this pamphlet had been produced either as a purely scientific contribution to dental literature, or as a popular treatise on a condition of the mouth that is but little understood by the public, and to whom it might have proved useful. We should, in the latter case, have known precisely the value to be attached to its contents and the object of its publication, whilst under present circumstances both are involved in obscurity. The public do not care for tabulated statements such as appear at the end of Mr. PARKER's pamphlet; and the medical profession certainly do not care to be "reminded" that the brain is the seat of sensation, and that the spinal cord rising from the brain is, in fact, a part of it. Having thus pointed out the demerits of this brochure, we willingly admit that many of the cases published are both useful and suggestive. It is undoubtedly true that defect of the teeth, as a cause of dyspepsia, is often overlooked, and that many of the so-called obscure cases of neuralgia are only obscure from the fact, that a sufficiently careful examination of the teeth has not been made. Many instances of fistulous openings in the cheek might also, doubtless, have been brought to a more satisfactory issue than the one reported, if the dental surgeon had been earlier consulted. These will, however, receive ere long, we trust, more attention, and the hideous deformities produced by the cicatrices of old fistulous openings in the cheek will become very rare in practice, and only be mentioned in text-books as matter of historical interest attaching to the operations of the past.

A MANUAL OF THE PRACTICE OF SURGERY. By W. FAIRLIE CLARKE, M.A., M.B., F.R.C.S., Assistant-Surgeon to Charing Cross Hospital. Second Edition, revised, enlarged, and illustrated. London: Renshaw. 1873.

THE first edition of this work might not inaptly be styled a pocket-book of surgery for the use of students. In it, Mr. CLARKE made no claim to originality, but merely offered it to students as a condensed and handy account of the various surgical diseases and injuries, and as introductory to the study of larger works. Subsequently, Mr. Clarke produced a sort of appendix to this little book, which dealt with the various kinds of splints and bandages. These two works are now united in the volume before us, which contains many fresh illustrations and some additional matter; but many important subjects, which surely should have been included in a recent work, are conspicuous by their absence. In the article on Hæmorrhage, we naturally looked for a short account of the so-called Esmarch's method; in the part devoted to the Treatment of Dislocations, we expected to see the name of Bigelow, with a description of his method; and in the article on the Treatment of Aneurism, we were disappointed in the hope of meeting with a condensed account of the treatment by electro-puncture. We hold, for many reasons, that publications intended for beginners in any science should be full, accurate, and up to the knowledge of the subject at the date of publication, especially because tyros are not in a position to supply deficiencies or correct errors. In justice to Mr. Clarke, it must be said that he is accurate as far as he goes; but he does not go far enough to satisfy the average student.

We have pointed out the chief omissions; but this is the least satisfactory part of our duty. We now state with pleasure that there are

many features in the second edition which will make it attractive to students. There are many illustrations, not a few original; the formula at the end will be serviceable to those for whom it is intended; and the size and "get up" of the book are excellent, being similar to others of Mr. Renshaw's useful manuals, such as Mr. Lawson's book on the *Eye* and Dr. Green's *Pathology*.

A MANUAL OF THE OPERATIONS OF SURGERY FOR THE USE OF SENIOR STUDENTS, HOUSE-SURGEONS, AND JUNIOR PRACTITIONERS. By JOSEPH BELL, F.R.C.S.E. Third Edition, illustrated. Edinburgh: Maclachlan and Stewart. 1873.

THE fact that this useful little book has reached a third edition, is sufficient to show that it is appreciated and has been serviceable not only to ordinary students, but also to those of larger growth. No doubt it has commanded a large sale in Scotland; and we frequently see it in the hands of London men, and are in the habit of recommending it. Although there is a decided (and perhaps natural) leaning to the teaching of Mr. Syme, still Mr. BELL does not omit to incorporate anything of importance from other sources, British and foreign. In our opinion, the success of the book is due partly to the use of plain illustrations, and partly to the fact that it preserves the happy mean between being too scanty and too minute. At the risk of inconsistency, we will say that it might with advantage be somewhat more minute; *i. e.*, it might give some of the more common operations in a more detailed manner, describing each step, its how and its why. This remark is founded on a knowledge of the queries put to us by students in going through the course of operative surgery; and we trust that the next edition will be more ample in this respect. However, the work, as it is, is undoubtedly, of several published, the one best adapted for those to whom it is addressed.

NOTES ON BOOKS.

LETT'S *Diaries* for 1874 have passed into the category of necessities of life for a very large proportion of busy men. We have before us a variety of forms. No. 42 may be recommended as a diary to lie upon the library table for daily memoranda of all sorts. Nos. 17 and 20 are convenient little pocket-diaries, not specially suited, however, for medical men; while Lett's *Medical Diary* for 1874 is a really admirable and most convenient pocket-book, of the kind indispensable in some variety, to medical practitioners. It contains a great deal of well compiled useful information, and is altogether an excellent medical companion. It is of course procurable in plain or in durable Russia bindings.

SMITH'S *Physician's and Surgeon's Visiting List* is now in its twenty-eighth year, and is too well known to need more than mention.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, DECEMBER 10TH, 1873.

W. R. E. SMART, M.D., R.N., President, in the Chair.

THE DEVELOPMENT OF PLAGUE IN MOUNTAINOUS COUNTRIES AND ON THE HIGH TABLE-LANDS OF EUROPE, AFRICA, AND ASIA. BY J. D. THOLOZAN, M.D.

THIS communication was divided into two parts: the received opinions on the original sources and *habitats* of plague; and facts relative to the development of plague in the centre of continents and in elevated regions. 1. When this scourge had become almost endemic in Europe, and was comparatively rare in the East, no one dreamed of referring each outbreak to reimportation from Asia or Africa. In 1845, Egypt, Syria, and Constantinople, were the only recognised plague-centres; and the limits of these were restricted to well defined zones. Thus Pariset states that plague never in Egypt goes beyond the first cataract, and, with other writers, denies it a birthplace in Upper Egypt, Nubia, and Abyssinia. Prus contends that a marshy soil or alluvium near the Mediterranean and certain rivers is necessary to its development. Hirsch, while admitting that elevated places may be attacked, adds that a moist situation is necessary for its production, and makes the north of Africa and the west coast of Asia the plague-country. M. Bouchardat concludes that the origin of plague is subordinated to the question of locality. These opinions of the eighteenth and first half of the nineteenth century, though representing the facts of that period, contain but half the truth, and must be supplemented by what was observed in the sixteenth and seventeenth centuries, as well as new facts, if we are to arrive at a positive formula to comprehend all the conditions of origin of plague. Each generation can but witness a

limited number of events: facts have been realised in former epochs that no longer come before us. By uniting the observations of all, we obtain the surest ground on which to raise the edifice of true science, which is for all places and for all times. 2. At the same time that plague was frequently appearing in the ports of England, France, Spain, and Italy, Webster remarks that it appeared as frequently in the towns of Germany. A document of the Parliament of Provence shows that, of twelve epidemics of plague from 1502 to 1664, several occurred in years when the town of Marseilles and other ports were exempt. Besides the records of plague at Poitiers, Paris, Lyons, Montpellier, and Nîmes, in the years 1606, '23, '26, '29, and '30, respectively, the observations of Scaliger for Toulouse and of Tardini for Milan in 1829, we have an account of plague in Italy half a century earlier by Massaria, commencing at Trent. Felix Plater, a physician of Basle, notices seven most destructive epidemics of plague in that district from 1539 to 1610. Switzerland and the Tyrol at this time—from 1539 to 1610—present quite a chronological series of outbreaks. According to Murat, plague continued to appear up to 1668 in Switzerland. So that true bubonic fever lingered as an endemo-epidemic even in the centre of Europe in the sixteenth and seventeenth centuries. Plague, introduced into Europe at a memorable time of history, acquired the right of domicile by length of tenure, and showed the same qualities, sometimes comparatively quiescent, sometimes rousing itself with an epidemic violence as widely spreading, as severe, and often of as long duration, as any original invasion of it on its native continents. In the seventeenth century, Evagrius and Procopius, Russell and Eton, also Ludolph, give us evidence of the plague arising in Ethiopia and in Upper Egypt. An Arabian physician, in a commentary of the *Canon*, speaks of it as endemic in Abyssinia. Garchi describes "*taoun*" after Ibn-Meizour in a manner clearly characteristic of plague as often arising in Abyssinia. The facts generally received about plague being thus rectified for Europe and Africa, it remains to speak of Asia. Plague occurred in 1840-41 in the villages around Erzeroum; it was endemic in Anatolia and Armenia from 1812 to 1828. Butel thought it was carried thence to Constantinople. Aubert notices that an epidemic at Smyrna in 1837 was imported from the interior. The history of plague in Mesopotamia in the eighteenth and nineteenth centuries shows that the great epidemic of 1773 came from Asia Minor to Bagdad by way of Diabek. It was the same in 1800 and 1802. The plague of 1830-31 came from Kurdistan and from the north of Persia, where it was introduced from the *pachalik* of Erzeroum, and chiefly from Kars. In the Himalayas of Gurwhat and Kumaon, an endo-epidemic plague is not yet extinct. Plague, therefore, can be developed on all soils, at any altitude, independently of position or of meteoric influences. Season only determines slightly the time for its appearance. Hygienic conditions are more important. Famine is a predisposing circumstance—nothing more. In the last three pestilences under Dr. Tholozan's observation, that of Bengali only, in 1857, coincided with famine; the second, in Mesopotamia in 1867, and the last, in Persian Kurdistan in 1871, occurred in districts which had not even felt want. Moreover, in 1871, in Persia, plague was limited to a small district where there was no scarcity of food; while in the centre of the country, in the east, and in the south, where the famine was excessive, no case of plague was developed, though, during the reign of hunger, dysentery prevailed, and, towards its close, both typhus and relapsing fever.—Dr. WALLER LEWIS inquired whether, if English epidemiologists had recognised the restricted distribution of plague, they had ever considered it dependent on paludal conditions.—Dr. MURRAY spoke of the occurrence of plague in the elevated districts of the Himalayas referred to as within his personal knowledge; so that a dry air was no more a barrier to it than elevation of site.—Dr. MILOV pointed out that plague was now nearly extinct in the very places where formerly it was most frequent.—Dr. BUCHANAN remarked that the highly contagious nature of plague, and its now being met with chiefly in ships, fully accounted for its prevalence in the densely populated and generally unhealthy seats of traffic, in ports at the mouths of rivers, and on sea-boards, whence it would be only fitfully carried to inland districts. In London, it had become quite endemic until purged by the great fire.—Dr. SQUIRE called attention to the outbreak at Eyam in Derbyshire as a parallel to the instances brought forward by Dr. Tholozan in Switzerland and Persia. This village, one of the most secluded and elevated in England, had the infection imported by some cloth from London, and was completely depopulated. He considered the observations at the end of this paper, by so able a physician as Dr. Tholozan, invaluable, as conclusively proving that "typhus is not in fact the plague of modern times"; for, while typhus and relapsing or famine fever followed as usual upon starvation, plague was confined to another part of the country not suffering from famine. These diseases, when studied together, were found not only to differ etiologically, but to be essentially distinct.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 20TH, 1873.

1873-4.

THE issue of the number in which the programme of the ensuing year is sketched, invites us to a brief review of the past and to a peep into the future. The historical retrospect of the year would require more space than can this week easily be allotted to it; but a rapid glance may be cast over the events of the year, before we sketch the outline of the scheme of next year's work. The main medical event of the year has been the forty-first annual meeting of the Association, in numbers exceeding two thousand, in the metropolis. Nothing was wanted to make this meeting impressive and influential: the concourse of medical practitioners, the presence of the most eminent of British practitioners, and of many illustrious foreign visitors; the splendour of civic, collegiate, and private hospitalities; the welcome given to the Association by learned corporations and authorities of the State; the public testimony of the Prime Minister to its high aims, its strength of organisation, and nobility of purpose; and the unanimous compliments of the press at home and abroad—concurred in placing the Association and the profession in the most favourable light before the world on this occasion. It was seen as the greatest and most powerful Association existing in connection with any profession in any part of the world; its widely ramifying and yet compact organisation, its true and amply representative character, its unselfish efforts for great public objects, its zeal for the promotion of public health, for the advancement of the interests of the public services, for the diffusion and improvement of education, for the maintenance of brotherly feeling and of high ethical aims; its watchful and intelligent supervision of sanitary and medical legislation, its continuous diffusion of scientific knowledge, were made apparent in the face of the world. Every important organ of medical opinion, and most of the great journals in this country, on the continent, and America, have discussed with admiration this spectacle of a great profession united by simple means in an effective organisation for good purposes, and have concurred in describing the meeting as one which could not fail to raise the medical profession in public estimation, and to strengthen its influence. Most of the leading foreign medical journals have pointed to the Association as one which exemplifies the peculiar capacity of Englishmen for practical self-government and efficient organisation, and have described it as a model for imitation in their own countries. We have seen with satisfaction that they consider the JOURNAL—as a means of constant intercommunication and of the diffusion of scientific information, and as the organ of the policy of the Association—as the most potent instrument in its prosperity.

To those who have followed the course of events in these pages, it will not be necessary to do more than indicate the lines on which the Association has moved during the year in promoting professional interests. It has been most active in representing to the Government the requirements of the public services, the injury inflicted by the late Army Medical Warrant, and the grievances of naval medical officers; it has brought into prominence the necessity for regulating in some way the present inefficient army of midwives, of whom it is stated that there are now not fewer than ten thousand delivering in some places as many as sixty per cent. of the women confined, but yet giving no guarantee of education or good conduct. It has watched over the administration of the Public Health Act; and in these pages alone can be found anything like a complete indication of the actual work done under the Act, together with a detailed criticism of that work. This duty has been entrusted to such hands as to secure that it shall be performed both ably and independently.

We have allotted a considerable space weekly to the report of the proceedings of medical officers under the Public Health Act, the consideration of questions which they propound to us, and the discussion of all matters affecting the public health and the public sanitary service. We shall be glad to continue to receive copies of all documents and reports of meetings relating thereto; and we see with satisfaction that the Branches of the Association are entering actively and sympathetically into these questions, and are affording powerful local support to medical officers of health.

The Association has still in hand the interests of the medical officers of the Army and Navy. Mr. Cardwell has made certain concessions; and the letter which Lord Lansdowne addressed to the Parliamentary Bills Committee, expressed the desire to go beyond the letter of the Warrant. The concessions made are not, however, satisfactory; and a suitable reply has therefore been addressed to Mr. Cardwell. It was published a fortnight since in our columns, and its receipt has been officially acknowledged; unless some more satisfactory hopes are held out, it will be necessary to bring the subject under parliamentary discussion. It may, however, be hoped that a Liberal Government will not allow it to be said that it is found impossible to obtain from it justice for its officers, except under parliamentary pressure.

The representations of the Parliamentary Committee to Mr. Stansfeld, as to the necessity of regulating the practice of the large army of uneducated and licensed Midwives, have been followed by the presentation of a "scheme" by the Obstetrical Society of London. This scheme will now be submitted for discussion to all the branches of the Association. No doubt, it will be considered carefully, and without prejudice; for it will, of course, be remembered that the question is one which relates to ten thousand existing midwives, and to the hundreds of thousands of women who are in their charge in the hour of peril.

Perhaps the most important strictly professional work on which any of the Committees of the Association are engaged is that of the Committee on a Scheme for a State Medicine Qualification. This Committee was nominated at the last annual meeting, after the reading of Dr. Rumsey's paper on the subject, by a resolution of the whole meeting; it is a most amply representative and able Committee, and it is very forward with

its work. A scheme has been approved by the Subcommittee, which is moderate, and yet sufficient to produce a great revolution in the future. It will affect no existing interests; but, if carried out, it will make State Medicine much more of a reality than it has often been hitherto, and will provide for the public service in the future a class of officers having a minimum preliminary acquaintance with all the subjects included in *State Medicine*. So soon as this scheme has been approved of by the General Committee, it will be published, and discussion on it will be invited. It will, we believe, be generally regarded as one of the most valuable achievements of the Association; and we anticipate that it will quickly assume a legislative form.

So much for public affairs. With domestic matters, we shall deal yet more briefly. The Association flourishes financially and numerically beyond all precedent. The year now ending has added, we believe, nearly 1,000 to our number. A new Branch has been formed; and other local societies in Ireland, Scotland, and England are in communication with us, with a view to affiliating themselves as branches to this great organisation. The subscription of a guinea from each member during the year has sufficed not only to furnish each associate with a copy of the *JOURNAL* post-free—while private enterprise finds it necessary to charge thirty shillings for a similar journal—to defray all establishment expenses, and expenses of committees and extra printing, but the revenue of the year has very nearly sufficed to defray all ordinary and extraordinary expenses of the year (including payment of £200 to a firm of accountants for a complete analysis of the past and present books, and a report on the finances), leaving a large surplus of good assets.

For the excellent manner in which the business has been conducted during the last two years, the Association is very largely indebted to the singular devotion and zeal of Mr. Fowke, who was appointed two years ago as business manager in London. His unceasing labours have largely tended to promote the present satisfactory state of affairs.

The present financial position is exactly that which we ventured two years since to predict that it might be made under good business management. While, in freely developing the Association in all directions necessary to the complete representation of the various forms of modern professional activity, no necessary expense has been grudged, economy and order have succeeded in producing during the last two years a handsome annual surplus, and in creating a certain capital for the Association out of profits. This wise course, no doubt, will need for a time to be continued; but, even while this is held in view, it will be possible even to devote a handsome sum for the purposes of encouraging physiological and therapeutical research; and it is known to be the intention of the Committee of Council to do so during the new year.

The *JOURNAL*, we hope, speaks for itself. It is now more ample in its contents, and by far more largely circulated, than any other British medical journal; and the published voice of the most eminent foreign and home critics in the profession pronounce upon it verdicts only too complimentary, and of which we shall endeavour to render it constantly more worthy.

THE ARMY AND NAVY MEDICAL SERVICES.

As announced by the official advertisement, eighteen appointments to the Indian medical service will be competed for in February; and, in all probability, the Army and the Navy will each require as many more; whilst the number will be considerably increased if the Ashantee campaign prove a sickly one, as there appears some reason to fear it will. There will thus be a probable demand for at least sixty young medical men for the public service. This fact acquires increased importance, engaged as we are in what has been truly called a doctors' war; and it may therefore be advantageous to consider the position of the medical departments of the three services, and the prospects which the Government has of filling their ranks. The Indian service proper of course remains, as it always has been, the best of the three; and since the candidates for it began to study at Netley, they have always taken the highest place. Whether it is beginning to prove less attractive or not, we are unable to say; but certainly at the last competition the Indian candidates were much below those for the home army, whilst the total number competing was comparatively small. Should this occur again, it will be worth while inquiring into the cause of so curious a change. Many men may dislike the idea of expatriation; but still one would imagine that, as the Army medical officer must look to spending a large portion of his service in India, he would prefer to do so on good pay rather than on bad; and there can be no doubt that the Indian officer in India has greatly the best of it. All the fat things are reserved for him, and the Army officer has to be content in nearly all cases with the bare pay of his rank. The Indian service has, on the whole, been well treated; and the only change likely to affect it will be one for the better (and one which sooner or later is inevitable), namely, its conversion into a civil medical service, and the transfer of its military duties to the Army Medical Department. When that is accomplished, the Indian medical service will be incomparably the best in the world, and may even compare favourably with the Civil Service proper, which has been long recognised as the finest public career open to energy and talent. There ought, therefore, to be but little difficulty in filling the ranks of such a service with men of ability and high scientific attainments.

When, however, we come to consider the two other services, whose advantages, both in the way of pay and position, are fewer, the question becomes more serious; and, as posts become more numerous and emoluments increase in civil life, men will weigh more carefully the inducements offered to them to spend the best years of their lives in being knocked about from post to pillar at home and abroad, or in dragging out the monotonous existence which shipboard life must be to all but the most elastic of temperaments. The points which invite consideration are the following. What proportion does the pay in the service bear to the average earnings of civil life?—What are the position and status?—What are the prospects of advancement?—What is the proportion of work?—What are the prospects of declining years?—and, lastly, What is the guarantee that the conditions shall be continuous, and improve in due proportion to the changes of the times? Could we answer this last question satisfactorily, we should have but little difficulty with the others; but here is the sting from which the Army and Navy Medical Departments have suffered in a degree to which the Indian has been a stranger. In civil life, we may take it that the medical profession, although not the wealthiest, is yet on the whole the most uniformly well-to-do; that is, there are probably fewer starving doctors than there are parsons or lawyers. On the other hand, the two latter have larger possibilities, not only in emolument, but also in personal dignity; whilst the doctor must (if he desire such things) limit his hopes to an occasional baronetcy. The average earnings of the civil practitioner have been estimated at something over £300 a year—not, truly, a large figure, but probably not much, if at all, under that of other professions. Now the average pay and allowances of the Army and the Navy surgeon come to very nearly the same sum; at all events, the margin of difference is not very great. It will be con-

ceded that, although the civilian has on the whole harder work, yet his life is a better one. He has no exposure to bad climates; he is spared the trouble and expense of constant change of residence, and the too frequent separation from his wife and children; and he can insure his life without the chance of forfeiting years of outlay should Government have a misunderstanding with King Coffee. On these grounds, therefore, the pay of the Army or Navy surgeon ought rather to exceed the average of his civil brother, and it might be made a matter of calculation what the amount ought to be. Of course, the chances of pension on retirement and half-pay, in case of sickness, require to be reckoned as *per contra*. The position and status of the Army medical officer were well based and well defined by the Warrant of 1858; but the history of the department since that time has been but a record of disappointment and vexation, spasmodic efforts being made by the Government, from time to time, to mend matters when its own bungling and bad faith were fast bringing matters to a crisis; and had not interested parties busied themselves in 1864 in dragging the Irish schools and inducing seventy-seven confiding youths to rush into the department, stimulated by promises never meant to be kept, a still better Warrant would have been wrung from the unwilling hands of a stingy administration. But once the fish were netted, promises were thrown to the winds, and the Warrant (which was actually ready) into the fire. It is well known now that, soon after the Warrant of 1858 was issued, a private notice was given to commanding officers that it was not intended to act upon the famous seventeenth clause, which granted the proper precedence to the medical officers; and, in 1861, a supplementary Warrant, reducing the relative rank of surgeons, completed the work.

In the Navy, the bad work was accomplished in even a more nefarious way—quite ingenious in its disingenuousness. The naval Warrant granted relative rank, so that at first an assistant-surgeon of six years' service ranked as a lieutenant (R.N.), a surgeon as commander, a staff-surgeon as captain (junior of the rank), and a deputy inspector-general as captain, according to date of commission. It was, however, ingeniously managed that the naval titles were not mentioned, but the rank granted with reference to the corresponding military titles! Accordingly, soon afterwards a Warrant made its appearance, raising the executive branch of the Navy a step in relative military rank, and thus lowering that of the medical officer—the consequence being, that now a surgeon (the present second-class staff-surgeon) ranks only with lieutenants, and the first-class staff-surgeon, who previously ranked as a captain, is now *junior of the commander's rank*! At the same time, the other civil departments were all hoisted up a step, so that the medical officer is not much better off than at the beginning. The change in the relative rank of naval officers would never have been dreamt of, had there not been a desire to checkmate the Medical Department. In the same way, in the Army the medical warrants led to those for the Commissariat and Purveyor's Department, to whom a rise of rank was granted both actually and proportionately greater than to the Medical Department, although the latter can plead a long previous special training, and the diploma of a separate and learned profession.

The story of the latest and most remarkable episode in the history of warrants must be fresh in the minds of all; and on it we may simply remark that for bungling stupidity it beats all its predecessors, whilst to the individual medical officer it has done more direct harm than any one of them—the recent letter of Lord Lansdowne having withdrawn the sole advantage that it held out, or (to speak more correctly) *was held out* verbally by Mr. Cardwell in introducing it. It has broken up the regimental system without introducing a staff-system, and it has deprived officers of privileges, leaving them only the expenses and inconveniences of both systems.

In conclusion, there is but little chance of officering the public departments properly, if anything like a considerable number of new men be required, unless some great improvements be still made: the position and status of the medical officers must be more securely and clearly defined; the emoluments must be raised to an average of forty or fifty per cent above that of civil life, to compensate for the extra

expense and diminished value of life in the services; the same privileges as regards sick and other leave must be given as are enjoyed by the military branches; the independence of the medical officer must be secured in the management of his own hospital and hospital corps; and, above all, a guarantee must be provided that no change shall be made in existing arrangements unless it be for the better.



THE SIGNIFICANCE OF ALBUMINURIA.

At a recent meeting of the Clinical Society, Dr. George Johnson read an interesting paper on Cases of Temporary Albuminuria, the Result of Cold Bathing. An abstract of the paper, with the discussion thereon, will be found in the JOURNAL of Dec. 6th, at p. 664. It will be seen that three healthy young men, medical students, from twenty-two to twenty-five years of age, and a boy aged 16, had albuminous urine after prolonged bathing in cold water. In each case, the albuminuria was a transient phenomenon; but in the first case, after the second bath, there was an almost daily reappearance of albumen in the urine for a period of about three weeks; and in the case of a boy, who had bathed daily in the sea for a month, remaining in the water from half an hour to three-quarters of an hour, more than three months elapsed before the urine had ceased to be albuminous. Then it is stated that four other young men, medical students, after bathing in cold water from half an hour to an hour, and in one instance for an hour and a half, found no albumen in the urine.

The observations are too few in number to warrant any conclusion as to the proportion of cases in which it is probable that prolonged immersion in cold water may excite albuminuria. It is a matter of common observation, that imprudently prolonged cold bathing is often followed by a sense of fatigue, chilliness, and headache. It now appears that, either with or without the occurrence of such discomforting symptoms, the urine may be rendered albuminous. We should expect to find that, *ceteris paribus*, those who have flabby muscles, a weak heart, and a languid circulation, are more liable to suffer from cold bathing than those who are more vigorous; but the different results observed in seven apparently healthy young men of the same age point to varying degrees of susceptibility, the explanation of which is not immediately apparent. Attention having been especially directed to this subject, we shall soon obtain more precise information as to the relationship between albuminuria and prolonged cold bathing; and, if the numerous and intelligent class of gentlemen who have contributed most of the facts set forth in Dr. Johnson's paper will use their opportunities of auto-inspection, they may render valuable aid towards the solution of this etiological problem. We would, however, raise a warning voice against incautious experiments; for we agree with Dr. Johnson that "there is danger lest the frequent recurrence of albuminuria, the result of cold bathing and the consequent repression of the cutaneous secretion, may lead to permanent mischief, and to structural degeneration of the kidney."

With reference to the proximate cause of the transient albuminuria which sometimes results from cold bathing, it seems not improbable that it may be directly due to increased blood-pressure within the Malpighian capillaries, consequent on the constricting effect of cold upon the cutaneous vessels. The frequenters of Turkish baths have ample opportunities of witnessing the opposite effects of warmth and cold upon the circulation. A very high temperature, by relaxing the cutaneous vessels, may divert so large a quantity of blood from the brain to the surface as to cause faintness. On the other hand, a splash of cold water on the legs, or a temporary removal to the cooling room, contracts the cutaneous vessels; the brain, in common with all the internal organs, then receives a larger supply of blood, and almost instantaneously the feeling of faintness is removed. A continuous application of cold to the surface of the skin must obviously have the effect of increasing

the blood-pressure in internal organs; and this increased pressure on the walls of the Malpighian capillaries may determine a serous transudation through their walls.

It is probable that the albuminuria which follows directly upon a prolonged cold bath, and passes away in a few hours, is due to this purely mechanical cause; but when, as in one of Dr. Johnson's cases, the albuminuria continues for three weeks, and in another for three months, it seems more likely that the repression of the cutaneous secretion is the proximate cause of the albuminuria. The appearance of albumen in the urine of a rabbit whose skin has been covered by an impermeable varnish, seems to be a strictly analogous phenomenon. By directing attention to the subject of albuminuria consequent on cold bathing, Dr. Johnson has added to the long list of known causes of transient albuminuria.

We take this opportunity of impressing upon our younger and less experienced readers the great practical importance of carefully discriminating between different cases of albuminuria. An impression prevails amongst the public, and it is shared by some members of our profession, that the appearance of albumen in the urine is a sign of fatal import. Now, the fact is, that acute albuminuria, or acute Bright's disease, as it is commonly called, is as curable a malady as acute bronchitis or acute pneumonia. The incautious practitioner who, finding the urine coagulable by heat and nitric acid, bases upon that indication alone a desponding and alarming prognosis, may have the dissatisfaction of losing his patient, not, as he erroneously predicted, by death, but by his unexpected recovery under the care of some more sagacious consultant. Before venturing upon a prognosis, it is necessary to make careful inquiry as to the probable cause and duration of the albuminuria, and to ascertain the nature and stage of the renal disease with which it is associated. The albuminuria which is of recent date is, as a general rule, more tractable than that which is known to have been of long duration; but the urine has often regained its normal characters after many months of persistent albuminuria. The microscope, in experienced hands, affords valuable aid in diagnosis and prognosis. It is sometimes assumed that, when the urine deposits renal tube-casts, the case is more serious than when tube-casts are absent. This, as a broad statement, is untrue and misleading. In some of the most acute and curable cases—case of acute Bright's disease, the result of scarlet fever or of exposure to cold and wet—epithelial and other forms of tube-casts are, as a rule, more numerous than in most cases of chronic and incurable degeneration of the kidney. It is not from the mere fact of tube-casts being detected in the urine, but from the observation of the kind of tube-casts, together with the physical and chemical characters of the urine and the attendant symptoms, that a trustworthy prognosis is to be deduced.

Yet one more caution before we conclude. As a general rule, no form of Bright's disease is unassociated with albuminuria. There are, however, exceptions to this rule. In cases of small red granular kidney, the urine is sometimes free from albumen, not only in the earlier stages of the disease, but even in the most advanced stage of atrophy and contraction. This fact is well known to careful clinical observers, and it should always be borne in mind in cases of doubtful diagnosis.

WE hear of a projected conference of health-officers of combined districts in London in January.

THE annual concert in aid of the Samaritan fund of Guy's Hospital takes place this evening, Friday, December 19, in the Governors' Court Room, commencing at 8 P.M.

WE regret to have to record the death of Mr. Hillman, for many years Assistant-Surgeon, and then Surgeon, to the Westminster Hospital.

THE friends of Dr. Fuller of St. George's Hospital will hear with much regret that he is suffering from a serious indisposition, attributed to the effect of professional overwork.

It is stated that Professor Owen has just discovered in the London clay at Sheppey a new fossil bird with teeth somewhat resembling those in the Australian hooded lizard. He concludes it to have been web-footed and a fish-eater. No evidence of true teeth had previously been known in any bird.

DR. BURDON SANDERSON'S LECTURES AT THE UNIVERSITY OF LONDON.

THE two concluding lectures of the course (December 19th and 23rd) will be on Bacteria and their Influence on the Life of Man and the Higher Animals. On Friday, an account will be given of the natural history of the group of organisms of which bacteria are the representatives (*Schistomycetes*), with special reference to the condition of their origin and growth, and to the question how far their forms may be regarded as specific. On Tuesday, the numerous observations which have been made during the last three or four years as to the presence of bacteria in the tissues and liquids of the body, will be considered in reference to the part they are supposed to play in the infective processes, and the value to be assigned to them as characteristics of specific diseases.

ARTERIO-CAPILLARY FIBROSIS.

BRITISH pathologists will note with interest that Sir William Gull and Dr. Sutton, having continued their researches on the subject of arterio-capillary degeneration in relation to what is commonly known as Bright's disease, will during the year publish in these columns some further communications on the subject.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

It is announced that the seventh anniversary session of this Association will be held at Willis's Rooms on Tuesday, December 30th, at 5.30 P.M. The President, Dr. Lockhart Robertson, will deliver an address on "The St. Andrew's Medical Graduates' Association: a Retrospect." In addition to the general business, resolutions affecting the future of the Association will be submitted by the Council to the members. The usual dinner will commence at 7 P.M., at the same rooms; Dr. Lockhart Robertson in the chair.

THE DOSES OF THE PHARMACOPŒIA.

WE are enabled to give in another column a short foretaste of what may be expected from the forthcoming addendum of the *British Pharmacopœia*, which will probably be read with interest, since the *Pharmacopœia* is the every-day working tool of the medical practitioner. All good workmen are careful as to the quality and form of their tools, although it is said that they are not the best who are the most prone to fall out with them. In an angry little article lately published, Dr. Anstie scolds the Pharmacopœia Committee very violently for presumed shortcomings in the matter of doses. Dr. Anstie has his own ideas of what the posological table of a pharmacopœia ought to be, and he can hardly find language strong enough to express his anger and contempt for those who differ from him. They have been guilty of an "unpardonable blunder", of "extraordinary ignorance or negligence", of "lamentable timidity", of "unaccountable rashness"; they must have been "entirely unfamiliar" with the practical use of drugs; they are "extravagantly wrong"; and their "mischievously misleading" errors have this "unfortunate significance", that they "indicate an ignorance and a carelessness which are very wide-spread in the profession". These are rather strong expressions even from the mouth of this commonly rather impetuous writer; they are especially so, if we remember that these ignorant, misleading, and practically uninformed posologists, include men bearing the names of Christison, Apjohn, Aquilla Smith, and Quain. If, however, we look to the little fire whence all this smoke proceeds, we see that the particular wrong alleged is, that the *Pharmacopœia* gives only what may be considered

as safe average doses, representing the mean of ordinary practice, without going to either extreme. The compilers of the *Pharmacopæia*, in departing from the earlier precedent of the *London Pharmacopæia*, and giving posological indications, met the known and expressed wishes of the profession; but they might easily have incurred very serious risks, and really misled numbers of people, if they had gone to any extremes. The range of doses in the *Pharmacopæia* does not bind any one; it only affords a certain datum—an indication for the neophyte. More refined or more adventurous therapeutists may give half-ounce doses of tincture of digitalis, or ounce doses of succus conii, as Dr. Anstie suggests; but it must remain very doubtful how far such doses can be generally counselled even in extreme cases; and it is far more reasonable, not to say more modest, to assume that, when the compilers of the *Pharmacopæia* declined to stamp officially with assent doses which might under ordinary circumstances be considered extreme and dangerous, they did so out of the fulness of their knowledge, than that they did so in the vacancy of their ignorance. If they had defined the extreme doses, or had given the whole possible range of administration of every drug, they must have also indicated the special circumstances which justify, or which have been thought to justify, these doses; and, further, they must have proposed safeguards. This would have converted the *Pharmacopæia* into a treatise on therapeutics. It might almost be advisable, therefore, for this excellent and able critic to reconsider and take back some of his big words. Meantime, as it has been thought advisable to continue to give posological indications in the forthcoming addendum, we are not sorry to know that the old rule of giving an indication of average doses only, continues to be the guiding principle of pharmacopœial posology.

THE SICK AT ALDERSHOT.

WE understand that a good deal of dissatisfaction exists at Aldershot regarding some of the arrangements for the comfort and well-being of the sick. The structure of the camp renders it necessarily a cold and cheerless winter-station; but, over and above the defects inherent to wooden huts and the natural progress of decay, there appear to be many points of sanitary improvement which have been long recognised by the medical officers, and reported by them from time to time. As no definite action has followed their oft repeated remonstrances, we hope to return to the subject, and to indicate the direction in which experience shows that progress is wanted.

ACCIDENTS IN THE FOG.

THE unusually high reading of the barometer (over 30.50 in.), which prevailed from the 6th to the 13th instant, were accompanied by a fog in the metropolis from the 9th to the 13th, which was at times excessively dense. In the Cattle Show, the horned cattle suffered severely from difficulty of breathing, but the sheep and pigs were less affected. Persons in good health who were living in the fog suffered much bodily discomfort, and smarting of the conjunctivæ was frequently accompanied by severe frontal headache. To invalids, however, and especially to those suffering from disease of the lung, the atmosphere was most distressing. Many fatal accidents on the river and in the streets were reported in the daily journals. The following house-surgeons have favoured us with accounts of the accidents attended at their hospitals. Mr. J. H. Morgan (St. George's) saw only two trivial accidents resulting from the fog: one, a contusion of the eye from a fall over the railings in Hyde Park; the other, a slight burn in the face from a blow with a torch. Mr. G. B. Browne (University College Hospital) reports that only three accidents were admitted by him; two in which the patients were run over, with two broken ribs in one case, and a case of bad burn in the face from a blow with a lighted torch. Mr. J. Leonard (Charing Cross) reports that from thirty to forty injuries arising in the fog were attended to at his hospital, but that they were mostly of little moment. The death-rate amongst the in-patients suffering from heart and lung-diseases was greatly increased. Mr. J. L. Morley (Guy's) reports that no more accidents than usual have

been admitted during the past fortnight. Only one serious case arose from the fog; it was that of a man, forty years of age, engaged in putting fog-signals on the rails. An engine knocked him down and crushed his left foot. The leg was amputated by Mr. Howse in the upper third immediately upon his admission. The patient had also a badly comminuted fracture of the left humerus; also rupture of the crucial ligaments and inner portion of the capsule of the right knee-joint, and three or four scalp-wounds. He is doing very well, and is under carbolic treatment. Mr. E. Jepson (St. Bartholomew's) writes, that "only two accidents due to the fog were admitted. A man fell thirty-six feet from the top of a house; and another man drove his cart into the East India Docks. Both patients are doing well. The medical patients, with affections of the lung, suffered very much."

CHANGES AT WHITEHALL YARD.

THE announcement that Sir Galbraith Logan is likely to retire at the close of the present financial year, can hardly have taken any one by surprise. The duties of his post, at all times onerous and difficult, have been much complicated by recent legislation; and the various modifications and alterations of the Warrant of 1858 have only succeeded in making the department unpopular. At the same time, we know that we only re-echo the universal opinion of medical officers, when we say that the urbanity and geniality of the present Director-General have been highly appreciated by all. A good deal has been said about his responsibility for some of the late changes, but we are quite inclined to believe that the military influences brought to bear upon him were simply overwhelming. We must remember that his voice is only one among many, and that he has no means of proving to the outer world how far he resisted measures which he knew were not for the good of the service. It is well known that the Warrant originally framed by Sir G. Logan was very different from that which saw the light a few months ago; and, if the inner history of this whole transaction ever come to be written, the Medical Department will see that the chief wire-pullers to their disadvantage were certainly not seated in Whitehall Yard. Sir William Muir will naturally succeed to the higher post when it becomes vacant; and it is stated that he will be replaced in the sanitary branch of the office by Dr. Monro. It has been hinted that some changes may possibly be made in the future regarding the rate of pay enjoyed by the Director-General, or, at all events, in his retiring allowance; and we may be very sure that this will not be on the side of augmentation. But a very substantial grievance connected with the Army Medical Office is this, that none of the members of the department therein employed receive one sixpence of extra emolument. Now, when we consider the really hard work which often devolves on them, the confined nature of their duties, and the fact that the staff-officers employed at the Horse Guards all receive a liberal recompense in addition to their pay, we see what a scant measure of justice is thus meted out to the Army Medical Department in this respect, as well as in many others.

A RARE PHYSIOLOGICAL EXPERIMENT.

DR. BRANDT, Professor of Surgery in Klausenburg, has placed on record, in the *Wiener Medizinische Wochenschrift*, a case in which removal of the sound kidney took place in the human subject. A healthy man, aged 25, was stabbed with a bread-knife in the left hypochondrium. Hæmorrhage to the amount of three or four ounces followed; and, about three hours after the accident, a fleshy looking tumour was expelled through the wound by a fit of coughing attended with severe pain. It was replaced by a bystander, but was soon again driven out by the cough. On his admission into hospital, twenty-four hours after the injury, Dr. Brandt, after a careful examination of the protrusion (of which a careful description is given), arrived at the conclusion that it was the left kidney. Its surface, with the ureter, was torn in some parts, and allowed the escape of a fluid, at first yellowish and transparent, but afterwards sometimes reddish and sometimes turbid yellow. It had an alkaline reaction, a specific gravity of 1042

to 1052, contained a large quantity of albumen and mucin, with some hæmoglobin, traces of urea, and an abundance of alkalies and alkaline earths. It gave a sediment, which on microscopic examination was found to consist of pus- and blood-corpuscles, masses of nuclei, mucus-fibrils, and fibrinous clots; also epithelium of the kind belonging to the calyces and pelvis of the kidneys. Dr. Brandt arrived at the conclusion that the organ was rendered useless, that its retention endangered life, and that it would be best to remove it. The previous history of the patient did not contraindicate this: he had had no severe illness, and, though the urine in the bladder contained some albumen, this might be derived from the injured organ. Accordingly, on the fourth day of the injury—a photograph of the patient having been first taken—Dr. Brandt tied the pedicle of the tumour in two parts, by means of a ligature passed through the middle, and cut it away with a knife. This operation was done on June 7th, and on the 23rd the patient left the hospital convalescent. No symptoms of uræmia or of peritonitis occurred during the progress of the case. The amount of urine excreted was measured daily up to the 22nd. The quantities were the following: June 7th (half day), 310 grammes; 8th (whole day), 923 grammes; 9th, 905; 10th, 1425; 11th, 1211; 12th, 992; 13th, 1278; 14th, 1222; 15th, 1348; 16th, 1306; 17th, 1296; 18th, 1324; 19th, 1312; 20th, 1437; 21st, 1498; 22nd, 1513 grammes. The urine was throughout acid, of specific gravity 1.010 to 1.040, and of normal composition: at first it was of a reddish yellow colour, but afterwards became clear yellow. Dr. Brandt has seen the man several times since the operation. He has no signs of disease of the heart, but complains of a sense of oppression and fatigue, especially in going up stairs, and says that he cannot work as well as before. Dr. Brandt, however, suspects that he may say this to avoid military service.

THE LONDON HOSPITAL.

A FORTNIGHT ago, we called attention to the movement which has been set on foot in order to bring public opinion to bear upon the voting charities; and we pointed out that the same principle prevails to some extent in the medical charities. In so far as a governor of a hospital or dispensary obtains, in return for his guinea, a voice in the election of officers and in the selection of patients, the system is essentially the same as that which is in full operation in orphanages, homes for incurables, idiot asylums, and the like. We have, therefore, noticed with pleasure that one of our largest metropolitan hospitals is taking steps to abolish the system of electing officers by the votes of the general body of governors. The House Committee of the London Hospital have just passed the following resolution.

"That, considering the great increase during the past few years in the number of the governors of the London Hospital (now amounting to upwards of 2,500), and the serious inconvenience and expense to which candidates for hospital appointments are liable in canvassing so large a body—the prospect of such liability having also the effect of materially reducing the number of eligible candidates—it be suggested to the governors, as a matter of trial, that the House Committee be instructed, on occasion of any vacancy during the year 1874, to select and recommend from among the candidates one person only for election by the governors at a General Court, duly summoned in accordance with the bye-laws."

This is an excellent example, and we sincerely trust that it may be followed by all other hospitals and dispensaries. The case of the London Hospital is no doubt particularly strong. The number of its governors is so large, and they are scattered over such a wide area, that candidates may easily spend several hundred pounds in canvassing for an unpaid appointment. But there are many other hospitals, both in London and in the provinces, where the hardship is scarcely less great. We do not, however, rest our argument upon the size of the hospital or the number of its governing body. Whether hospitals are large or small, the old practice is unreasonable and degrading, and the course recommended by the London Hospital is that which all ought to adopt.

We are glad to note that no half-measure is proposed. At some hospitals, a compromise has been made; and it has been arranged that, if the Committee of Selection can agree to recommend a single candidate,

he shall be elected. But there is mischief in that *if*; for it occasionally happens that the Committee of Selection are not of one mind; and then an appeal is made to the governors, and there are all the evils of a general canvass. The rule ought to be made absolute, as is now proposed for the London Hospital. The body who are appointed to inquire into the merits of the candidates—having been nominated because of their fitness for this special task—should be required to present one individual; and he should, as a matter of course, be elected by the governors. If the Committee of Selection be not unanimous, the votes of their majority should decide the question.

THE HOSPITAL FOR CONSUMPTION AT VENTNOR.

THE chapel in connection with the National Hospital for Consumption at Ventnor, Isle of Wight, was opened on Saturday by the Bishop of Winchester. The building is capable of accommodating 200 people. Amongst those present at the ceremony were the Right Hon. Sir Laurence Peel, Mr. Baillie Cochrane, M.P., Colonel Pratt, C.B., Colonel Hemell, etc. The bishop delivered an eloquent and appropriate discourse. The bishop and principal visitors were afterwards entertained at luncheon.

THE TREATMENT OF PNEUMONIA.

WE may call attention to a letter from Dr. Sturges of the Westminster Hospital, which is published in another column, and which asks for assistance from the members of the Association in gathering information concerning some interesting clinical questions in the course of pneumonia. Dr. Sturges has sufficiently proved, by his recent publication, that he possesses all the qualities of an accomplished clinical observer and careful logical thinker. The materials for deciding the questions at issue could not be placed in better hands, and we would bespeak for Dr. Sturges the cordial co-operation of our associates.

THE DISMISSAL OF DR. CHAPMAN.

DR. DRYSDALE forwards us the following account of what took place, within his own knowledge, on this matter.

"Last summer, the members of the staff of the hospital were invited to attend a meeting with the general committee. I went, as I was anxious to have some regulations made relative to the beds in the hospital. There were present at the meeting, Mr. Joseph Fry, of Gresham House, and Mr. Murrell, auctioneer, as representatives of the committee; and Dr. Fotherby, Dr. Chapman, Dr. M'Nalty, Mr. Chance, Mr. Sheffield, Mr. Goodsall, and myself. The secretary was also present. On arriving, I found that an article in the *Pall Mall Gazette* was being commented on, in which two sentences were devoted to the hospital. Suggestions as to who could have written the critique were made. I said I thought it might possibly be written by some one connected with the *Lancet* or the *BRITISH MEDICAL JOURNAL*, as my respected friends Dr. Stallard, and the lamented Dr. Murray, had some years ago written criticisms about it. At this moment, Dr. Chapman entered the room, and Mr. Chance pointed out that the name of that gentleman was mentioned in the article, near the end. Dr. Chapman then, laughing, said that he must confess that he was the author of the article. Further details, perhaps, would be wearisome. Suffice to say that the chairman uttered some very severe words, whilst I did my very best to pour oil on the waters—to my cost. The subject was dropped, and another question taken up. But Mr. Chance, with Mr. Sheffield, Mr. Goodsall, and Dr. M'Nalty, soon after this called a meeting of the medical staff, without any notice as to what the business was to be, and at which I was not present; and, at it, they recommended the resignation of Dr. Chapman for writing this article. The general committee at once acted on the suggestion, and asked Dr. Chapman to resign, which he declined to do. On which, the doors of the hospital were shut on his days, and the porter refused him admittance. There are nine medical men attached to the hospital, and two dentists, so that Messrs. Chance, Sheffield, Goodsall, and Dr. M'Nalty took it on themselves to judge a colleague, and condemn him. Such are the facts of the case, and no one can, I believe, alter them, except in detail. Events like this, as well as the affairs of the Orthopedic Hospital, have convinced me long ago that a Medical Court of Appeal, similar to a Court Martial, is much needed by our profession. In such a court, Dr. Chapman might state his case; and we might hear what Messrs. Chance, Sheffield, Goodsall, and Dr. M'Nalty have to say."

It is obvious that this puts a peculiar character upon the case. It has been stated as one of oppression by the governors; it appears to be one of difference of opinion among the staff. Mr. Chance, Mr. Sheffield, Mr. Goodsall, and Dr. McNalty are all members of the medical staff; and if a majority of the staff passed a vote requesting Dr. Chapman to resign, which concurred with the opinion of the general committee, it is not surprising that the latter exercised their powers. None of the medical staff appear to have protested at the time against such exercise. Whether the staff were right in making the request, is another matter; but it is not probable that they acted without some reason, and it is stated that all their reasons have not been published. In similar cases in the provinces, and in two cases in London (the British Lying-in Hospital, and the Royal Orthopædic Hospital) the sort of court which Dr. Drysdale desires, was found in the Branch Councils of the British Medical Association. Dr. W. J. Hunt, lecturer on Psychology at the Charing Cross Hospital, has been appointed assistant-physician in place of Dr. Chapman.

THE MEDICAL BENEVOLENT COLLEGE.

A SECOND application will be made this year to the governors and subscribers of the Royal Medical Benevolent College, Epsom, in favour of William Baker Brown, nine years of age, son of the late Isaac Baker Brown, F.R.C.S.Eng., who practised for upwards of thirty years in London, but during the latter part of his life, being afflicted with paralysis, was totally disabled from following his profession, becoming almost helpless; and, having no other source of income, he died in very straitened circumstances, leaving his widow and three young children quite unprovided for. Proxies will be gladly received by Mrs. Baker Brown, 88, Albany Street, N.W.; and we believe that many will be glad to be reminded of this opportunity of helping the orphan of a man who rendered great professional services, and who, if he undoubtedly sinned professionally, did also suffer much, and died broken down under the weight of an overwhelming retribution.

THE GERMAN UNIVERSITIES.

THE number of students in the University of Berlin in the present winter session is 520 (against 495 in the previous session); but the number in the faculty of medicine has fallen from 298 to 282.—In Leipzig, of 870 enrolled students, 98 are medical.—In Würzburg, there are 810 matriculated students this session, of whom 396 belong to the faculty of medicine.—There are 569 matriculated students this session in the University of Strasburg, against 467 in last session.

NEW TREATMENT OF ANEURISM.

MR. BRYANT has lately treated a popliteal aneurism at Guy's Hospital after a plan recommended and tried with success by Dr. R. J. Levis of Philadelphia. Pressure in the groin having proved ineffectual for the cure, Mr. Bryant introduced a very fine trocar and cannula with the sac, and upon the withdrawal of the former he passed through the cannula about twenty feet of horsehair. The man was a bad subject for any plan of treatment, as he was known to have heart-disease before the operation. He gradually sank, and died at the end of the fourth day from ulcerative endocarditis. At the necropsy, no evidence of embolism was discovered. The tumour became consolidated shortly after the operation, and pulsation of the arteries of the same foot soon ceased. The sac is being preserved in spirit, but has not yet been opened. The particulars of the case will be published *in extenso* at some future day.

THE HISTORY OF OVIARTOMY.

WE have received from Dr. Keith of Edinburgh a communication, which appears in another column, on the history of ovariectomy. We publish it with sincere pleasure. No one can speak with more authority and independence than Dr. Keith, who is himself eminently distinguished as an ovariectomist, and has achieved extraordinary success in his operations. Coming from so well qualified an observer, it

may, we think, be accepted as an authoritative settlement of the question, which will have a place in future surgical history. Dr. Keith, it will be seen, attributes, on weighty grounds, to Mr. Spencer Wells practically the whole credit of the revival of ovariectomy in the form and with the results which have given surgeons just confidence in the operation, and have conferred a great boon upon humanity. We shall certainly feel disposed to follow Dr. Keith's authority, which, we may confess, dispels certain illusions which we entertained on the subject.

AN INDIAN VETERAN.

THE week's obituary includes the death of an Indian practitioner well known in his day, and who passed through a long career in which he held high office with credit. Mr. Henry Chapman served twenty-seven years in India under the old Company, and became presidency-surgeon in Calcutta, and the personal surgeon of two governors-general, Lords Auckland and Lord Dalhousie. It was on the report of Mr. Chapman that Darjeeling was selected as a sanitarium. He died at his place of retirement in Canterbury, surrounded by all that befits and adorns a happy old age.

MR. DOYLE'S FAILURE IN SOUTH WALES.

MR. DOYLE's attempt at "reconstruction" of his sanitary scheme has broken down in South Wales, as we feared it would. Mr. Doyle has, we believe, resigned the South Wales District to a colleague, Mr. Bircham. Mr. Doyle is one of the ablest of the Poor-law inspectors, and his failure has been due to his department, and not to himself; and the responsibility and discredit must rest upon Mr. Stansfeld and his advisers at the old Poor-law Board. The original fault consisted in setting a number of gentlemen, without any preliminary knowledge of sanitary science or sanitary needs and possibilities, to work as "ambassadors," to explain views which were not defined, and which were equally formed without reference to the accumulated knowledge and experience of skilled advisers. Had Mr. Stansfeld chosen to consult Mr. Simon and his staff, it is impossible that the present *fiasco* should have happened.

SCOTLAND.

THE EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

THE following gentlemen have been elected office-bearers for the ensuing year. *President*: D. R. Haldane, M.D. *Vice-Presidents*: R. Paterson, M.D.; P. H. Watson, M.D.; G. W. Balfour, M.D. *Councillors*: A. J. Sinclair, M.D.; J. D. Pridie, Esq.; J. G. McKendrick, M.D.; F. Cadell, M.B.; J. Niven, M.D.; C. Cuthbert, M.D.; John McGibbon, Esq.; J. Andrew, M.D. *Treasurer*: Joseph Bell, M.D. *Secretaries*: C. Muirhead, M.D.; J. Chiene, M.D.

THE LADY MEDICAL STUDENTS.

ON Monday, at a meeting of the managers of the Royal Infirmary, Edinburgh, the question was brought up as to admitting lady students into the surgical theatre to witness operations at the same time as the male students. After a lengthened discussion, a resolution against the proposal to admit was carried by a majority of eight to six. Neither the Lord Provost nor Mr. Blyth took part in the division.

IRELAND.

THE RISKS OF PRACTICE.

THE heavy mortality and frequent illness of the medical staff of the district dispensaries of Dublin has compelled those gentlemen to seek increased remuneration. It appears that no fewer than five out of a strength of fourteen have died within a period of about eight years. In addition to this, the medical officers are not infrequently incapacitated from illness, and we have just heard that such is the case at present; overwork in one case, and in the other typhoid fever, being the cause of their illness. The high price of all the necessities of life gives additional reason why the guardians of the Dublin unions should comply with this most reasonable request, if any further consideration were necessary.

REPORTS

ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

VIII.—DAMPNESS.

Damp-Proof Courses.—Every one is aware of the dangers which might arise from residing in a house that is constantly damp, and how important it is to provide against this enemy to health and comfort. Perhaps the best way to form a just estimate of this subject will be to follow mentally the erection of a dwelling from its foundation upwards, and notice what evils might arise, and how they may be averted.

A residence designed by me, and which is now being completed, in the neighbourhood of London, contains 180 rods of brickwork, or rather over four-fifths of a million bricks. Allowing for the lime, sand, and water, the space taken up by the walls is over 54,000 cubic feet. The foundations under the ground-line occupy about 8,000 cubic feet, and represent 115,000 bricks, presenting an upright surface of about 5,000 superficial feet to possibly damp earth. Under favourable circumstances, the foundations up to the ground-surface will at first contain about 5,000 gallons of water; and if the subsoil were very humid and the bricks poor and porous, the latter might absorb and retain 7,000 gallons, *plus* the water contained in the mortar. If no damp course had been laid just above the ground-line, this wet would be continually striking up into the walls of the house above ground—by capillary attraction, exerted over a horizontal surface of 2,400 superficial feet below ground. Dampness from this source has several times been traced up thirty feet in height above ground. The cure would therefore consist in laying down 2,400 feet (superficial) of damp course on the top of the walls the moment that the foundations rose above the ground level, and thus build the real walls of the house upon an impervious stratum, cutting them off from the possible 5,000 gallons of water.

There are various kinds of suitable damp courses used by architects. Sometimes a double course of slates, or one course of sawn Welsh slate bedded in cement, is laid along the top of the walls when they have emerged above the ground-line. Some, again, interpose there a layer of sheet-lead, weighing four pounds to the foot superficial. Another system is the paying over the tops of the walls with a coat of hot bastard asphalt or bitumen mixed with sand. There is also a kind of so-called asphalt damp-proof course sold in sheets ready for laying on the walls; but the hot layer is generally considered preferable. A course or two

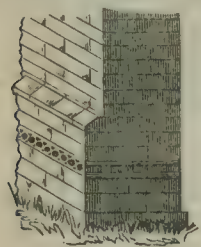


Fig. 94.

of enamelled bricks, or ramped glazed bricks, are also occasionally laid, in order to arrest the rising damp; but the best article devised up to the present time is a vitrified stone-ware tile, made in thicknesses from one to one-and-a-half inches, and perforated in order to ventilate the space between the ground and the joists of floor, and also to prevent dry rot in the timbers. A view of this last contrivance is given at fig. 94. The proper place at which to insert the damp-proof course is a foot or so above the ground, or high enough to obviate the effects of splashing and dripping after heavy rains. Some architects also surround the base of the house with a

piece of stone-flagging about a foot in width, and slightly tilted up towards the walls, in order to prevent soakage; and the plan is a good one. Where a damp course is used, the reason why it should not be laid too near the surface of the ground is, because in time it is apt to be covered by the earth, which always accumulates there, as the paths are re-gravelled, or fresh *humus* is laid to the roots of the plants. Creeping or trailing plants should, moreover, derive their sustenance from the ground, and should be attached to the walls by means of lattice-work or wires. A thin wall, in which the suckers of ivy penetrate, is necessarily always damp.

In adopting a damp-proof course, care should be taken that the article chosen should be able to resist the superincumbent weight of walls. Sheets of prepared asphalt will not, for instance, resist the immense pressure of a tall tower, whilst lead will. The power necessary to crush the perforated stone-ware course (drawn at fig. 94) can hardly be reached by any building; but it is the most expensive of all the systems.

In cases where old buildings are unprotected from rising dampness, it is quite easy to cut out for and insert a damp-course, such as is drawn at fig. 94. Many houses which had once proved uninhabitable have been rendered perfectly healthy in this way.

Dry Areas, etc.—A great many old and a great many new houses both in town and in country have their basement or cellar-floor built without dry areas of any kind, the walls simply abutting against the water-saturated earth; and the consequence of this folly is, that the interiors are always damp and uncomfortable. A way to cure this state of things is to construct a dry area wall on the outside, leaving a space between that and the basement-walls—and even a few inches will afford sensible relief. A brick or a half-brick wall connected with the main wall of building up to the ground-line, by means of an occasional brick stretching between the two, is the common system adopted; but this is not altogether to be recommended, as ordinary brick stretchers still act as partial conductors of the wet. Fig. 95 represents an arrangement to be recommended; and here again are used the vitrified stone-ware tiles drawn as flat damp courses, as at fig. 94, only that they are now placed perpendicularly. A still better method is to construct a second or area wall, which shall be unattached to the main wall save just above the ground-line. The best device is of course to build an independent wall to the requisite height, and then cover the intermediate space by an iron grating; but this is an expensive remedy, and might also prove unsightly.

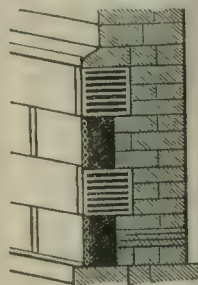


Fig. 95.

In erecting a dry area, care should be taken to ventilate the open space between the walls, or the air there will become foul. A small air-shaft, rising up to six inches above the ground-line and covered by a grating, will generally suffice. The bottom of the area should also be concreted over and drained, and proper steps should be taken to prevent the inroad of rats. Constructing these areas outside or inside the house is always preferable to battening the inside basement-walls of an old and damp dwelling-house with wood and then boarding over it. It sometimes occurs, however, that little else can be done—as, for instance, in a house where there is a basement on one side of a party-wall and none on the other, or where another inside wall is an objection. Even then the narrow space between wall and boarding should be ventilated. Some are content with ventilating it into the room itself by means of occasional perforations, but this is not a commendable plan. A special shaft might in most cases be constructed so as to lead the close air outside. Instances, I think, will also occur where the space may with benefit be ventilated by way of the chimney-flue.

Hollow Walls, etc.—A building which stands in an exposed situation is generally built with extra thick walls, in order to resist the effects of drifting rains; but it has been more customary to run them up first with the usual minimum amount of materials, and, if then found pervious, to slate over the walls having exposed aspects. That this outer casing was positively necessary, will have been noticed by those who have inhabited some sea-side villas. The slating of exterior walls in this way prevents the rain from being beaten into the walls by boisterous winds, and also prevents the more constant saturation which follows an ordinarily wet season; and if some ventilating spaces be left where the slates lap, the remedy is not a bad one. A visit to some of the littoral towns in the north will enable one to remark also many other cures for this evil—its damp wall patches and its mildewed paper-hangings. There more especially also will be observable outer walls which have been treated with hot, boiled, and sulphurous oils; gas and pine tars; pitch; asphaltes; chemical and other paints; lime, concrete, and mastic cements; silica, encaustic, and other impenetrable solutions; water-glass, soap and alum, and scores of other damp resisting preparations. Sometimes also may be noticed walls built with glazed bricks, and also cased with washable enamelled tiles. These will all keep out the external wet, but they will also keep in the wet generated in the interior, which will prove a greater source of mischief in the end.

All these remedies for damp walls are wrong in principle. They shut up the pores of the wall-substance outside, just as much as if they were filled with water. There remains, therefore, only the walling inside these paints for the absorption of the water which is collected there from the air of the house, and such accommodation cannot last for ever. If a new house were originally built of ordinary brick or stone, and coated over with an "impenetrable" solution, however well dried before being inhabited, by means of forced fires and commensurate ventilation, it would not be very long occupied before the walls, by condensing the watery vapour given off by the inmates in breathing, cooking, etc., would be rendered perfectly damp again; the reason

being that the walls are then without porosity, and could not pass the moisture which was developed inside the house to the exterior of the wall, where it might evaporate. The Professor of Hygiene at Munich was perhaps the first to take this view of the functions of a wall, and to compare the building of impervious walls to the wearing of India-rubber textures. Both protect from the exterior wet; but as they impede the exchange of air between the inside and outside, they generate a wetness in the interior—upon the skin or upon the walls of the room.

Such are the reasons why all damp-proof paints for the exterior of house-walls are even dangerous. Buildings built with vitreous slag, like some cottages which I have seen in the iron districts of South Wales, or those constructed with glazed bricks, are of course still more reprehensible. Better build with very porous bricks, provided that the superstructure will not crush them, than with bricks which cannot absorb water at all, nor transmit the air. Sandstones in which the siliceous grains have been cemented together with durable deposits, free working limestones, magnesian limestones, and most granites (if their absorption of water be never followed by disintegration), and even some artificial stones—these are all porous to a certain extent, and consequently commendable. Concrete walls, when the concrete contains just a sufficiency of binding medium, may also be made eligible. I speak now of solid, not cavity, walls.

The same general rule as to the desirability of permeable walls applies to all the interior walls of a house, for these bear some such relationship to the exterior walls that under-clothings do to outer garments. If it be unhealthy to wear for any length of time India-rubber outer coats during a wet and cold day, and even for any length of time on a wet and warm day, it is still more unsound to wear a macintosh material next the skin. It is, therefore, a mistake to paint or varnish walls, or to line them with wall-tiles, mirror-attachments, or cement-bedded veneers. Stencilling or water-colour painting upon merely distempered walls can be made to yield as much flat ornamentation as need be desired. The most sensible walls I have seen are those in the passages of the ducal residence at Chatsworth, which were merely built up of rubbed masonry, and neither plastered nor painted. Ordinary plastering will not destroy the porosity of a wall, but houses which already have their walls painted and varnished should be especially well ventilated. We might take many more lessons from our forefathers: if they wished to hide their walls they hung tapestry before them; and if they did paint them, it was not in oils, but in frescoes.

I must not be understood as saying that the more porous the materials of a wall are the healthier the house will always be; for, as any one may imagine, a wall may be built of too porous a material—as, for instance, of mud or road-drift; but rather as recommending a certain perviousness of walling materials; and as, with my betters, condemning all walls whose exterior stopped-up pores prevent the evaporation of water outside, or whose interior unporous surface serves merely to precipitate on the inner walls the water derived from the air inside the house. The thing to avoid is a wall-material which will admit water too easily; the thing to adopt is a substance which will just fairly admit the air. With Pettenkofer's apparatus air can be driven through mortar, sandstone, and even some limestones; water will also pass through, but far less readily.

In a country like ours, where the majority of houses are built with whatever comes first to hand, it is satisfactory to think that everything positively necessary is reached by the adoption of hollow exterior walls. Walls, like garments, interpose between the outer air and the inmates. Hollow walls are doubly agreeable, for in cold weather the air passing into the house is well heated during its passage through the inner wall; the hollow space also impedes the radiation of heat outwards. In hot weather they impart a sense of coolness, because the more interrupted the shade which acts as a cover, the greater is the current through the walls to the outer air. It does not follow that because there is a hollow space the ventilation is impeded, for there is a constant interchange of air between the two walls, just as between coat and vest. Hollow walls are also very readily cleared of drifting wet.

There are several methods of erecting these hollow walls. Sometimes ramped bricks are used, as at *a*, fig. 96; or straight bricks may be inserted, resembling that seen at *b*, and

perfectly straight, like that at *d*. These are also variously fashioned at the ends—some bent up at one extremity and turned down at the other; but the kind most commonly used now are those made with clawed ends. As for the space usually left between walls, some architects prefer three, some two, inches. In the house mentioned by me at the beginning of this article, the walls had a two-inch space between, and the contents of this hollow space exceeds 3,000 cubic feet.

There are some precautions to be taken when building hollow walls—for instance, providing for some means of draining the base of the intermediary space. The best plan is to leave a few small openings there, to the exterior of house; and, as the hollow walling begins, or should begin, from the damp-course, any water, whether generated inside or outside, will thus readily find exit without soaking into the foundations. There should also be a few air-bricks inserted along the walls, just where the hollow space is left off. The nature of the cornice or the weight of the roof will sometimes necessitate a few solid courses at the top of the building, and the ventilating bricks are best put immediately under these. The hollow space need not be continued round the corners of a structure unless the wall is sufficiently thick to withstand this abstraction of strength where often most wanted. If the walls, too, be kept hollow up to the extreme top, the tie-beams of roof should sit upon stone templates which cross the space and rest on both walls. As for the window and other sills spanning the hollow, it is a mere matter of strength of outer walling.

Hollow walls are easiest built in brickwork, but they can of course be erected in stone, concrete, or other material. As regards thickness, walls of this description may be built which measure only nine inches across both walls and hollow space as well: for instance, the house and farm-offices of the residence I have previously alluded to are built of two half-brick ($4\frac{1}{2}$ in.) walls, with an air space of two inches. This thinness of wall is, however, only suitable for one-storey erections, or for top storeys of higher buildings. Where the height or weight of superstructure calls for thick walls, the hollow should be begun at such a distance from the face of outer wall as will preserve the whole space truly perpendicular. The only other caution I can bring to mind is to see that iron ties are so shaped as really to tie the walls together, and that they have been either galvanised or dipped in boiled oil, etc. The mortar-droppings should also be well cleaned from the top of the stretching media, and as well from the foot of the hollow spacing.

Damp Pavements, etc.—Very many old houses, and not a few modern ones, are rendered unhealthy by the damp condition of their pavements, particularly in the basement-floors—the reason being that the flags were bedded in mortar laid directly upon the cold earth, instead of being laid upon a bed of concrete. A wise system is to cover the whole floor superficies with proper concrete, six inches in depth, and then to bed the stones upon a layer of cement upon this concrete. The best plan is to put in the concrete at such a level as will allow of piers or walls being built upon its surface, such piers, etc., being about a foot or so in height, and prepared to carry the stone-flagging. Whichever plan be adopted, it is imperative that the subsoil be drained as much as possible, and to take care that the walls are guarded by external areas, or the water may find its way through the walls and cover the concrete.

I have seen cellars which were duly protected by areas from the wetness of the environing soil, and yet, from the absence of drains, the piers which supported the flags were found mostly surrounded with water. The only cure for damp flags is to take them up, excavate underneath, put in a bed of concrete, and lay them in cement upon that or upon piers or sleeper walls. If the house have been built, or is being erected, upon *made ground*—i.e., shot rubbish of all kinds—it will be necessary to interpose a layer of charcoal.

The Drying of Buildings.—The dampness which results from basement-walls that are surrounded by damp earth, or from underground paving which had been simply laid upon the cold clay or moist earth, can never be removed by any amount of firing, because the evil is a persistent one. It often occurs, however, that it is necessary to occupy as quickly as possible a new house; and here fires may be made of service, provided that the dwelling has been properly erected. If we institute fires in a room newly built, we render the air in it capable of taking up more than its natural quantity of water; and if we continually replace this fully saturated air by fresh air, the room will speedily become dry. Heat and ventilation combined are the only means by which one can force on a suitable dryness. And yet this is not universally known, for it is not long since I found a builder attempting to dry the walls and ceiling of a newly erected billiard-room by burning coke in two grates placed in the centre of the room, and insisting upon keeping the windows closed for fear of letting in the cold outside air. One thing I might add here, and that is, that the fires should be as much as possible kept up in the proper fireplaces, because the ventilation is

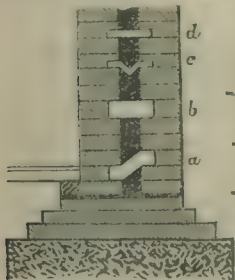


Fig. 96.

both may have glazed or enamelled surfaces. They are generally laid twenty-seven inches apart, and alternately spaced. There are, moreover, many patterns of iron ties—some made with a depending piece in the middle, and thus forming a water-drip, as at *c*; others are per-

thus rendered more perfect. A ventilating grate possessing a chamber behind it, which is duly fed with air from the outside, and that sends this air heated into the room, is also of more service than the common form of grate.

ADDENDUM TO THE BRITISH PHARMACOPŒIA OF 1867.

*Published under the direction of the General Council of Medical Education and Registration of the United Kingdom.**

We mentioned some time since that the Medical Council have taken the opportunity afforded by the necessity for a reprint of the *British Pharmacopœia* of 1867 to add to it an Addendum, which will be published at the end of the volume in the forthcoming reprint, and which will also be published separately for the convenience of those who already possess that volume.

The Addendum is in the hands of the binder, and will be forthcoming for the use of the profession, we anticipate, at the close of the year. It will be found to include many new medicines and new preparations, and a few slight numerical corrections of the text of the old *Pharmacopœia*. That they are not very bulky, will be gathered from the fact that the Addendum will not exceed twenty-four pages altogether. Yet it will be found to include most articles of interest and approved use which have come into notice lately. Among them are the following: *Tinctura ipecacuanhæ*; a new *Tinctura aurantii recentis* (from fresh bitter orange-peel); a syrup of chloral; suppositories of tannic acid, morphia, and carbolic acid, with soap; *Succus hyoscyami*, made of the fresh leaves and young branches of *hyoscyamus* (now well recognised as a most efficient preparation), and a *Succus belladonnæ* similarly prepared; the hypophosphite of soda; a compound of elaterium powder, made by rubbing ten parts of elaterium with ninety parts of sugar of milk; a compound jalap pill made with resin of jalap and of scammony, and soap, strong tincture of ginger, and rectified spirit; a formula for pepsin; a formula for making phosphorated oil, by dissolving phosphorus in oil of almonds; a solution of citrate of magnesia (*Limonade purgatif*); an excellent solution for the hypodermic injection of morphia, the acetate being formed by the process in the proportion of one-twelfth of a grain to each minim; yellow oxide of mercury; a fluid extract of liquorice; mustard papers, to supersede the ancient mustard plaster; oxide of bismuth; and nitrite of amyl. It will be seen that the list is comprehensive, although eclectic. Besides the *Pharmacopœia* Committee, which has deserved well of the profession by its patriotic and successful labours, the Council have had the services of Professor Redwood, the Professor of Pharmacology of the Pharmaceutical Society, who has for the last few years undertaken the duty of watching and reporting on pharmacological progress to the Committee, and has assisted in seeing these pages through the press. Pharmacology and therapeutics are not yet sciences so exact or so complete, but that we may expect to see reproaches of two kinds addressed to any committee or to any individuals who undertake to prepare an addendum to an official *Pharmacopœia*: the one that they have done too much, and the other that they have done too little. It would, however, be premature to discuss the Addendum to the *Pharmacopœia* from either point of view at present. Very shortly it will be in everybody's hands: we feel sure that the principal feeling will be one of obligation to the *Pharmacopœia* Committee for their important and successful labours, and the care and zeal which they have shown in making the *Pharmacopœia* a really valuable standard guide and book of reference for the most modern therapeutic purposes. Whether the book be perfection, or on which side of the line its errors are to be found, will be a matter for further consideration. We may as well announce, however, that it is our intention to be as critical as possible when the time for criticism comes.

* London: Printed for the General Medical Council by Spottiswoode and Co., New Street Square, E.C. 1873.

REPORT

ON

DRINKING-WATER IN THE EASTERN COUNTIES.

I HAVE recently had an opportunity of examining the drinking-water of certain well known places in the Eastern Counties. The results are as follows.

Date.	Name and Description of the	Grains per Gallon.	Parts per Million.
1873.	Samples of Water.	Solids. Chlorine.	Free Alumin'd Ammonia. Ammon.
December.	Norwich Water Company...	24.0 1.7	0.00 0.05
16th Nov.	Yarmouth Water Company.	22.0 4.2	0.00 0.18
	" Well (North) ...	— 15.2	0.04 0.18
	" Well (South) ...	— 10.2	0.00 0.15
	" Naval Asylum...	19.2 4.2	0.01 0.30
December.	Cromer; Town Pump	118.0 20.0	0.02 0.26
	" "Happy Jack" Pump.	36.0 5.0	0.12 0.23
December.	Beccles.....	36.0 3.7	0.00 0.12
December.	Lowestoft (from Lound Water Works).....	20.0 3.5	0.05 0.14

For comparison, the analyses of London waters are appended.

London Water Supply (Thames).....	18.5	1.2	0.01	0.06
" " (New River)	17.7	—	0.00	0.06
" " (Kent Company)	26.5	—	0.01	0.02

From the foregoing it will be seen that of all these specimens of Eastern Counties water, only one—viz., the water of the Norwich Water Works—comes up to the standard of purity. The city of Norwich is to be congratulated on the improvement of its water-supply. In 1868, when I examined Norwich water, the result was very unfavourable, far different from what it is now. The water of Yarmouth is in a disgraceful condition; and, as is apparent from the above, the water supplied by the Water Works Company is as bad as that from the wells in the place. The mortality in Yarmouth is notoriously high—far too high for a town which, in other respects, enjoys great sanitary advantages.

Cromer—the snug little watering-place which boasts that it is still uncorrupted by the stream of modern civilisation, and which no railroad has hitherto dared to approach—is quite mediæval in the matter of water-supply. Its town-pump yields a fluid comparable with the contents of the Fleet Ditch-sewer in London. Fortunately, Cromer is a small place at the sea-side, otherwise it might every now and then contribute a mediæval plague to modern England.

Of Beccles and Lowestoft the remark may be made that, although they do not drink water of average purity, yet they do drink drinking-water, and they may be encouraged to attempt a further improvement of their water-supply.

J. A. WANKLYN.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

M. Béhier.—Dr. Galewowski on Ophthalmology.—The "Two-headed Nightingale."

PROFESSOR BÉHIER is decidedly the leading physician in Paris. As a professor, he is unexcelled, and his lectures bear the impression of a superior and a practical mind. His powers of diagnosis are simply marvellous, and his therapeutics are rational, savouring nothing of the scepticism prevalent amongst French physicians. He, at least, believes in drugs; and, while he abhors polypharmacy, he has a certain amount of faith in pharmaceutical preparations. His *clinique* is always well attended, not only by students, but by practitioners from all parts of the world. M. Béhier opened his winter course in the midst of a great number of practitioners and students, several representatives of the medical press of all countries being present. The Professor began by declaring that he was not tied down to any particular doctrine; that he was neither a humoralist, solidist, nor vitalist, but believed that, in most cases, the powers of nature alone were sufficient to cure disease—that is to say, without the intervention of drugs, properly so-called. He dwelt upon the utility of personal observation and the importance of taking cases at the bedside, for which, I must say, he affords every aid and facility. Whenever a patient is admitted into his wards, he

calls upon one of the students to form his diagnosis, interrogates him on the case, and then leaves it to his entire management, the Professor, of course, proffering his advice when necessary. In addition to this, the student is required, not to read his observation, but to give a lecture on the subject within a given time (fifteen minutes), after which the Professor rectifies any faults made by the student. This plan has borne excellent fruit, if one may judge from the positions attained by many of M. Béhier's pupils, and it is desirable that all clinical professors should imitate the example.

Dr. Galewski, one of the leading oculists in Paris, has just brought out a second series of his journal, *Recueil d'Ophthalmologie*, which is to appear quarterly. He is assisted in the work by Professor Richet and other surgeons and ophthalmologists, and the number before me is replete with interesting subjects. Article I contains an account of an autoplastic operation performed in the palpebro-temporal region by Professor Richet, on a man aged 41, who was wounded by the bursting of a shell in the Crimea. Article II is on keratotomy, or the manner of examining the cornea, by Dr. Cuignet of Lille; but the article that struck me as most interesting is a long one by Dr. Galewski himself, entitled "The Study of Certain Affections of the Lacrymal Apparatus, and their Treatment." The journal is well got up, and will, I am sure, be welcomed as a useful addition to the few ophthalmological publications now extant.

Paris, just now, seems to be the rendezvous of living teratological specimens, for, besides the two hairy individuals referred to in my last, there is "the two-headed nightingale," Marie Christine, the same that was or were exhibited in London about three years ago. I need not trouble your readers with a description of this most wonderful specimen of teratology, as the subjects under notice are well known to your English readers. I may, however, observe that they are a puzzle alike to the French naturalists, metaphysicians, and philosophers, and the wildest speculations as to their unity or duality are made, either for the edification or the amusement of the Parisian public. The members of the Anthropological Society of Paris were specially convened, last week, to examine these creatures; but, to their great disappointment, they were not more privileged than the general public, the examination being confined to looking at and feeling the bond of union which united them in the back. Then the question arose as to whether they were two distinct individuals, or whether they were two halves of a whole. The weight of opinion bore on the first supposition, and that they were merely twins accidentally, or rather pathologically, united, and that they do not in any way represent a normal specimen of any special division of the animal kingdom.

The two little negresses, or rather, mulattoes, were, however, much admired for their intelligence and lady-like demeanour, and the artistic manner in which they danced and sang. On questioning a German lady (a doctress) who acted as interpreter, it was ascertained that the organs above the middle dorsal vertebrae were distinct and independent, but those below, that is, the intestines and pelvic organs, were common to both. "It may be true," pathetically observed a gentleman present, "that they have but one vulva; but each has her own heart" (using the term figuratively and literally); "so that, even psychologically speaking, they are decidedly two distinct individuals."

Among other curiosities of natural history, I may note the exhibition of giants and dwarfs, fat women, weighing between 300 and 400 lbs., women with moustache and beard (*femmes à barbe*), and a man with a beard nearly twice the length of his body! I have also seen an ox with a fore-leg growing from its hump, the other four limbs being normal in number and size.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Subcutaneous Injection of Mercury—Qualification of Physicians.—Operations at the Infirmary.—Lectures by Professor Gamgee and Dr. Lankester.

At a meeting of the Medical Society, held on the 3rd inst., Mr. Cullingworth read an interesting paper on the Subcutaneous Injection of Mercury in Syphilis. The author, after tracing the history of this mode of treatment, related the experiments he had himself performed. After trying several solutions of mercury, he gave his preference to the bichloride, as being the one least likely to produce local irritation.

A meeting of the Infirmary Trustees is convened for the 22nd inst., when the desirability of the Physicians being fellows or members of the College of Physicians in London will be discussed. This proposition is supported by the physicians themselves. Several interesting cases have been admitted into the wards of the Infirmary during the last few weeks, the most important, perhaps, being a case of Ence-

phoid disease of the upper part of the left leg, involving the knee-joint and following a blow on the limb. Mr. Bowring amputated at the hip-joint. The patient progressed favourably for a few days, when septicæmic symptoms set in, and she died of pyæmia on the 9th inst. This case will be reported fully hereafter. Lister's antiseptic method of dressing was not adopted in this case. The *post mortem* examination revealed an acetabulum full of putrid pus. Lister's aortic tourniquet was used, and all the vessels were twisted.

The method of arresting hæmorrhage by torsion has been almost exclusively employed at this Infirmary for nearly twelve months, and in no case has secondary hæmorrhage taken place. When torsion is inadmissible from any cause, catgut ligatures are used. The femoral artery has been tied twice lately, and these ligatures were successfully employed in each case. The bloodless method of operating has been tried of late at this institution, but the trials have been too few to furnish any definite results.

The Committee of the Eye Hospital having abandoned their original intention of appointing three surgeons in addition to the present three, now advertise for three assistant surgeons. Their duties will consist in seeing out-patients only.

The Managers of the Ardwick and Ancoats Dispensary, at a meeting held on the 1st inst., decided to appeal to the public for subscriptions to enable them to open the Infirmary in connection with this valuable institution; at present only the Dispensary is in a working condition. It is, however, hoped, in order to meet the wants of the poor in this densely inhabited district, that the Committee will soon be in a position to admit patients into their Infirmary.

The Provident Dispensary system was favourably alluded to by some speakers at this meeting.

On the 9th inst., at the Hulme Town Hall, Professor Gamgee of Owens College, delivered a lecture on "Muscle and Nerve". The lecture, illustrated by several experiments, was one of the popular science course, first instituted by Professor Roscoe. Three very interesting lectures on the "Food Question" have been delivered at the Royal Institution here, by Dr. Lankester.

ASSOCIATION INTELLIGENCE.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: GENERAL MEETING.

AN ordinary general meeting was held in Aberdeen on Wednesday, December 3rd, 1873. Present, twenty-one members and one guest; the President, Dr. GREIG (of Fyvie), in the Chair. The minutes of last meeting were approved of, and applications for admission from four gentlemen were tabled.

Alteration of Law 14.—On the motion of Dr. JACKSON, seconded by Dr. ANGUS FRASER, the following resolution was agreed to, viz.:—"That Law 14 have the following words added to it. 'All conveners of standing committees shall be *ex officio* members of Council.'"

On the Plastic Surgery of the Eyelids.—Dr. A. D. DAVIDSON drew the attention of the Branch to the various operative procedures adopted for remedying deformities and destruction of the lids, illustrating his remarks on these heads by the exhibition of the following cases. 1. A male, with right lower ectropion resulting from typhus, cured by the V-shaped transplantation of Reil and Adams. 2. A female patient, with left upper ectropion from periorbital necrosis, cured by Fricke's transplantation of a temporal flap. 3. An infant, with congenital coloboma at the inner third of the left upper lid, with dermoid island on the cornea, cured by a quadrangular flap and unfolding of the mucous membrane. Dr. Davidson also showed a case of central leucoma of the cornea in process of cure by tattooing.

Provident Society and Scale of Fees.—Dr. FORBES (Aberdeen) read a paper on a scheme for a Provident Medical Society in Aberdeen, and moved the following resolution, which was seconded by Dr. BURR:—"That a Committee be appointed for the purpose of revising the scale of medical fees within the bounds of this Society, for co-operating with committees of other medical societies similarly employed, for considering means to enforce payment of arrears due to medical men, for considering the scheme for a Provident Medical Society in Aberdeen, and to report." This motion was agreed to, and the following Committee was appointed, viz.:—Dr. Mackie, Inch; Dr. Keith, Aboyne; Dr. Jamieson, Peterhead; Dr. Leslie, Stonehaven; Dr. Greig, Fyvie; and Drs. Findlay, Wight, Johnston, Willock, Jackson, Angus Fraser, A. Ogston, Best, and Burr, Aberdeen. It was understood that the Committee consisted of two sections, the country members being appointed with special reference to the scale of fees, the town members also with

special reference to the Provident Society; Dr. Forbes convener of both sections.

The papers promised by two other members were postponed for unavoidable reasons.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETING.

THE second meeting of the seventeenth session 1873-4 was held at Maidstone, at the General Hospital, on December 5th; GEORGE HENRY FURBER, Esq., in the Chair.

New Member.—John Dunbar Baskerville, Esq., of Chatham, was elected a member.

Next Place of Meeting.—A proposition was made by the Honorary Secretary to hold a meeting at Tunbridge Wells next March, conjointly with the East Sussex District. A Committee was appointed to make arrangements in the event of the proposition being found practicable.

The death of John Grantham, Esq., F.R.C.S., of Crayford, was announced, and the Secretary was directed to express the regret of the members to the friends of the deceased.

The Visiting List of Dr. Sheen of Cardiff, newly published, was handed round the room for inspection, and was favourably received.

Papers.—The following were read.

1. Aneurism of the Aorta, with Specimens. By John M. Burton, Esq.

2. Empyema successfully treated by Paracentesis and Drainage-tube in a child. By John M. Burton, Esq. The necessity of early interference by tapping was insisted on, and its benefits were ably shown by Mr. Burton.

3. A Demonstration was given by Matthew A. Adams, Esq., of Dr. Dewar's and Dr. M'Kendrick's experiments whereby the correlation of the function of the retina and galvanic electricity is shown.

4. Dr. Monckton exhibited a lad with incipient Vertebral Disease, in whom a swelling had occurred below Poupart's ligament, and who had been cured by two evacuations by the aspirator.

5. Dr. Monckton also exhibited some morbid specimens from a patient that died of chronic catarrh of the bladder, pyelitis, and contracted thickened colon with obliteration of the pouches.

After a vote of thanks for the use of the board-room in the hospital, the members and visitors adjourned to dinner at the Mitre Hotel.

CORRESPONDENCE.

DR. BARNES ON THE SEAT OF THE PLACENTA IN PLACENTA PRÆVIA.

SIR,—I have read with utter surprise in Dr. Matthews Duncan's paper on this subject at p. 600 of your JOURNAL, the following passage: "Simpson and Barnes, erroneously believing that the cervix is the placental site, and knowing that this part does not contract during and immediately after labour, as the body of the uterus does, have been led to unnecessary and misleading reflections based on these anatomical points. Simpson calls attention to the rarity of bleeding when the placenta is separated from this uncontracting portion of the uterus. Barnes describes the cervix as liable to paralysis for a time, and thinks this state is more liable to occur in labour with placenta prævia, and that then it is doubly dangerous. But such reflections on the influence of the placental site on the hæmorrhage are to be utterly disregarded, because founded on the anatomical error."

In support of this astounding impeachment, Dr. Duncan refers to p. 401 of my *Obstetric Operations*, second edition. On this very page is the following passage: "Stoltz, Riederer, Weilbrecht, and Matthews Duncan, clearly show that the cervix proper contributes in no way to the reception of the ovum. I have repeatedly felt the cervical canal entirely closed above by the narrow os uteri internum at the end of pregnancy. I have also ascertained the truth of this by dissection of women dying after labour."

More than this, in the very memoir of Dr. Duncan, which I quoted in that page, is a figure which I sent to him many years ago in proof of the proposition that the body of the uterus alone is the normal seat of gestation. Dr. Duncan thus describes it, "Figure 26 gives a tracing of a drawing made by Dr. Barnes, *ad nat.*, from a preparation of the uterus of a young woman who, in perfect health, destroyed herself by poison when at the beginning of the fifth month of pregnancy. The uterus was taken out entire and injected by Mr. Lane. The drawing is from a section—of course after the injection. The preservation of the cervix and cervical cavity at this stage of gestation is complete."

I do not hesitate to say that this figure is the best illustration given

in Dr. Duncan's memoir. It shows what is precisely the point in question, namely, the decidua vera dissected up from the inner surface of the body of the uterus down to the margin of the os uteri internum. The original drawing I have invariably shown in my lectures, in illustration of the fact that the body of the uterus is the proper and exclusive seat of gestation. I believe that Dr. Duncan is under a delusion if he imagines that any teacher in London is ignorant of this fundamental fact in physiology.

Upon what, then, does Dr. Duncan base his impeachment against me? He refers to p. 421 of my work, which contains the following passage: "This state (of paralysis) is more likely to occur in labour with placenta prævia, and it is doubly dangerous, because the cervix is the placental site."

But will any candid reader so misconstrue this expression as to infer that it means a direct denial of that which was so clearly expressed in the passage quoted above from p. 401? I have used, perhaps a little carelessly, the word "cervix" in the same sense in which, all through the lecture on this subject, I have used the term "cervical zone," meaning what no one can fail to understand as the lower zone of the body of the uterus.

In the next page, 422, are passages which might have removed any doubt from Dr. Duncan's mind. In the "Series of Physiological Propositions," which sum up my views, beginning on p. 421, No. 8, says: "That, in the case of partial placental presentation, where an edge of the placenta dips down to near the edge of the os uteri internum, the umbilical cord commonly springs from that edge." No. 9 further says: "That adhesion of the placenta to the os uteri internum impedes the regular dilatation of the part."

In the "Series of Therapeutical Propositions" on p. 423, No. 4 states, "That, in cases where labour appears imminent, with considerable flooding, whilst the os internum uteri is still closed," etc. No. 5 states: "That, since a cross-presentation, or other unfavourable position of the child at the os internum uteri," etc.; and, to finish similar references which might be multiplied, No. 9, p. 424, states: "That the artificial detachment of all that portion of the placenta which adheres within the cervical zone of the uterus will at once liberate the os internum uteri from those adhesions which impede its equable dilatation."

I make this correction with considerable reluctance. Into the merits of Dr. Duncan's argument I forbear to enter. I might not unfairly quote against them Dr. Duncan's own words, that his "reflections are to be utterly disregarded, because founded on error." I will simply ask any one who takes an interest in the subject to read Dr. Duncan's papers and the lecture in my *Obstetric Operations*, and judge for himself how far the views, physiological and therapeutical, therein set forth, are disturbed or confirmed, and how very little Dr. Duncan has added that is new.

Dr. Duncan has done me the honour to associate my humble name with that of the late Sir James Simpson in his impeachment. I will not examine how far Sir James is justly impeached. The peculiar zest with which the books of this illustrious man has been criticised by Dr. Duncan has long been so painfully conspicuous to every lover of science, that to defend Simpson against Duncan has come to be recognised as a work of supererogation.

I am, etc.,

ROBERT BARNES.

CAULIFLOWER EXCRESCENCE OF THE OS UTERI.

SIR,—In your report of the last meeting of the Royal Medical and Chirurgical Society, in a paper on a case of the above kind, Dr. Snow Beck, in referring to a paper of mine in the *Guy's Hospital Reports*, observed that the cases reported were not cases of cauliflower disease, but "encephalomatous" and other diseases of malignant nature. Yet they were cauliflower disease, notwithstanding Dr. Beck's exception to the term. "Cauliflower" is not a really scientific term, but an useful clinical one, which includes a group of the varieties of a canceroid disease affecting the mucous membrane of the os and cervix uteri, primarily or principally more or less the villi of that membrane, producing to the naked eye the appearance of a "cauliflower." Any one who has examined various specimens will agree with me that the degree to which the vascular portion of villi is affected varies with each specimen and in parts of the same specimen. The same may be said of the epithelial portion, and which I have shown in the paper quoted, at the one end of the series one places the apparently simple villous disease, at the other the forms approaching ordinary epithelioma. I say "apparently simple villous disease," as of the bladder; because I believe that the case is exceedingly rare where the at first simple villous growth does not, if the patient live, show unmistakable signs of malignant disease at the base. This opens up the old question as to the definition

of malignant disease, and the exact marks by which we can recognise it, the discussion of which I will not intrude upon your space. But I will ask you to excuse one remark, which is that, if we recognise the fact that there is much variation in these new growths, both as to the intensity of the exciting force and also as the part first or primarily affected, and that there is no strict line of separation, we shall arrive at a better knowledge of them than by drawing a hard and fast line between the various forms. I know nothing which bears this out better than the large amount of discussion which has taken place on this very question. But as long as we have no better clinical name than cauliflower excrescence, I shall prefer to employ it for these growths of a canceroid character which resemble a cauliflower, which was the fact in my cases.

I am, etc., J. BRAXTON HICKS.

George Street, Hanover Square.

THE TREATMENT OF PNEUMONIA.

SIR,—I am anxious, by your permission, to invoke the aid of members of the Association on behalf of an inquiry respecting the treatment of a certain stage of acute pneumonia.

The question I should desire to put to individual members would be shortly this: From your experience of acute sthenic exudative pneumonia (I use the nomenclature of Walshe), and refer to "uncomplicated" cases with well marked symptoms and physical signs, where the stress of the disease has threatened speedy death by asphyxia, can you (or would you) furnish cases illustrating the particular service (or otherwise) of any specified method of treatment which you have adopted with a view to meet the emergency?

The question has special reference to the employment, in the event stated, of blood-letting (in whatever form); but it also contemplates the case of any particular drug, *e.g.*, digitalis, whose use has been followed, under the circumstances mentioned, by direct and immediate results, good or bad.

I would limit the class of cases strictly to those who, to all appearance, are about to die suffocated, carefully excluding instances of acute pneumonia, however severe, which have seemed to owe their recovery to the adoption, at any other stage than this, of a certain mode of treatment. For example, it is thought by some that pneumonia is always best treated by the assiduous administration of beef-tea, but, obviously, beef-tea does not meet the condition I am here concerned with; the question is—Does *any thing* meet it in the sense of being its remedy?

It might ensure greater precision to suggest a tabular form for the particular information I am in search of, but that plan would probably be too troublesome to some who might be otherwise willing to help me. It will suffice to ask generally for such evidence in each case as the observer himself deemed sufficient to establish his conclusions. I am in hopes also, that by this appeal I may be referred to cases already published, and which I have hitherto overlooked.

If the inquiry issues in any positive result, the credit will assuredly rest with those who supply the materials. In that event, I would ask leave to publish the particulars in the names of my correspondents, in the columns of this JOURNAL, together with such cases as I have already got.

I have collected during several years some material of the sort, but want much more; it is especially desirable to obtain further testimony in reference to the treatment of acute sthenic pneumonia, of the open country as compared with that of the large cities. Statistics are very apt to wear out, so to speak; to be of use they must refer, I think, to our own time and circumstances. Such is my apology for troubling a very busy profession. I know that others, by similar means, have collected very valuable data in reference to practical medicine, and, should you regard my proposal as within the province of the Association, I have confidence that I shall not ask in vain.—I am etc.

Westminster Hospital, December 1873. OCTAVIUS STURGES.

THE HISTORY OF OVARIOTOMY.

SIR,—Will you allow me to give in all fairness the opinion of an independent onlooker or outsider on your article on the progress of surgery in the last number of your JOURNAL? You there claim for Mr. Baker Brown and Dr. Clay the credit of having placed ovariectomy in this country on a sure foundation. Few watched more eagerly than I did the history of this operation, and few know so well the details of the early cases. Till 1858, I could find nothing whatever anywhere to encourage, but everything to deter, one from attempting it. Ovariectomy was then, as an operation, simply nowhere; and, had the practice of using Dr. Clay's long intraperitoneal ligatures been continued, it would have yet been nowhere. Up till that year, Mr. Brown had lost seven out of his nine patients, and had ceased operating for

upwards of two years and a half. Surely there was nothing for any one to learn from such results, except, perhaps, what there might be to avoid.

But when Mr. Wells began to publish his results, it was evident that a period of progress had begun. He continued to give every case—successful as well as unsuccessful—the only way, in the case of a new operation, to give or restore confidence. I think I know pretty well what the verdict of the profession on this matter will be; and when I think of the weariness of flesh and spirit with which Spencer Wells's great work has been accomplished—and there never has been anything like it in surgery since surgery began—it seems to me strange that any doubt could have arisen at all.

Great credit is due to Mr. Brown for his perseverance after his unsuccessful beginning, and from his introduction of the cautery in dividing the pedicle, his name will ever be associated with this operation. His latest results were very remarkable; but in giving them, Mr. Lennox Brown should, to be strictly accurate, have added the ten deaths from incomplete or partial operations that happened during the same period.

I am, etc., THOMAS KEITH.

Edinburgh, December 16th, 1873.

THE FIRST OVARIOTOMY.

SIR,—In some recent numbers you assign the first performance of ovariectomy in 1809 to Ephraim McDowell, of Kentucky, a great surgeon, who afterwards performed and perfected the operation; but that it was done with success in 1701 will appear to any reader of Dr. Robert Houston's case, related in the *Philosophical Transactions* (1724), vol. xxxiii, pp. 8-17. His language is very quaint, but it is plain that his incision in the abdominal wall was five inches long, and that the tumour was multilocular, and contained nine quarts of liquid. He does not state how he treated the pedicle. He says: "I kept in the lower part of the wound a small tent, which discharged some serosities at every dressing for four or five days. . . . Her chief food was strong broth made of an old cock, in each porringer of which there was a spoonful of the lady's cinnamon-water; this was repeated four times a day, and gave her new life and spirits." The patient, Margaret Miller, aged 58, a tenant of Sir J. Houston, Bart., Renfrewshire, perfectly recovered.

I am, etc., E. D. MAPOTHER.

18, Merriem Square, N., Dublin, December 16th, 1873.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE TOPOGRAPHY OF DISEASE.

A KNOWLEDGE of the distribution of disease in his district is essential to the proper carrying out of a medical officer of health's duties. The omission of all provision for procuring the necessary data for this knowledge, although limited, as perhaps it may be at first, to returns of deaths and sickness among paupers (these data being largely under the control of the Local Government Board), has been a cause of untold difficulty to many medical officers of health, and of indifference among others, and also among their sanitary authorities, to some of the most important of a medical officer of health's duty, which it will not be easy to rectify. Mr. Alfred Haviland, as was to be anticipated from his previous researches in the geography of disease, has given considerable prominence, and devoted much attention, to the measures necessary for obtaining this kind of knowledge in his district. A few nights ago, he brought together in conference the different medical men practising in Northampton, and submitted to them a scheme for securing the necessary data for a current topographical account of the sickness and mortality, from certain kinds of disease, in the town, asking their co-operation in carrying out the scheme. He had in view, not only the procuring of such data as were requisite as a guide to his duties as medical officer of health, but such also as might be turned to a scientific account. The diseases which he suggested should be noted were small-pox, measles, scarlet-fever, diphtheria, whooping-cough, fever, diarrhoea, cholera, and phthisis. He sought to know the habitats of these diseases; and, in regard to phthisis, he desired and sought to study intimately the causes of an undue prevalence of the malady in Northampton, which had been brought to light by his previous researches on the geography of disease. Mr. Haviland's scheme met with a very hearty approval of the meeting, and the gentlemen present willingly proffered their co-operation.

We follow with admiration Mr. Haviland's efforts to make good, by individual exertion and the friendly co-operation of his professional

brethren, the defects of the law, and of the initial organisation under which his duties are carried out. But it must be obvious that work of this kind is work which can be expected only from very few men, mostly with special aims of study; that, under the most favourable circumstances, it cannot be carried out with any surety of permanence, and that it offers no security for even that necessary and limited information as to pauper sickness which, supplemented, perhaps, by sickness in public hospitals and dispensaries, must form the abiding data for the medical officer of health. Wherever a man of Mr. Haviland's stamp carries out the duties of a medical officer of health, he is sure to obtain the worthy co-operation of his professional brethren in any efforts to further his labours; but such co-operation must not, in any sense, be understood as the right mode in which information as to sickness, necessary to the performance of a medical officer of health's duties, should be obtained. Neither should the procuring of this information be left to the option of the medical officer of health. Even when the Legislature has done its utmost to facilitate the work of the medical officer of health, there will be abundant occasion for the co-operation of his brethren, without the latter being called upon, as now, to make good, voluntarily in the interests of the public, defects of sanitary policy, which have been perpetrated in insulting disregard of their representations and remonstrances.

REFUSE AND WATER-SUPPLY.

MR. BERESFORD EARLE, medical officer of health to the rural authority of the New Winchester Union, writes to us for information and advice on points connected with the removal of refuse and the water-supply of villages. It appears that Mr. Earle has already sent a special report on the sanitary state of one of his villages, to "the authorities for sewage utilisation," whoever they may be; and these may, perhaps, help him in his difficulties. But, in reply to his questions:—

1. We suggest his not recommending the local authority to adopt a system of sewerage and sewage utilisation "for a population of 200 in less than 30 houses, where no good supply of water exists." Of course, he is right in objecting to cesspools, whether open or closed. We suspect that this may be just a case for the trial of the village-earth-closet system, of which he will learn full particulars at the office of the Earth-closet Company, 5A, Garrick Street, Covent Garden, where he may also obtain advice as to the best method of applying the system in such a place.

2. We should say that every house ought to have its own privy or closet. The frequency of the emptying of dry-earth closets is a point of very great importance. Wherever Moule's system has not succeeded, the cause of failure has been either the use of *wet* earth, or the infrequency of removing the contents of the receptacles. As in Rochdale, and some villages of Buckinghamshire, every house should be supplied with two movable receptacles. The employment of labourers, to replace those in use by those which have been emptied and cleaned, at least three times a week; to supply dried earth where there are not domestic ashes enough, and to place the contents of the receptacles in proper drying sheds, will be found to cost less in the end, reckoning the sale of the manure, than the construction of sewers, the supply of water in sufficient abundance, and the maintenance and management of a system of irrigation.

3. Any accumulation of filth in an open water-tight box out of doors is less prejudicial to health than it would be in a shallow pit with uncemented walls, and therefore liable to pollute the wells and streams in the neighbourhood, especially in porous soils.

4. Every case of sewage-drinking ought to be peremptorily stopped by the local authority, which, we think, would be justified in supplying water, either from a new well, or even from an Abyssinian pump, if deep enough, and if out of reach of pollution, but not otherwise. We believe that the cost of such a means of pure water-supply might be charged by the local authority to the owner, as "private improvement expenses," recoverable under existing legal provisions. But the Public Health Act, 1872, makes no provision for a pure water-supply; and we must wait, at Mr. Stansfeld's good pleasure, for statutory powers to enable villages to provide this necessary of life.

MR. RAWLINGS (Hartlepool).—We will consider how we can best meet our correspondent's wish. We have such a list nearly ready and tolerably complete; but it is so long, and would take up so much room, that we doubt whether we can publish it. The principle on which remuneration is now fixed would of course be hard to discover—in fact, it is fixed on the most opposite principles; and in the total absence of any uniformity of scheme or duties, it is really difficult to do more than decide each case for itself, which we shall be happy to assist our correspondent in doing.

A MEDICAL OFFICER suggests in the second part of his letter some points worth discussion, and which shall have attention. The first part consists of imputations against independent gentlemen, which are the more discreditable that they are absolutely the reverse of the fact, as materials in our possession would quickly prove.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON N. WARD, who left England in the *Himalaya* for service on the Gold Coast, was invalided at Madeira. We understand that the cause of his temporary withdrawal from duty was a severe recurrence of an asthmatic complaint, to which he has long been subject.

MR. RICHARD B. O'TOOLE, Surgeon R.N., of H.M.S. *Lord Warren*, has resigned his commission, and this has been accepted by the Admiralty. Mr. O'Toole entered the service in October 1861.

AN examination of surgeons in the Royal Navy who are eligible and who may be desirous of qualifying for the rank of Staff Surgeon, second class, will be held at the Naval Hospitals at Haslar and Plymouth, on Tuesday, January 27th, 1874.

THE ARMY IN AFRICA.

THE members of the Army Medical Department detailed for service on the West Coast of Africa during the war are—Surgeons-Major A. D. Home, V.C., C.B. (with local rank as Deputy Surgeon-General), J. A. Woolfrees, M.D., J. E. Clutterbuck, M.D., 42nd Highlanders; T. B. Reid, Royal Artillery; D. A. C. Fraser, M.D., 103rd Fusiliers; T. M. Bleckley, M.D., R. W. Jackson, 100th Regiment; J. H. Finmore, C. B. Mosse, S. Alder, 2nd Battalion 23rd Fusiliers; J. G. Faught, A. A. Gore, M.D., R. Waters, J. Kelly, 106th Regiment; A. F. Elliott, M.D., S. Rowe, M.B., A. N. Fox, J. Wiles, Rifle Brigade; and F. A. Turton. Surgeons, W. Venour, E. L. Low, M.B., E. G. Ley, M.D., J. W. C. N. Murphy, F. T. M'Carthy, J. A. B. Horton, M.D., F. R. Wilson, M.B., A. Doig, G. W. M'Nalty, M.D., R. W. Troup, M.B., W. R. Kynsey, J. F. Beattie, M.D., A. Turner, M.D., R. H. Bolton, C. A. Atkins, C. J. Weir, M.B., V. S. Gouldsbury, M.D., J. Fleming, M.D., J. Gray, M.D., T. W. Wright, P. Smith, M.D., J. H. Hughes, M.D., E. Ward, S. Robertson, M.D., J. J. Hanrahan, M.D., W. A. Catherwood, M.D., E. J. Clarke, R. W. Lowe, M.D., E. Connellan, H. T. Brown, M.D., E. M'Crystal, M.D., J. H. Hannagan, S. Moore, M.B., G. J. Gibson, M.D., W. H. Steele, M.D., J. F. Supple, J. H. Moore, N. Wade, J. R. Croker, W. F. Bennett, M.D., D. C. W. Heather, J. S. Conyers, M.D., J. H. Ussher, M.B., J. A. J. O'Brien, M.D., A. L. Brown, A. A. Macrobin, M.B., D. Thornton, W. F. Samuels, F. A. L'Estrange, O. S. Eagar, D. Parke, and R. D. Bennett.

The *United Service Gazette* tells us that twelve more surgeons have been placed under orders for service on the Gold Coast, and will embark before the end of the present month. The present medical staff serving on the station consists of deputy surgeon-general, 1; surgeons-major, 13; surgeons, 48. Of the African service, surgeons-major, 4; surgeons, 4. This number might at first sight appear to be somewhat out of proportion to the actual force engaged, but we have no doubt that ample work will be found for all. The prevention of disease as well as its actual treatment; the charge of hospital-ships, and the superintendence of the numerous detachments required by the necessities of bush-fighting, will fully tax the best energies of the medical men who have been selected for these duties, and the importance of a large contingent reserve is rendered necessary by the unhealthy nature of the climate, and the probable greater liability of the surgeons than the other officers to be injuriously affected by it, although the so-called "non-combatant" element is usually looked upon as being essentially unmilitary. We see that at least one medical officer has been wounded in the field, and that every one speaks in the highest terms of the gallantry and devotion displayed by the surgical staff generally during the late operations. Although we cannot expect that much operative experience can be gleaned from a campaign in which the enemy show a strong repugnance to open fighting, we hope some scientific observations may be recorded on the various forms of fever endemic on the African coast, more especially with reference to that which seems almost necessarily to attack Europeans landing there for the first time, and which had recently deprived the expedition for a short time of the services of Sir Garnet Wolseley and several of his staff. The symptoms, so far as we can learn, appear to be bilious remittent in their type, and their severity depends essentially on the season of the year. This is well proved by the fact that, whereas the recent cases

appear to have been mild in character and readily amenable to treatment, the epidemic amongst the marines some months ago assumed a much more malignant form, and was associated with severe bowel complications.

OBITUARY.

WILLIAM DALTON, M.R.C.P., F.R.C.S.

WILLIAM DALTON was born at Swansea in 1802. He commenced the study of his profession at an early age as pupil to the late Mr. Prosser, who practised in his native town. After this he resided for some time with Mr. Merriman, of Kensington. On the completion of his apprenticeship at the latter place, he went through the usual curriculum at the united school of Guy's and St. Thomas's Hospitals, London. After obtaining his qualification, he served for several years as surgeon to a whaling ship in the South Pacific. He used to be very fond of narrating his stirring adventures and experiences whilst in this capacity; and, indeed, he became so thorough a sailor, that he was offered the command of a ship. He, however, adhered to his own profession, and on abandoning his seafaring life, settled for a time in Winchcomb in Gloucestershire, removing thence in a few years to Cheltenham. Here he spent the best part of his days—thirty years; and he there rapidly acquired a large and highly respectable practice. He for a long time enjoyed a leading reputation as an obstetric and general practitioner. His death will now be heard of with regret by many of the present and former inhabitants of Cheltenham.

For the last ten or fifteen years of his life, Dr. Dalton suffered much from ill-health. A severe attack of hæmatemesis, which was well-nigh proving fatal in 1856, laid the foundation. In 1869, he relinquished practice in Cheltenham, and removed to Bournemouth. He finally succumbed to his old complaint on November 12th.

UNIVERSITY INTELLIGENCE.

THE CAMBRIDGE UNIVERSITY.

The number of students in the medical school of the University of Cambridge has been greater than in any preceding year, which is doubtless, in great measure, owing to the increasing reputation of the school, and to the excellent opportunities for the study of practical anatomy and practical physiology which are now afforded under the auspices of Dr. H. Wilson, and Dr. Michael Foster. The Regius Professor of Physic (Dr. Paget) also now gives a course of lectures on the Principles and Practice of Medicine; and Dr. Bradbury gives a course on Pathology. The opportunities for instruction in chemistry have been increased by enlarging the University Laboratory, and by erecting a new Laboratory in Caius College, and the appointment of Mr. Apjohn from Dublin as Prelector in Chemistry. Moreover a spacious and admirably constructed laboratory for experimental physics is just being completed, and is already partly in operation under the superintendence of Professor Clerk Maxwell.

As first fruits of Physiological work going on under his direction, Dr. Michael Foster has edited part I of *Studies from the Physiological Laboratory in the University of Cambridge*, containing admirable papers on the "Development of the Chick", by F. M. Balfour of Trinity College, and various other papers by Dr. Foster and his pupils, with a dedication to Professor Humphry.

Two important measures affecting, or likely to affect, medical students have been passed by the University. First, the "Previous Examination" may, after next October, be passed in the first term of residence, so that students who come up sufficiently well prepared in their classics and mathematics to do this, may at once, in their second term at least, proceed with the study of natural science and medicine. This will obviously prove a great advantage to many, and will enable them to attain a greater proficiency in the natural and medical sciences. Secondly, in compliance with a request from the Committee now sitting in London for the purpose of maturing the plan for a conjoint medical examination in England, the University has passed a grace "that on the recommendation of the Local Examinations Syndicate, a student, though he is above the age of sixteen, may be admitted to the Local Examination for students under that age, provided that he produces a certificate signed by a graduate of the University, or a member of the medical profession whose name is on the Medical Register, that such graduate or member believes him to be *bona fide* intending to become a medical student; and that the names of stu-

dents admitted under this condition and satisfying the Examiners be sent to the Registrar of the General Medical Council, but that the ordinary certificates be not granted to such students." It is hoped that this provision for facilitating the admission of those who desire to be medical students to the Local Examinations of the University will be the means of rendering it unnecessary for the conjoint board to institute a special preliminary examination for such students. The Local Examinations conducted by the Universities in the various towns of England, are easily accessible, have acquired a high reputation, indeed may now be regarded as national institutions, and there seems no reason why they should not be largely utilised as preliminary examinations to the medical profession, and so render the special examinations held by the several corporate medical bodies, which scarcely fall within the legitimate functions of those bodies, unnecessary. We should gladly welcome such a change, and feel that the profession is indebted to the University for thus at once complying with the request which was made to it. It only remains for the Medical Council to recognise the junior Local Examination of the University as well as the senior; and we believe the standard of the examination is quite sufficient to justify this.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows on December 13th, 1873.

Cameron, John, M.D. Glasgow, 17, Rodney Street, Liverpool
Turnbull, James Muter, M.D. Edin., 86, Rodney Street, Liverpool

The following gentlemen were admitted Licentiates.

Appleyard, John, 38, Harrington Street
Bennett, William Henry, 33, Sloane Street
Birch, Robert, King's College Hospital
Colgate, Henry, 41, Albert Street
Davies, Henry Naunton, Cymer, Pontypridd
Ellis, Herbert Mackay, Chudleigh, Devonshire
Hale, Charles Douglas Bowdich, 48, Westbourne Park Road
Johnson, John James, Newcastle-on-Tyne
Nicholson, Arthur, King's College Hospital
Paul, Frank Thomas, Guy's Hospital
Pilkington, William Binns, Crawshawbooth, Rawtenstall, Manchester
Skerritt, Edward Markham, University Hospital
Stericker, William, Victoria Park Hospital
Syme, William Holland, 21, Kennington Road
Thomas, George Twister, 8, Ampton Place
Wilkins, James Sunderland, Guy's Hospital

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College.

Fry, John Farrant, Guy's Hospital

UNIVERSITY OF LONDON.—B.S. Examination, 1873. Examination for Honours.

First Class.
Colgate, Henry (Gold Medal), University College
Second Class.
Skerritt, Edward Markham, B.A. University College
Lucas, Richard Clement, Guy's Hospital
Third Class.
Barlow, Thomas, B.Sc., University College
Rayne, Charles Alfred, University College

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 4th, 1873.

Arthur, Walter, Oakley Street, Chelsea
Barnes, Arthur Richard, Faversham
Charney, William, Lancaster
Mason, Samuel Butler, Denham, Uxbridge

The following gentlemen also on the same day passed their primary professional examination.

Armstrong, Henry George, St. Thomas's Hospital
Bernays, Herbert Leopold, St. Thomas's Hospital
Evans, David Thomas, Guy's Hospital
Higgs, Augustus William, St. Mary's Hospital
Rees, Charles, Guy's Hospital
Smith, Sydney Lloyd, St. Thomas's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ARDWICK and ANCOATS DISPENSARY, Manchester—Consulting Surgeon.
BIRMINGHAM and MIDLAND EYE HOSPITAL.—House-Surgeon: £100 per annum, apartments, board, and attendance. Applications, 20th instant, to J. C. Gell, Secretary.
BRIGHTON and HOVE DISPENSARY—Honorary Physician in Ordinary. Applications, 31st January.

BUCKINGHAM RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £100 for one year. Applications, 20th instant, to Henry Hearn, Clerk to the Rural Sanitary Authority.

BURY ST. EDMUNDS—Surgeons to Sir John James's Charity. Applications, 23rd instant, to John S. Greene, Esq.

CHELTEMHAM GENERAL HOSPITAL AND DISPENSARY—Junior House-Surgeon: £80 per annum, board and residence.

CHESTER GENERAL INFIRMARY—House-Surgeon: £80 per annum, residence and maintenance. Applications, 31st inst., to J. Jones, Sec.

CITY OF LONDON LUNATIC ASYLUM, Stone—Assistant Medical Officer: £120 per annum, board, lodging, etc. Applications, 15th January, to H. F. Youle, Guildhall, London.

DUNSHAUGHLIN UNION, co. Meath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ratoath Dispensary District: £110 per annum, and fees. Applications, 3rd January, to James Kelly, Hon. Sec.

EASTERN DISPENSARY, Bath—Physician.

EDINBURGH VETERINARY COLLEGE—Professor of Anatomy.

ENNISKILLEN UNION, co. Fermanagh—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Enniskillen Dispensary District: £100 per annum, and fees. Applications, 1st January, to George Black, Hon. Sec.

FROME UNION—Medical Officer: £90 5s per annum, and fees. Applications, 23rd instant, to G. W. Bradbury, Clerk.

FULHAM—Public Analyst for one year: 21s. per analysis for first hundred, 20s. 6d. per analysis for second hundred, and 5s. per analysis for third hundred. Application, 31st inst., to Thomas Edward Jones, Broadway House, Hammersmith.

GERMAN HOSPITAL, Dalston—Honorary Medical Officer to the Eastern Dispensary. Applications, 20th inst., to A. Walbaum, D.D., Hon. Sec.

GODSTONE UNION, Surrey—Medical Officer and Public Vaccinator for the Southern District: £62 per annum, and fees. Applications, 23rd instant, to Evelyn Alston, East Grinstead.

HARTLEY WINTNEY UNION—Medical Officer and Public Vaccinator for the Hartley Wintney District: £70 per annum, and fees.—Medical Officer for the Workhouse at Winchfield: £30 per annum, and fees. Applications, 24th inst., to Wm. Brookes, Clerk, Odiham.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, board, etc. Applications, 15th January, to the Hon. Sec.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.

MANCHESTER DEAF AND DUMB INSTITUTE—Surgeon.

MANCHESTER ROYAL INFIRMARY—Consulting Surgeon.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NORTH DISPENSARY, Liverpool—Honorary Medical Officer. Applications 23rd instant.—Dispenser. Applications, 20th inst., to W. Lister, Secretary.

NORTH STAFFORDSHIRE INFIRMARY, Hatfield—Dispenser: £90 per annum. Applications, 23rd instant, to Ralph Hordley, Sec.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

PERSHORE UNION, Worcestershire—Medical Officers for the Upton Snodsbury and Eckington Districts: £41 and fees, and £65 and fees, respectively. Applications, 23rd instant, to E. H. Pace, Clerk.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon: £105 per annum, board and lodgings.

ST. GEORGE'S PROVIDENT DISPENSARY, Mount Street—Physician. Applications, 29th inst., to Col. Alcock, Hon. Sec.

SHEFFIELD—Five Surgeons to the Police of: £60 for the Central Division: £15 for the Attercliffe Division; and £10 each for the Bromhill, Walkley, and Highfield Divisions—all for one year. Applications, 22nd instant, to John Yeomans, Town Clerk.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, board, etc. Applications, 24th instant, to Dr. J. C. Hall, Hon. Sec.

SUNDERLAND AND BISHOP WEARMOUTH INFIRMARY AND DISPENSARY—Surgeon. Applications, 18th instant.—Senior House-Surgeon: £80 per annum, board and residence. Applications, 25th instant, to John Kitts, Secretary.

SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.

UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon and Assistant Secretary: £100 per annum, furnished rooms, board, etc. Applications, 15th January, to F. G. Hamilton, Assistant Secretary.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

WORCESTER DISPENSARY AND PROVIDENT MEDICAL INSTITUTION—Medical Officers in Ordinary.—Dispenser: £80 per annum, furnished apartments, etc. Applications 26th instant.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

CUTHBERT—CORBIN.—On Thursday, December 11th, at the Parish Church of St. Peter Port, Guernsey, by the Rev. R. S. Ozanne, M.A., Rector, assisted by the Rev. J. Oates, M.A., Principal of Elizabeth College, Robert Thomas Powlett Cuthbert, Major H.M.'s 15th (York Esate Riding) Regiment, son of the late Colonel Cuthbert, formerly of the same regiment, to Geneviève Anson, youngest daughter of *M. A. Bazille Corbin, Esq., Inspector-General of Hospitals, Royal Guernsey Militia.

PATON—ALEXANDER.—At 25, Elmbank Place, Glasgow, on December 11th, by the Rev. David Brown, St. Enoch's, assisted by the Rev. W. C. E. Jamieson, B.A., St. Matthew's, John Wilson Paton, M.D., Rock Ferry, Cheshire, son of Robert Paton, Esq., Ayre, to Janet Ann, daughter of John Alexander, Esq.

DEATH.

***LINNECAR**, Edward Harrison, Esq., Surgeon, at Shenley, Herts, in his 74th year, on November 21st.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Farquharson, "Cases of Infectious Tonsillitis"; Dr. Pearson, "An Epidemic Sore-throat, with marked constitutional symptoms" (communicated by Dr. Farquharson); Dr. Dowse, "On Cerebro-spinal Meningitis, with Clinical Records"; Mr. Nelson Hardy, "A Specimen (living) of Persistent Papillary Membrane."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

OWING to pressure on space, many articles in type are omitted, including the reports of the Royal Medical and Chirurgical and Clinical Societies, the letters of our Glasgow, Dublin, and Birmingham correspondents, and several letters and replies to correspondents.

MR. TEEVAN.—Without delay.

MR. R. H. B. NICHOLSON (Hull).—A very good medical family guide for colonists is the *Handy Book of Medical Information and Advice*, by a Physician (Nelson and Sons, London). The surgical information is, however, rather scanty; and, to meet this, there is a handy little book published by Hardwicke, of which the title escapes our memory.

WE regret that we have no information on the subject of Dr. Spencer Smyth's query.

DR. CASSELL (Glasgow).—The proceeding known as "Galvanisation of the Cervical Sympathetic Nerve", is described and illustrated in Dr. Althaus's *Treatise on Medical Electricity*, third edition, pp. 166 and 335.

LONDON FEVER HOSPITAL.

SIR.—I presume that the letter I sent to you on Wednesday evening, in reply to Mr. Phillips's unwarranted censure upon the authorities of the London Fever Hospital, did not reach you in time, as it does not appear in last week's JOURNAL. Mr. Phillips apologises now to Dr. Mahomed for blaming him and the hospital authorities without cause; but he leaves his strictures, and the grounds upon which they were founded as regards the removal of the body of the late Dr. Gwynne Harries, just where they were. I, as the person wholly responsible for that removal, before I accept any blame for what I have done, shall be glad to know what sanitary authority he has for writing the sensational paragraph he did, beginning, "There is something grim," etc. I know no evidence whatever to support his view, that the body of a person dying of scarlet fever is capable of propagating that disease after decomposition has set in; nor do I believe in the efficacy of carbolic acid as a disinfectant, as Mr. Phillips evidently does when he assumes that even now some calamity may arise. As to the coffin leaking, I deny it *in toto*, for it was made of an inch-and-a-half plank, and thoroughly pitched, as well as an inner lid. The trace of carbolic acid to which he refers as being found on the shoulders of some of the men who carried it from the railway station to the house, must have come from the van, and not a defective coffin, for the sheet upon which it rested for two days afterwards was without speck or stain, nor was there the slightest trace of carbolic acid observed by the other men who carried it from the house to the hearse, to the church, and to the grave—facts which he could and ought to have made himself acquainted with to complete his case, before he wrote or spoke in the sensational terms he has to alarm the ignorant. I am, etc., JNO. MILLAR, Medical Superintendent, Bethnal House, E.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

INQUIRER.—No degrees in medicine whatever, obtained since the passing of the Medical Act 1858, except those of British and Irish Universities, are allowed to be recognised by the General Medical Council.

The subject treated in the letter of "An Original Member of the St. Andrews Graduates' Association" is one which might perhaps be fairly discussed at the annual meeting of that Association; but it would, we think, be ungracious and invidious if we allowed the proposition to be first broached in these columns in the form in which it is now sent to us. Every Association has the right to be consulted openly, in the first instance, as to its own objects, course, and *raison d'être*.

THE COLLEGE OF PHYSICIANS AND ITS LICENTIATES.

SIR,—There was something masterly in the picture which you drew with a few strokes of the pen of the attitude of the London College of Physicians in the face of the profession in August last, which makes it linger in my imagination, and, I suspect, in that of many others. We shall not soon forget the sketch of the venerable and dignified corporation in Pall Mall, condemned by the failure of its registrar's letter, or by subsequent inquiries as to the safety of the penny post, to appear with both its hands in its pockets lolling against the door-posts in Pall Mall, and "whistling to the tune of *vacuus viator*", as the procession filed by in long procession of hundreds to partake of the hospitalities of King's College, of the College in Lincoln's Inn, Gower Street, and the Mansion House. I myself hurried past the College (carefully taking the Cockspur Street route), that I might not hurt the feelings of the *bedellus* by seeming to cast a longing lingering look at the walls of the College with which I am associated, and which I should have been proud to see busily thronged at that time, instead of being deserted, when others were preparing the signs of welcome. I imagined that he felt as Sir Robert Peel is supposed by Mr. Disraeli to have felt when the flower and chivalry of the Conservative party filed past him—their erewhile leader in the House of Commons—to record their votes in an opposite lobby. No doubt, however, the frank explanations which passed between the College and the Association at the dinner in Lincoln's Inn did something to restore a feeling of cordiality.

But there still remains with us the hope that the questions then raised, and to which this incident was merely an accidental pendant, may not be suffered to fall into oblivion, and that the whole question of the relation of the College of Physicians to the profession will be kept in view. The large body of practitioners now becoming allied to the College as Licentiates, and the arrangements now being made to force the whole English profession (even graduates of Universities) through the doors of the College of Physicians, seems to require such a revision of the relations of the College to its licentiates as you called for. The College is, indeed, rapidly becoming one which includes the whole profession; and it is no longer accordant with the spirit of its constitution and objects to treat licentiates as persons outside it, and having no claim to do much else than pay their diploma-fees and turn their backs on the walls once and for ever.

I feel quite certain that the trumpet-call which you sounded will resound for long years to come through the corridors in Pall Mall; and it is to be earnestly desired that a deaf ear may not be turned to its echoes to those within the College walls, for it is certain that outside attentive listeners will be found, quick to catch and to repeat its faintest echoes—it may be a little out of tune and out of time.

I am, etc.,

M.B., M.A..

HOMŒOPATHY.

SIR,—Amongst the many valuable contributions for which our profession have to thank Dr. George Johnson, none, in my opinion, has emanated from the pen of this distinguished physician of more practical import than his late *exposé* of homœopathy; and I trust from the revelations that occurred during the discussion on his paper, as also from your own most appropriate remarks and admirable strictures upon the subject in your late leading article, that some ultimate good will follow towards annihilating this dangerous delusion and *bonâ fide* swindle, still so rampant. I regret to say, even amongst those who, from their position in society, ought to know better than to place any credence in such buffoonery. If any proof be wanted to convince the greatest admirer of Hahnemann of the fallacy and dangers of his tenets, the following *dénouement* will, I trust, infallibly convert them. During my attendance a few years ago upon a lady—one of high rank among the nobility—who was indisposed whilst passing through Dublin at one of our hotels, she informed me that I was the first legitimate physician she had consulted for a long time, as she always was treated by a homœopath. On inquiring as to the cause of her desertion from the ranks of the globulists, she gave me the following very cogent reasons. She had a large family of children; and, when pregnant of her last child, and stopping at — in the South of France, she was attacked with symptoms of premature labour at the beginning of the seventh month. Two "globulists" who resided in the town were speedily summoned, as the hæmorrhage was most alarming, it being a case of placenta prævia. However, these bright luminaries were nonplussed, and stood by with their hands crossed whilst the blood of their deluded victim was rapidly ebbing away. They made no examination, used no plug or cold injection, not even wine, confining their treatment to giving their "comfits" all through this terrible ordeal. Their patient was insensible and unable to speak; but almost the last word she heard from her medical advisers was that she should be dead in an hour. At this stage, being appealed to by her husband if nothing could be done, they resolved to play their last card by ordering an injection of treacle and oatmeal to be thrown up into the vagina to arrest the bleeding. This preposterous and novel remedy was very properly not allowed to be used by her maid. In an agony of despair, her husband went for an English surgeon resident in the town, who promptly attended, merely stipulating that his predecessors should be expelled. The sequel need not be told. In qualified hands the life of this lady was saved, but almost miraculously, as on his arrival she was *in extremis*. After this she bade farewell to globules, and has striven since to make the *amende*, if possible, to our profession by expelling the globulists for ever from her family. Had this lady permitted her case to be made known to the public,

with her name appended, the death-knell of homœopathy was rung for ever. However, she gave me leave to mention the case, merely at present withholding her name. I have not done so before through any public medium; but now, as the subject has been ventilated, my further reticence would be highly culpable.

Although this case is a most convincing one even to the most ardent devotees of this popular fallacy, it is still not an isolated one; for during the thirty years that I have been in practice I have met with many such cases where life has been sacrificed whilst temporising with globules. It behoves every member of our profession, therefore, to raise his voice and use his pen in condemning this dangerous quackery, as also its twin sister, hydropathy, an equally fallible delusion. There is but one secure path of science in our art—one orthodox code of laws for its government; all others are intricate bye-roads and dangerous heresies, ending in bringing disgrace and confusion to the teachers and abettors of the monster swindle, and ruin in many instances to the unhappy throng of believers.—I am, etc.,

December 1873.

JOHN FRANCIS McVEAGH.

DR. MUSHET (Ealing) is, we fear, a little impatient.

"A DYING FAITH."

The Editors of the *Monthly Homœopathic Review* write to us:—"We must request you to state in your next number that, in the article from which you quoted, we remarked that a dose of from five to ten drops of the tincture of *nux vomica* is 'quite needless if *nux vomica* be prescribed only in cases to which it is homœopathic.'" They add that the Duc de Cannarizzo, whose death was by Dr. Stewart attributed to his having taken three globules saturated with strychnine, was well known to have been alive and well for some years after the story of his having been poisoned by homœopathy was circulated.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The North British Daily Mail; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; etc.

COMMUNICATIONS, LETTERS, &c., have been received from:—

Dr. C. Radclyffe Hall, Torquay; Dr. Dickinson, London; Mr. F. Jordan, Birmingham; Mr. W. S. Savory, London; Dr. R. P. Cotton, London; Dr. Lombe Athill, Dublin; Dr. Grimshaw, Dublin; Dr. Edis, London; Dr. G. Harley, London; Dr. Clouston, Edinburgh; Dr. W. Hope, London; Dr. Symes Thompson, London; Dr. Mapother, Dublin; Mr. F. Mason, London; Dr. George Johnson, London; Mr. Cowell, London; Dr. Richards, Hanwell; Mr. Graves, London; Mr. Millar, Bethnal Green; Dr. A. B. Steele, Liverpool; Mr. Berkeley Hill, London; Inquirer; Mr. Eastes, London; M.D.; Dr. J. W. Moore, Dublin; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Farquharson, London; Mr. J. W. Langmore, London; Mr. T. Keith, Edinburgh; Mr. W. D. Napier, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. Whitehead, Manchester; Our Dublin Correspondent; Dr. A. B. Duffin, London; Mr. W. Adams, London; An Associate; Dr. G. H. Porter, Dublin; Mr. Callender, London; Dr. Lockhart Clarke, London; Dr. S. Martyn, Clifton; Mr. Barwell, London; Dr. Braxton Hicks, London; Dr. W. S. Playfair, London; Mr. Mac Cormac, London; The Registrar of the Royal College of Physicians, London; Mr. Jessop, Leeds; The Secretary of the Clinical Society; Mr. Holthouse, London; Dr. J. Hughlings Jackson, London; Mr. Holmes, London; Dr. Heaton, Leeds; Dr. Sieveking, London; Dr. Cobbold, London; Dr. Axel Key, Stockholm; Dr. G. W. Balfour, Edinburgh; Mr. Nelson Hardy, London; Dr. R. Barnes, London; Mr. Corbin, Guernsey; Dr. H. R. Haddon, Dublin; Mr. B. Blower, Liverpool; Dr. A. W. Barclay, London; Dr. Fraser, Edinburgh; Dr. Yeld, Sunderland; Dr. Mushet, Ealing; Dr. S. T. Smyth, Great Yarmouth; Dr. Bell, Bradford; Mr. Alderson, Hammer-smith; Dr. Rumsey, Cheltenham; Dr. Bridges, London; Mr. Eassie, London; Dr. Squire, London; Dr. Crichton Browne, Wakefield; Mr. Liebreich, London; Mr. L. Rudd, London; Mr. R. H. B. Nicholson, Hull; Mr. Teevan, London; Dr. Cassell, Glasgow; Dr. W. B. Woodman, London; Mr. Little, Barnet; Mr. J. N. Chapman, London; Dr. Keith, Edinburgh; Dr. Charlton, Newcastle; Mr. John Gay, London; Dr. Marshall, Clifton; Mr. Southam, Manchester; Mr. Durham, London; Dr. C. J. B. Williams, London; Dr. Waters, Liverpool; Mr. T. P. Teale, Leeds; Mr. W. Stokes, Dublin; Mr. Thomas Smith, London; Dr. J. G. Swayne, Clifton; Dr. Rupperford, London; Dr. Tilbury Fox, London; Mr. Erichsen, London; Mr. John Marshall, London; Dr. Macleod, Glasgow; Dr. Elliston, Ipswich; Dr. J. G. Wilson, Glasgow? etc.

BOOKS, &c., RECEIVED.

Manual of Comparative Anatomy and Physiology. By S. M. Bradley, F.R.C.S. London: Simpkin, Marshall, and Co. 1873.
Typhoid Fever. By W. Budd, M.D., F.R.S. London: Longmans and Co. 1873.
St. Bartholomew's Hospital Reports, 1873. London: Longmans and Co. 1873.
The Simplicity of Life. By R. Richardson, M.A., M.D. 1873.
Don Carlos: a Tragedy. By Schiller. Translated into English blank verse, by Andrew Wood, M.D. Edinburgh. Munro: 1873.

1874.

THE BRITISH MEDICAL ASSOCIATION.

President—SIR WILLIAM FERGUSSON, Bart., F.R.S., Sergeant-Surgeon to the Queen, Senior Surgeon to King's College Hospital.

President-Elect—EDWARD COPEMAN, M.D., F.R.C.P., Physician to the Norfolk and Norwich Hospital, Norwich.

President of Council—G. SOUTHAM, F.R.C.S., Surgeon to the Manchester Royal Infirmary.

Treasurer—R. WILBRAHAM FALCONER, M.D., D.C.L., Physician to the Mineral Waters Hospital, Bath.

Editor of the Journal—ERNEST HART, Esq.

General Secretary—FRANCIS FOWKE, Esq.

The ANNUAL MEETING of the Association for 1874 will be held in NORWICH, under the Presidency of

EDWARD COPEMAN, M.D., F.R.C.P.

ADDRESSES will be delivered in MEDICINE, in SURGERY, and in OBSTETRIC MEDICINE.

THE HASTINGS GOLD MEDAL, Value Twenty Guineas,

Will be awarded for the best Essay "On the Action of Alcohol in Health and Disease".

The objects of the Association are—the promotion of Medical Science, and the maintenance of the honour and interests of the Medical Profession. The Subscription to the Association is one Guinea annually: and each Member on paying his Subscription is entitled, in addition to the other advantages of the Association, to receive weekly, post free, the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION". The Subscription is payable, in advance, on the 1st January in each year.

Gentlemen desirous of becoming Members of the Association should communicate their wish to the HONORARY LOCAL SECRETARIES, or to the General Secretary, F. FOWKE, Esq., 37, Great Queen Street, Lincoln's Inn Fields, London, W.C.

The BRITISH MEDICAL JOURNAL for 1874,

Edited by **ERNEST HART, Esq.**

The JOURNAL includes the earliest *scientific, social, and political information* on all subjects interesting to the Profession; LEADING ARTICLES and Editorial Comments on the subjects of the week; ORIGINAL ARTICLES and LECTURES by the most eminent authorities; MEMORANDA and RECORDS of DAILY PRACTICE by Hospital and General Practitioners; Extracts from British and Foreign Journals; Reports of the Practice of the Hospitals of Great Britain and Ireland; Full Reports of the Proceedings of the British Medical Association and of its Branches and Committees; SPECIAL CORRESPONDENCE from the principal cities and localities of Great Britain, Ireland, and the Continent; Reports of the principal Medical Societies in England, Scotland, and Ireland; REPORTS on NEW INVENTIONS; SPECIAL REPORTS ON SANITARY AND MEDICO-LEGAL QUESTIONS; REVIEWS OF BOOKS; a Department devoted to the PUBLIC HEALTH and POOR-LAW SERVICES; a Department devoted to the MILITARY and NAVAL MEDICAL SERVICES; University Intelligence; Lists of Vacant Appointments; Obituaries of Medical Men; NOTICES and ANSWERS to CORRESPONDENTS.

The Department devoted to the interests of the **PUBLIC HEALTH and POOR-LAW MEDICAL SERVICES** has been recently largely developed, and the services of gentlemen of the highest authority and largest experience have been obtained. The Department will include notices and answers to questions from Medical Officers of Health and Poor-Law Medical Officers, and is intended to assist and support them in the performance of their difficult duties.

The Department now opened, which will be devoted to the interests of the **ARMY and NAVY MEDICAL SERVICES**, is intended to fulfil similar functions in respect to those services. It has been opened at the request of the increasing number of officers who desire to place themselves in union and sympathy with the Association, and to bring the affairs of the Services under frequent professional notice. It will include News, Comments, Correspondence, and Critical Discussions on all questions affecting the position of officers, and on the scientific, social, and professional matters which specially interest them.

Arrangements have been made for the further extension of the **SPECIAL CORRESPONDENCE** from **SCOTLAND, IRELAND, and the PROVINCES of ENGLAND**, as well as from **THE CONTINENT**.

Supplements will be issued frequently to meet the necessary demands on space.

For the Annual Subscription of One Guinea, paid in advance, the **BRITISH MEDICAL JOURNAL** is forwarded weekly, free by post. Orders enclosing remittances should be addressed to FRANCIS FOWKE, Esq., at the Office of the Journal, 37, Great Queen Street, London, W.C.

In the forthcoming Volumes will be published—

THE LUMLEIAN LECTURES delivered at the Royal College of Physicians. By Francis Sibson, M.D., F.R.C.P., F.R.S., Consulting Physician to St. Mary's Hospital.

THE CROONIAN LECTURES at the Royal College of Physicians. By Charles Murchison, M.D., LL.D., F.R.C.P., F.R.S., Physician to St. Thomas's Hospital.

THE GOULSTONIAN LECTURES at the Royal College of Physicians. By J. Frank Payne, M.B., F.R.C.P., Assistant-Physician and Demonstrator of Morbid Anatomy at St. Thomas's Hospital.

THE HARVEIAN ORATION at the Royal College of Physicians. By **Charles West, M.D., F.R.C.P.**, Physician to the Hospital for Sick Children.

THE LECTURES ON ANATOMY at the Royal College of Surgeons. By **George W. Callender, F.R.C.S., F.R.S.**, Surgeon to St. Bartholomew's Hospital.

REPORTS AND ABSTRACTS OF CLINICAL LECTURES, by **Sir William Jenner, Bart., K.C.B., M.D., F.R.C.P., F.R.S.**; **Sir William Gull, Bart., M.D., F.R.C.P., F.R.S.**; **Sir James Paget, Bart., F.R.S.**

PAPERS on ARTERIO-CAPILLARY DEGENERATION (FIBROSIS). By **Sir William Gull, Bart., M.D., D.C.L., F.R.S.**, Consulting-Physician to Guy's Hospital; and **Henry G. Sutton, M.B., F.R.C.P.**, Assistant-Physician to the London Hospital.

Lectures and other Contributions from the following Members of the Profession :

WILLIAM ADAMS, F.R.C.S., Surgeon to the Great Northern Hospital, Consulting Surgeon to the National Orthopaedic Hospital.—1. ADDITIONAL CASES OF SURCUTANEOUS DIVISION OF THE NECK OF THE THIGH-BONE for BONY ANKYLOSIS, with MALPOSITION OF THE LIMB. 2. On the PATHOLOGY of some of the CASES of SO-CALLED SPINAL CONCUSSION following RAILWAY and other ACCIDENTS.

T. CLIFFORD ALLBUTT, M.A., M.D., Physician to the Leeds General Infirmary.—SHORT PAPERS on Typhoid FEVER.

THOMAS ANNANDALE, F.R.C.S. Edin., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, and Lecturer on Clinical Surgery.—NOTES on CLINICAL SURGERY.

LOMBE ATTHILL, M.D., F.K.Q.C.P., Examiner in Midwifery in the King and Queen's College of Physicians of Ireland.—PAPERS in GYNÆCOLOGY.

J. H. AVELING, M.D.—The Unsatisfactory CONDITION OF ENGLISH MIDWIVES.

CHARLES BADER, M.R.C.S., Ophthalmic Surgeon and Lecturer on Diseases of the Eye at Guy's Hospital.

W. MORRANT BAKER, F.R.C.S., Assistant-Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital.

RICHARD BARWELL, F.R.C.S., Surgeon to and Lecturer on Surgery at Charing Cross Hospital.—DISEASES OCCURRING in the PHYSICAL ENDS OF IMMATURE BONES.

LIONEL S. BEALE, M.B., F.R.C.P., F.R.S., Physician to King's College Hospital.—ORIGINAL PAPERS.

JOSEPH BELL, M.D., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh.—PAPERS on SUBJECTS in SURGICAL PATHOLOGY and OPERATIVE SURGERY.

EDWARD BELLAMY, F.R.C.S., Senior Assistant-Surgeon and Teacher of Operative Surgery at Charing Cross Hospital.—PAPERS on SURGICAL and ANATOMICAL SUBJECTS.

I. B. BERKART, M.D., Physician to the City of London Hospital for Diseases of the Chest.—On PERIBRONCHITIS.

J. B. BRADBURY, M.D., Physician to Addenbrooke's Hospital, and Linacre Lecturer in Physic, Cambridge. CASES OF HYDATIDS OF the LIVER: with Remarks.

J. CRICHTON BROWNE, M.D., Medical Superintendent of the West Riding Lunatic Asylum, and Lecturer on Mental Diseases in the Leeds School of Medicine.—1. LECTURES on CEREBRAL PATHOLOGY. 2. PSYCHICAL THERAPEUTICS.

LENNOX BROWNE, M.R.C.S.—Contributions to PRACTICAL LARYNGOSCOPY.

GEORGE BUCHANAN, A.M., M.D., Surgeon and Lecturer on Clinical Surgery to the Glasgow Royal Infirmary, Professor of Anatomy in Anderson's University.—CONTRIBUTIONS to CLINICAL SURGERY.

GEORGE W. CALLENDER, F.R.C.S., F.R.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.—CLINICAL LECTURES on SURGERY.

THOMAS CHAMBERS, M.R.C.P., Physician to the Chelsea Hospital for Women.—A CASE of VEGETATING EPITHELIOMA OF the UTERUS HEALED by DILATATION, the CURETTE, and LOCAL APPLICATION OF TINCTURE OF IODINE.

J. LOCKHART CLARKE, M.D., F.R.S., Physician to the Hospital for Diseases of the Nervous System.—CLINICAL OBSERVATIONS on DISEASES OF the NERVOUS SYSTEM.

THOMAS S. CLOUSTON, M.D., Physician Superintendent of the Royal Edinburgh Asylum for the Insane.—PAPERS on INSANITY.

T. SPENCER COBBOLD, M.D., F.R.S., Lecturer on Parasitic Diseases at the Middlesex Hospital.—The TREATMENT OF PARASITIC DISEASES.

R. PAYNE COTTON, M.D., F.R.C.P., Senior Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—NOTES on CONSUMPTION.

GEORGE CRITCHETT, F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital.—The TREATMENT of the SUPERFICIAL AFFECTIONS OF the EYE.

W. B. DALBY, M.B., F.R.C.S., Aural Surgeon to St. George's Hospital.—NOTES on DISEASES OF the EAR.

JAMES G. DAVEY, M.D.—The Delusions of the INSANE: their Real Value as a Means of Diagnosis.

VICTOR DE MERIC, F.R.C.S., Surgeon to the Royal Free and German Hospitals.—On SOME PECULIAR MODES OF TRANSMISSION OF SYPHILIS in MARRIED LIFE.

J. LANGDON DOWN, M.D., Physician to and Lecturer on Medicine at the London Hospital.—The ELEMENTS for PROGNOSIS in CONGENITAL MENTAL DISEASE.

DYCE DUCKWORTH, M.D., F.R.C.P., Assistant-Physician and Demonstrator of Diseases of the Skin at St. Bartholomew's Hospital.—1. On the CAUSES and TREATMENT of CERTAIN FORMS OF SLEEPLESSNESS. 2. STUDIES OF ANÆMIA. 3. SCROFULODERMA.

ALFRED B. DUFFIN, M.D., Physician to King's College Hospital.

ARTHUR E. DURHAM, F.R.C.S., Surgeon to and Lecturer on Anatomy at Guy's Hospital.—EXPERIENCES in OPERATIVE SURGERY.

C. M. DURRANT, M.D., F.R.C.P., Physician to the East Suffolk and Ipswich Hospital.—The MANAGEMENT OF ADVANCED HEART-DISEASE.

ARTHUR W. EDIS, M.D., Physician to the British Lying-in Hospital.—ARTICLES on DISEASES OF WOMEN and OBSTETRICS.

WILLIAM A. ELLISTON, M.D., Surgeon to the East Suffolk and Ipswich Hospital.—The IMMEDIATE TREATMENT of LACERATIONS of the PERINEUM.

JOHN ERIC ERICHSEN, F.R.C.S., Surgeon and Holme Professor of Clinical Surgery in University College Hospital.—LECTURES on HOSPITALISM.

JAMES FINLAYSON, M.D., F.F.P.S.G., Assistant in Professor Gairdner's Medical Clinic, Glasgow.—1. LECTURE on the USE of the CLINICAL THERMOMETER. 2. The ALLEGED DANGERS of DENTITION, and the PRACTICE of LANCING the GUMS.

BALTHAZAR FOSTER, M.D., F.R.C.P., Physician to the General Hospital, Birmingham, and Consulting Physician to the West Bromwich Hospital.—CLINICAL ESSAYS.

F. P. FOSTER, M.D.—Animal Vaccinations in NEW YORK.

EDWARD LONG FOX, M.D., F.R.C.P., Physician to the Royal Infirmary, and Lecturer on Medicine in the School of Medicine, Bristol.—CONTRIBUTIONS to CEREBRAL PATHOLOGY.

TILBURY FOX, M.D., F.R.C.P., Physician to the Skin Department of University College Hospital.—PAPERS on SKIN-DISEASES.

JOHN GAY, F.R.C.S., Senior Surgeon to the Great Northern Hospital.—On ULCERS.

GEORGE GREY, M.D.—On Herb-Poisoning at the CAPE of GOOD HOPE.

THOMAS W. GRIMSHAW, M.D., Physician and Lecturer on Materia Medica in Steevens' Hospital, Dublin.

GEORGE HARLEY, M.D., F.R.C.P., F.R.S.—MEDICAL PAPERS.

REV. SAMUEL HAUGHTON, M.D., D.C.L., F.R.S., Fellow of Trinity College, Dublin.

GEORGES HAYEM, M.D., Agrégé of the Faculty of Medicine in Paris, Physician to the Paris Hospitals.—NOTE on the SYMPTOMATIC ALTERATIONS in MUSCULAR TISSUE.

J. D. HEATON, M.D., F.R.C.P., Senior Physician to the General Infirmary Leeds.—CASES and CLINICAL LECTURES.

J. BRAXTON HICKS, M.D., F.R.C.P., F.R.S., Physician-Accoucheur to and Lecturer on Midwifery at Guy's Hospital.—CONTRIBUTIONS in GYNÆCOLOGY.

T. HOLMES, M.A., F.R.C.S., Surgeon to and Lecturer on Surgery at St. George's Hospital.—SURGICAL CLINICAL MEMORANDA.

C. HOLTHOUSE, F.R.C.S., Senior Surgeon to the Westminster Hospital.—On HERNIA.

HENRY G. HOWSE, M.S., Senior Assistant-Surgeon to Guy's Hospital.—On CERTAIN POINTS CONNECTED with the TREATMENT OF NECROSSED BONE.

J. W. HULKE, F.R.C.S., F.R.S., Surgeon to the Middlesex Hospital and to the London Ophthalmic Hospital.—CLINICAL LECTURES on SURGERY and OPHTHALMIC SURGERY.

JONATHAN HUTCHINSON, F.R.C.S., Senior Surgeon to the London Hospital, and Surgeon to the Royal London Ophthalmic Hospital and to the Hospital for Diseases of the Skin.—CLINICAL LECTURES on the VALUE and MEANING of CERTAIN SPECIAL SYMPTOMS.

J. HUGHLINGS JACKSON, M.D., F.R.C.P., Physician to the London Hospital and to the Hospital for Epilepsy and Paralysis.—CLINICAL LECTURES on DISEASES of the NERVOUS SYSTEM.

VICTOR JAGIELSKI, M.D.—The PHYSIOLOGICAL EFFECTS of the KREUZ and FERDINAND BRUNNEN of MARIENBAD.

T. R. JESSOP, F.R.C.S., Surgeon to the Royal Infirmary and Lecturer on Surgery in the School of Medicine, Leeds.—1. EXCISION of the ANKLE-JOINTS. 2. HOSPITAL CASES.

GEORGE JOHNSON, M.D., F.R.C.P., F.R.S., Physician to King's College Hospital, and Professor of Medicine in King's College.—CLINICAL LECTURES in MEDICINE.

C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S., Physician to St. Mary's Hospital.—On DISORDERS of the NERVOUS SYSTEM and their REMEDIES.

FURNEAUX JORDAN, F.R.C.S., Surgeon to the Queen's Hospital and Professor of Surgery in Queen's College, Birmingham.—NOTES on the SURGERY of the URINARY ORGANS, MALE and FEMALE.

P. W. LATHAM, M.D., F.R.C.P., Deputy for the Downing Professor of Medicine, Cambridge University; Physician to Addenbrooke's Hospital; formerly Assistant-Physician to the Westminster Hospital.—CLINICAL OBSERVATIONS and REPORTS.

GEORGE LICHTENBERG, M.D., Surgeon to the German Hospital.—REMOVAL of a LOOSE CARTILAGE from the KNEE-JOINT under the ANTISEPTIC TREATMENT.

RICHARD LIEBREICH, F.R.C.S., Ophthalmic Surgeon to St. Thomas's Hospital.—CLINICAL LECTURES on OPHTHALMIC SURGERY.

ROBERT LIVEING, M.D., F.R.C.P., Physician to the Middlesex Hospital.—CLINICAL LECTURES and OBSERVATIONS on DISEASES of the SKIN.

WILLIAM MACCORMAC, F.R.C.S., Surgeon to and Lecturer on Surgery at St. Thomas's Hospital.—PAPERS on SURGICAL SUBJECTS.

MORELL MACKENZIE, M.D., Assistant-Physician to the London Hospital, and Physician to the Hospital for Diseases of the Throat.—On the TREATMENT of CERTAIN FORMS of BRONCHOCELE by INJECTION of IODINE.

EDWARD MACKEY, M.B., Physician to the Queen's and the Children's Hospitals, Birmingham.—CLINICAL NOTES.

GEORGE H. B. MACLEOD, M.D., Surgeon to the Glasgow Royal Infirmary, and Professor of Surgery in the University of Glasgow.—SURGICAL CONTRIBUTIONS.

RAWDON MACNAMARA, M.D., F.R.C.S.L., Surgeon to the Meath Hospital, and Professor of Materia Medica in the Royal College of Surgeons of Ireland.—The SURGERY of the RECTUM and of the URETHRA.

HENRY M. MADGE, M.D., Vice-President of the Obstetrical Society of London.—On TRANSFUSION of BLOOD.

E. D. MAPOTHER, M.D., Professor of Physiology in the Royal College of Surgeons of Ireland; Surgeon to St. Vincent's Hospital.—SURGICAL REPORTS from ST. VINCENT'S HOSPITAL and its CONVALESCENT HOME.

HENRY MARSHALL, M.D., Consulting Surgeon to the Bristol General Hospital.

SAMUEL MARTYN, M.D., F.R.C.P., Physician to the General Hospital, and Lecturer on Medicine in the School of Medicine, Bristol.—1. CASE of INTESINAL OBSTRUCTION TREATED by PUNCTURE. 2. A COMPLETE SYSTEM of HOSPITAL REGISTRATION.

FRANCIS MASON, F.R.C.S., Senior Assistant-Surgeon, and Lecturer on Anatomy at St. Thomas's Hospital.—CASES in HOSPITAL PRACTICE.

N. G. MERCER, M.D., Medical Superintendent of the East Riding Asylum.—On GENERAL PARALYSIS and FRAGILITAS OSSUM.

W. J. MICKLE, M.D., Medical Superintendent of Grove Hall Asylum, Bow.—On MORPHIA in SOME CASES of INSANITY.

HUGH MILLER, M.D.—Tedious Labour from DEBILITY, and ITS TREATMENT.

HENRY MORRIS, M.A., M.B., Assistant-Surgeon to the Middlesex Hospital.—THREE CASES of ICHTHYOSIS followed by EPITHELIOMA of the TONGUE.

WALTER MOXON, M.D., F.R.C.P., Physician to and Lecturer on Materia Medica at Guy's Hospital.—LECTURE INTRODUCTORY to a COURSE of MATERIA MEDICA and THERAPEUTICS.

HERBERT PAGE, M.A., F.R.C.S., Surgeon to the Cumberland Infirmary.—CASE of TRAUMATIC PNEUMOTHORAX ILLUSTRATING the USE of the ASPIRATOR.

G. H. PHILIPSON, M.A., M.D., F.R.C.P., Physician to the Newcastle-upon-Tyne Infirmary; Lecturer on Medicine at the University of Durham School of Medicine.—1. On HYDATID DISEASE of the LIVER. 2. On THORACIC TUMOURS.

W. S. PLAYFAIR, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, and Physician for Diseases of Women and Children to King's College Hospital.—CLINICAL OBSERVATIONS.

GEORGE H. PORTER, M.D., Surgeon to Queen in Ireland; Senior Surgeon to the Meath Hospital.—PAPERS on SURGICAL SUBJECTS.

R. DOUGLAS POWELL, M.D., Assistant-Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—CLINICAL OBSERVATIONS on CHEST DISEASES.

J. S. RAMSKILL, M.D., F.R.C.P., Senior Physician to the Hospital for Paralysis and Epilepsy; Physician to and Lecturer on Medicine at the London Hospital.—TRANSIENT ATTACKS of HEMIPLEGIA.

FREDERICK T. ROBERTS, M.D., Assistant-Physician to University College Hospital.—On DISEASES of the HEART and LUNGS.

M. K. ROBINSON, M.R.C.S., Medical Officer of Health for East Kent.—The CARRIERS of the CONTAGIUM of TYPHOID FEVER.

JAMES RUSSELL, M.D., F.R.C.P., Physician to the General Hospital, and Professor of Medicine in Queen's College, Birmingham.—On HYPOCHONDRIASIS.

WILLIAM RUTHERFORD, M.D., F.R.S.E., Professor of Physiology in King's College, London.

E. SEGUIN, M.D., Physiological Thermometers and MATHEMATICAL THERMOMETRY.

W. R. E. SMART, M.D., C.B., Inspector-General R.N.—NOTES TOWARDS a HISTORY of the MEDICAL DEPARTMENT of the NAVY.

THOMAS SMITH, F.R.C.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.—CLINICAL LECTURES.

GEORGE SOUTHAM, F.R.C.S., Surgeon to the Manchester Royal Infirmary, and Lecturer on Surgery in the Manchester School of Medicine.—SURGICAL OBSERVATIONS.

WILLIAM STOKES, Jun., M.D., Professor of Surgery in the Royal College of Surgeons of Ireland, and Surgeon to the Richmond Hospital, Dublin.—SURGICAL RECORDS.

OCTAVIUS STURGES, M.D., F.R.C.P., Assistant-Physician and Lecturer on Materia Medica at the Westminster Hospital.—STATISTICS of PNEUMONIA, with REFERENCE to VARIOUS PLANS of TREATMENT.

HENRY G. SUTTON, M.B., F.R.C.P., Assistant-Physician to the London Hospital.—REPORTS from the PATHOLOGICAL DEPARTMENT of the HOSPITAL.

J. G. SWAYNE, M.D., Physician-Accoucheur to the General Hospital, and Lecturer on Midwifery in the Medical School, Bristol.—1. The INDUCTION of PREMATURE LABOUR. 2. The USE of OBSTETRIC INSTRUMENTS.

T. PRIDGIN TEALE, M.B., F.R.C.S., Surgeon to the General Infirmary, and Lecturer on Surgery in the School of Medicine, Leeds.—1. CASE of COMPOUND FRACTURE of the PATELLA TREATED ANTISEPTICALLY. 2. CASE in which a HALFPENNY was SWALLOWED, and DISCHARGED from the GROIN in FIFTEEN YEARS.

WILLIAM F. TEEVAN, F.R.C.S., Surgeon to the West London Hospital.—Is STRICTURE CURABLE?

E. SYMES THOMPSON, M.D., F.R.C.P., Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—NOTES on CLIMATE.

J. WALLACE, M.D., Assistant Obstetric Physician to the Liverpool Lying-in Charity.—A CASE of STRICTURE of the FEMALE URETHRA.

A. T. H. WATERS, M.D., F.R.C.P., Physician to the Royal Infirmary, and Lecturer on Medicine in the School of Medicine, Liverpool.—CLINICAL LECTURES.

J. ROSS WATT, M.B., Consulting-Surgeon to the Fever Hospital, Ayr.—SPINA BIFIDA CURED by INJECTION.

J. SOELBERG WELLS, F.R.C.S., Professor of Ophthalmology in King's College, Ophthalmic Surgeon to King's College Hospital, Surgeon to the Royal London Ophthalmic Hospital.—CONTRIBUTIONS on OPHTHALMIC SURGERY.

SPENCER WELLS, F.R.C.S., Surgeon to the Queen's Household.—EXCISION of the SPLEEN: with CASES.

C. G. WHEELHOUSE, F.R.C.S., Senior Surgeon to the Infirmary, Leeds.—The TEACHINGS with regard to the OPERATION of OVARIOTOMY at the GENERAL INFIRMARY at LEEDS.

M. A. EASON WILKINSON, M.D., F.R.C.P., Physician to the Royal Infirmary, Manchester.

CHARLES J. B. WILLIAMS, M.D., F.R.S., President of the Royal Medical and Chirurgical Society.—NOTES on ALPINE SUMMER QUARTERS for INVALIDS (second series).

C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P., Physician to the Hospital for Consumption and Diseases of the Chest at Brompton.—The TREATMENT of SPASMODIC ASTHMA.

J. G. WILSON, M.D., F.R.S.E., Professor of Midwifery in Anderson's University, Glasgow.

JOHN WOOD, F.R.C.S., F.R.S., Professor of Surgery in King's College, and Surgeon to King's College Hospital.—CLINICAL LECTURES and HOSPITAL REPORTS.

OBSERVATIONS

ON THE
CAUSES AND TREATMENT OF CERTAIN FORMS
OF SLEEPLESSNESS.

By DYCE DUCKWORTH, M.D., F.R.C.P.,

Assistant-Physician to St. Bartholomew's Hospital, and Demonstrator of
Skin-Diseases.

IN this communication I am desirous to direct attention to some causes of sleeplessness, which, I think, are hardly sufficiently recognised or adequately met by the resources of practical medicine. The remarks I have to make have reference more especially to causes of insomnia acting in persons who are either in apparently good health, or who, at any rate, are not decidedly ill. Some of the conditions which I shall mention as leading to loss of sleep will, however, be shown to occur in persons who cannot be said to be in good health. Systematic writers on the practice of physic only incidentally allude to the subject of insomnia, and more especially when they treat of certain cerebral affections, of delirium tremens, early phases of insanity, and stages of acute inflammations and fevers.

There are naturally idiosyncracies with regard to sleep; but I have nothing to say about these, further than they must be so far considered in every case of insomnia that comes under observation. It should be remembered that many persons, apparently healthy, declare that they have hardly slept during a night, and believe what they aver, when they have really only lost two or three hours of a long night's rest; not that such a loss is unimportant by any means. So-called bad nights exert a very harmful influence upon the sufferers, and much subsequent bodily and mental enervation, much nervous irritability, and even, I believe, misdirected appetite, are due to this partial loss of rest.

Much light has been thrown upon the physiology of sleep during the last fifteen years; and the teaching of those who have best investigated the subject requires us to believe that the cerebral condition is essentially one accompanied by a feeble and diminished circulation of blood in its vascular system. It is also within the reach of capable observers to assure themselves that the most constant (physiological) cause, and certainly the most frequent accompaniment, of sleeplessness is an opposite condition, or one of active and increased circulation of blood in the brain. These views are the reverse of those that were formerly taught upon the subject. The statements of Boerhaave, published in 1768 (*Institutiones Med.*), "Motus arteriarum, venarumque et cordis, fit fortior, lentior, aequabilior, plenior, idque per gradus diversos augendo, prout augetur somnus;" and again—"In somno augetur motus cordis," were corrected, as were also many doctrines of the same illustrious physician, by the acumen of Cullen, who taught that "an increased impetus of the blood in the vessels of the brain was the principal cause whereby the waking state of it was supported" (*Institutiones Medice*, 1770). The more recent researches of Durham and Hammond have clearly shown that the brain is in a comparatively anæmic condition during sleep, and that the blood thus removed from the head is more freely supplied to the viscera and integuments. We have in this latter statement an explanation of the commonly observed fact, that perspiration is present in inordinate amount during sleep as compared with the state of wakefulness.

I believe that one of the most common causes of sleeplessness in persons otherwise not in bad health, is dyspepsia in some of its forms; and, although most observers would be prepared to agree to this view, I think the subject has not received sufficient attention. As Sir Henry Holland has remarked (*Medical Notes and Reflections*, page 218), "no rules are more important than such as apply to the relation between digestion and sleep," and he proceeds to show that all such rules are exceedingly scanty and incomplete, "notwithstanding the perpetual experiment which life affords upon the subject." I aver, then, that dyspepsia is not only one of the commonest, but also one of the least recognised, of the causes of loss of sleep; and amongst reasons for this statement are the facts that the symptoms of digestive disturbance are sometimes, indeed frequently, not appreciable, or not at all prominent, at the time of retiring to rest; and also, that the diurnal digestion may be in a comparatively vigorous state. Most persons are familiar with acute dyspepsia as occurring in the night, and supervening upon errors of diet; and in such cases a disturbed sleep is rudely broken by an attack of cardialgia or acid vomiting. The dyspeptic symptoms to which I specially allude as interfering with sleep, are less

severe than those just enumerated. The patient retires to rest and sleeps, it may be calmly, for a short period, but he then awakes, and forthwith secures no more sleep for several hours. To such a form of dyspepsia Cullen alludes, and he was the victim of it himself. He writes, "Persons who labour under a weakness of the stomach, as I have done for a great number of years past, know that certain foods, without their being conscious of it, prevent their sleeping. So I have been awaked a hundred times at two o'clock in the morning, when I did not feel any particular impression; but I knew that I had been awaked by an irregular operation in that organ, and I have then recollected what I took at dinner, which was the cause of it. Dr. Haller is liable to the same complaint; and, in his larger work especially, he gives the particulars of his own case, and to the same purpose that I have done, as he learned it from his own experience." So far as I know, nocturnal dyspepsia of this character is not described in treatises on digestive disorders. The sources of it, however, may, I believe, be various. There may be no actual suffering experienced, and, beyond dryness of mouth, burning soles of the feet, and heat and throbbing in the head, there is little to complain of.* These symptoms may supervene several hours after the last meal, but they never occur unless some error of diet have been committed; and it may not always be possible, as in Cullen's own case, to attach blame to the particular article of food, or to the unwholesome combination of aliments which has led to the result. And naturally, the question of idiosyncrasy must be considered in all such cases.

It seems most probable that the symptoms are due to a too acid condition of the contents of the stomach and upper part of the small intestine, and it is certain that excess in fatty and highly seasoned food, in fruit, and in wines of various kinds, is the chief exciting cause of the dyspepsia. Hence there is no more fertile source of this trouble than the fashionable dinner-party, especially if there be indulgence in the sweet courses and in fruit, and if the fatal dietetic error, peculiar to Englishmen, of mixing various wines be committed. The misery of insomnia is rendered more certain subsequently, if both strong coffee and strong tea be taken after such a dinner, as is not unfrequently the case. The dyspepsia is thus aggravated by special cerebral excitants.

The form of indigestion known as "dyspepsie des liquides," described by Chomel (*Des Dyspepsies*, Paris, 1857, p. 99), and by Dr. Thorowgood in this country, may also prove excitative of sleeplessness. But this affection, together with such symptoms as I have just described, are best referred clinically to the type of atonic dyspepsia, and, when the immediate discomforts are relieved, a more prolonged therapeutic course is needed to promote recovery.

It is needless for me to do more than allude to the almost intolerable insomnia, delirium it may be called, induced by excess of tea or of coffee taken late in the evening. All persons are not affected by these, and some people can even sleep soundly after taking one or other, provided they retire to rest immediately, and do not begin to do brain-work. It is less well-known, however, that smoking strong tobacco late at night is a source of sleeplessness to some people, and if practised after dietetic errors only tends to aggravate the subsequent wakefulness.

I pass on now, to speak of sleeplessness due to overexhaustion, both bodily and mental. It is well known, and within the experience of most persons, that a certain point of fatigue may be reached when sleep is impossible. This condition is the result of increased flow of blood to the brain, consequent on vaso-motor paresis. After a day of incessant activity, when body and mind have been unduly taxed, this state may be reached. If, in addition, there be anxiety of mind or a persistent source of worry, the insomnia is aggravated. To "take off one's cares with one's clothes," as has been said, is indeed an excellent rule, but one, at times, very difficult of accomplishment.

Literary men suffer from insomnia oftentimes as the result of brain-work, executed at the small hours of morning, and sometimes because of bodily exhaustion superadded from sheer want of nourishment. Brain-work, in addition to the tax upon the ordinary powers by the pursuit of a profession, is, I believe, highly exhausting to the majority of those who practise it, especially amidst the calls, turmoil, and high pressure of life in a metropolis. The state of bodily fatigue to which I allude, is sometimes experienced by travellers who, after a hard day of locomotion, with perhaps irregular, and not very nourishing, meals, endeavour to procure a night's rest without taking a sufficient or suitable meal in the first instance. And it is precisely at this meal that the grossest dietetic mistakes may be committed. The digestive powers are at a minimum, and yet there is a large demand for nutrition. The difficulty is not always easily to be met, but attention to the rules of physiology will in most instances, I believe, secure the wished-for

* The cerebral circulation is in this, as in most forms of insomnia, increased in activity.

result both for stomach and brain. And so, for the throbbing head and busy brain of the literary man or student, there are rules to follow, of which I shall speak presently.

The treatment of cases of insomnia due to nocturnal dyspepsia is to be met by remedies affording relief temporarily, and by measures calculated to improve the digestion generally. Naturally, if due discretion were exercised at the last meal taken, no disturbance would occur, but I have already shown that it is not always possible to discover the offending article or articles of diet. A large meal taken late after exhausting work, and when solid food has not been eaten in the middle of the day, is liable to be digested with difficulty. Hence long intervals between meals should be avoided. There is no harm in varied diet at a late repast, provided too much be not taken, and the food be skillfully cooked. As adults are the sufferers from this complaint, so in most cases have they the requisite knowledge of the particular articles of food that best agree with them.* The question as to stimulants, however, is less readily answered. No one can doubt that much of the dyspepsia of the affluent classes in this country is due to indiscreet mixing of liquors, a practice which is singularly in discord with the science and skill now imported into culinary matters.

It is at all events sufficiently well-known that to drink one wine is most wholesome for dyspeptics; and whether it shall be claret, dry sherry, or alcohol in some form, properly diluted, must be decided in each case. In some instances of acid dyspepsia, port wine is of use, and appears to call forth less acid than sherry, perhaps, as Dr. Budd has suggested, on account of its astringency. For the immediate relief of the insomnia and dyspepsia, full doses of alkalies should be given. The calcined magnesia or solution of carbonate of magnesia in excess of carbonic acid, and the compound rhubarb or Gregory's powder, are amongst the best remedies. A large draught of cold water will also prove effectual at times. The success of the therapeutical measures throws light upon the existing cause of the sleeplessness, even when this is hardly suspected. Cullen does not state what remedies he employed in his own case, but we may rest assured that he treated himself.

The dyspepsia of liquids, as a cause of insomnia, is naturally best treated by the adoption of a diet in which less fluid is taken. The underlying atonic condition of the stomach and intestines requires the remedies proper to such a state; and here may be mentioned, as of especial value, the mineral acids, strychnia, and quinine.

For the sleeplessness ensuing upon tea or coffee taken late at night, there is hardly any remedy that I know. To give alcohol in any form, with a view to induce sleep, after excess of tea, is of no use. I believe it is better to read an easy and not too entertaining book when in this condition, for sleep is thus more quickly induced than when the sufferer lies conscious of each cardiac and vascular pulsation, and agonised by floods of rushing thoughts.

For the relief of the insomnia following exhaustion, either mental or bodily, there is happily a good deal to be done. No greater mistake can be made than to retire to sleep at the time of completed digestion.

It is almost proverbially known to be bad to go to bed fasting. Insomnia, from this cause, is, of course, easily met by taking some simple food. People, whose duties occupy them far into the night, and who have exercised their minds with any effort, should take a full evening meal, or, failing this, nourishment must be had later on. And where there is, from any cause, undue pressure of work, mental strain, or anxious watching, I know no nutriment so suitable as well made beef-tea or extract of meat. The latter is of especial value, being always at hand, and, if taken in the form of Mr. Darby's extract, the best, I believe, of all such preparations, and spread upon bread or biscuits, is eminently calculated to relieve the craving felt, and to supply a readily digestible little meal. Such measures, I think, are more to be commended than was the practice of literary men fifty years ago, which consisted in the imbibition of whiskey punch, made with infusion of green tea.

I should recommend all bad sleepers who cannot trace their insomnia to indigestion, and who may have passed an unduly long interval since their last meal, to employ extract of meat in the manner I have just described. I can, at all events, bear testimony to its value from personal experience, and I have known benefit to be largely derived from its use in several other instances.

* In the case of a nourishing meal being required late at night, after a hard day's travel, I know nothing more suitable than good beef-tea, if it can be had; and, by the aid of prepared extracts of meat, this is now quite within the reach of travellers in the most outlandish quarters. Chicken, and simply prepared salad of lettuce, is likewise easily digestible late at night, by even delicate and exhausted persons. Good draught beer is advisable, if it agree generally, or dry champagne: the latter, indeed, is often an excellent remedy. In cold weather, mulled claret is very valuable; and something is perhaps due to the nutmeg in its composition, for this spice, as Cullen shewed, is, in full doses, an important hypnotic. (*Materia Medica*, vol. ii, p. 204.) Lettuce has likewise similar properties.

The sleeplessness due to cold feet in winter time, resulting from alterations of arterial blood-pressure in the body, is best met by the use of pediluvia at bedtime; and the addition of mustard or tincture of iodine is valuable, especially where the sufferer is a victim to chilblains.

Experience shows that a prolonged nap after a late dinner interferes with proper sleep at the usual time. I believe that a short sleep of a few minutes ("forty winks") is really valuable after dinner to those who have to work late at night. If the sleep be of an hour's duration, digestion is disturbed, and, in some cases, nightmare occurs immediately on going to bed.

Sleeplessness may sometimes be the result of mere bad habit. There may be no error of diet as the cause, and no dyspepsia; but there is simply a morbid apprehension as the head is laid upon the pillow that sleep is impossible, and forthwith the brain begins to be busy. This state is most apt to supervene upon a long course of broken rest. Persons who have kept watch by the sick, especially where there has been mental anxiety and distress, suffer from this form of insomnia. The acuteness of their trouble has more or less passed away, but night brings dispeace and apprehension with it. This form is engendered, then, as a bad habit from an interruption, more or less prolonged, of one of the periodical functions of the brain. It is not possible to detach entirely, in these cases, the peculiar mental element—the active conjuring up of past scenes, or the busy memory; but, in other instances, no cause is readily to be found, and we are compelled to believe that the bad habit results from a low condition of nervous energy.

The benefit to be derived in this form of insomnia from change of scene and change of air is very remarkable, and it is, indeed, seldom advisable to employ medication. There can be no doubt of the value of the change of air in many forms of sleeplessness; but, in awarding the true therapeutic value to climatic influence, we must not altogether lose sight of the effects of the *medicina mentis*. To pass from the noise and sullen heat of dwellings bordering upon the streets of London on a summer night, to a cool and well-aired apartment, in any peaceful country district, is in itself a strong incentive to slumber; but, beyond this, there are special aerial conditions and influences due to proximity of sea,* nature of soil, and immediate surroundings, which unquestionably require due consideration in each case. Indeed, attention to such points is almost as necessary, in some instances of sleeplessness, as it is in the cases of sufferers from spasmodic asthma.

The best drugs to employ in such cases, if they must be employed, are the bromide of potassium or chloral hydrate. Henbane, in full doses, is also of service.

Persistent odours will prevent sleep. Thus, flowers in a sleeping apartment—where, by the way, they never should be placed—giving off aroma, will affect certain people powerfully, causing headache and cerebral irritability (*vide* Moore on *Going to Sleep*, page 37. London. 1868). I have known the effluvia of certain embrocations to act in preventing sleep for a time in some patients; belladonna, tar, and citronella, in particular, are to be blamed.

While laying stress upon securing pure air for sleeping apartments, as far as is possible, attention must also be paid to the amount of moisture present in the air. In many instances, the air is deficient in moisture, and the dry air inspired, often laden with dust, is a source of discomfort to the nasal and bronchial membranes; not only so, the influence of a too dry atmosphere is perceived by the whole cutaneous surface, and thus a source of irritation exists which is not unfrequently the last to be suspected.

In the case of bedridden persons, or during long illness, this point is to be attended to, and the absence of moisture is to be met by keeping water in the room, and, if need be, by sprinkling water on the floor. I am sure that many persons have additional cause for their sleeplessness in the dry air they inspire in the bedrooms of hotels, after doing a hot season on the continent of Europe. They are committed, perhaps late at night, to a room that has been shut up and baked by a fierce sun all day, and that has not had an ounce of water in it for days. To open the windows may entail a plague of mosquitoes, or give entrance to a still more deadly malaria. In such a case, I recommend a very free distribution of water to various parts of the floor. I have known quarts of water to evaporate in a single night when used in this manner, showing the urgent necessity for the employment of it.† The same con-

* Townspeople resorting to the seaside very commonly experience marked sleepiness during the earlier part of their stay; and the same is sometimes the case in the pure air of the country. Long continued exposure to air, as Dr. Handfield Jones has remarked, is a powerful inducer of sleep; but it is to be observed that the air must be pure, and, if possible, of bracing character. Long continued exposure to the air and ochlotic miasms of large towns is by no means so effectual an hypnotic.

† It is highly probable that ozone is generated by such a procedure as I recommend. Dr. Cornelius Fox's observations on the "Purification of Air by the Vaporisation of Water," in his book on *Ozone and Antiozone*, and his paper on "Coke as a Fuel in relation to Hygiene," should be read by all interested in sanitary matters.

dition of dryness is met with in winter in all apartments warmed by artificial heat. This is not felt where there are open fireplaces; but, if stoves be employed, then all the unfavourable conditions for insomnia are present, unless the amount of heat and moisture be duly regulated. According to Dr. Cornelius Fox, air, containing a healthful amount of moisture, exhibits a difference of about five degrees between the wet and dry bulbs of a hygrometer. If the difference be greater, moisture should be added.

As to the best posture to assume on going to sleep, I think little need be said. Dr. Radcliffe has lately recommended natural decubitus to ensure sleep, but, lest this seem paradoxical, it should be added that this advice is for bedridden persons, the subjects of chronic nervous disorders, and the plan suggested is in opposition to a sitting posture to be maintained during the day by a suitable bed-support. In the case of otherwise healthy people who suffer from heat and throbbing in the head as part of their insomnia, a posture with the head somewhat high is desirable in order to promote sleep upon physiological principles. A hard pillow should also be employed in such cases.

In conclusion, I would remark that the best knowledge we now possess, as to the action of the drugs commonly used to secure sleep, shows us that both bromide of potassium and chloral hydrate cause diminished amount of blood to circulate through the brain; and hence, as in many similar cases, the advance of the science of therapeutics has shed light upon the mysteries of pathology.

THE MECHANISM OF ACCOMMODATION OF THE EYE.

By ARTHUR TREHERN NORTON, F.R.C.S.,

Assistant-Surgeon to St. Mary's Hospital.

MR. PRIESTLEY SMITH has endeavoured to show, by experimenting upon rabbits' eyes, that the views I have expressed upon accommodation of vision, though ingenious, are untenable, and his finishing sentence runs thus:—"It may consequently be asserted that the act of accommodation is, in no way, dependent upon vascular turgescence." To Mr. Smith great credit is due for the trouble and time he has devoted to the experiments, for they were evidently undertaken with the desire to establish a fact, whether strengthening or overthrowing my opinion. I think, however, he has arrived at a conclusion somewhat too hastily; for it is in consequence of dissections and experiments upon the eyes of all varieties of animals that the anatomical and physiological descriptions of the human eye, which have been based upon them, have proved so manifestly incorrect.

I have no doubt that I shall be able to show how Mr. Smith's experiments have led him to wrong conclusions; but, before doing so, I think it advisable to state briefly what my opinions are upon accommodation, and especially do I think this necessary, as they have been explained only in my paper on the anatomy of the ciliary body, read before the Royal Society, and are yet known to but few. Attached to the interior surface of the ciliary muscle is a vascular lamina, from which the ciliary processes proceed; both are composed of blood-vessels, held together by fine areolar tissue, and covered in by a stout elastic layer. When empty, they are shrivelled and festooned, but, by injection, they swell and fill out their irregularities; they are, therefore, erectile. An examination of the ciliary muscle shows that one-third of its fibres are inserted into the connective tissue of the choroid, and that the rest are inserted into the connective tissue of the ciliary processes. Every vessel that passes into or out of the erectile tissues passes through the ciliary muscle. The large veins of the ciliary processes perforate the ciliary muscle near its apex.

Judging the action of the muscle from its attachment, the fibres which are inserted into the choroid, and which are seen to surround the vessels as they leave the erectile tissues, when contracting, compress the vessels, and, by interfering with the return of blood, cause the erection of the tissues. The rest of the fibres of the muscle, which curve round to insert into the ciliary processes, when contracting, cause the processes to approach the muscle, thus rendering them tense upon their contained vessels, and preventing them from flattening upon the anterior surface of the lens when pressed upon by the contracting iris.

The erectile tissues form a circular cushion, which overlaps the equator of the lens, and, as they become dilated with blood, owing to the contraction of the ciliary muscle, the circular cushion compresses the substance of the lens from the equator towards the poles, thus increasing the convexity of the lens, and accommodating it for near vision.

In this manner, accommodation may take place without the aid of the iris; and that such is possible is proved by the case described by Von Græfe, in which no iris existed. But, without the iris, change of

focus from extreme distant to extreme near vision would occupy the time required to fill the erectile tissues with blood.

An examination of the anatomy of the iris may show how this loss of time is prevented. The iris is attached to the base of the ciliary muscle by a thin tendon, which is continuous with the connective tissue of that muscle, and through which the vessels and nerves pass from the muscle into the iris. This tendon extends obliquely forwards for about one-twenty-fourth of an inch; so that the plane of the iris is in advance of its attachment. If now the sphincter of the pupil contract, it becomes a fixed point upon which the radiating fibres of the iris can act, and they, contracting, obliterate the angle from which the plane of the iris is suspended. The iris is thus thrown back upon the ciliary processes, which, in turn, are pressed upon the lens.

The action of the iris is, then, not only to regulate the amount of light admitted to the fundus of the eye, which can be effected by contraction of the circular fibres, but to increase the rapidity of accommodation which must be effected by the simultaneous contraction of both the circular and the radiating fibres.

No doubt, the iris, when thrown back to its limit, accommodates the lens to an extent, without the aid of the ciliary muscle, or of turgescence of the ciliary processes; for the processes are in direct contact with the iris in front, though not attached to it, and with the equator of the lens behind, and, if compressed by the iris, must, in turn, compress the lens.

Accommodation of vision by turgescence of erectile tissues is a great gain to the economy, for the only force required is muscular effort sufficient to compress a series of minute veins; whereas, on the other hand, it does not seem possible that a muscle as small as the ciliary muscle, acting against an elastic ligament, should be able to contract up to a given point, neither short of nor beyond that point, and maintain a contraction, without wavering, over a period amounting to hours—as when the eye is occupied in close study.

I conclude, then, that the ciliary muscle has no direct action upon accommodation, but that it acts indirectly by erecting the ciliary processes; that the iris has direct action upon accommodation, but that it is not capable of carrying it to its full extent; that the erection of the ciliary process is the means whereby accommodation of vision for any particular distance is maintained over a lengthened period.

Mr. Smith, in experimenting, has used the eye of a rabbit, an animal in which the ciliary processes are attached to the posterior surface of the iris, and in which, when compared to man, the ciliary muscle is small, whilst the lens and iris are immoderately large. It is, therefore, to be presumed that the process of accommodation must differ in detail. The anatomy leads one to believe that the iris takes a greater part in accommodation in the rabbit than it does in man; but on this I shall not at present dwell.

The experiments showed a want of correspondence between the movements of the pupil and those of the image of the flame upon the lens. This is no proof that the iris was not the power which caused the change in the lens, for the circular fibres of the iris might contract the pupil even to closure without affecting the lens; only the radiating fibres, acting in conjunction with the circular fibres, could throw back the iris, so as to compress and accommodate the lens.

The next conclusion is that, because the increase in the convexity of the lens was greater than occurs in man, therefore accommodation was effected, not in part, but absolutely to its full extent. In reply to this, I would suggest that we are totally ignorant of the amount of change which takes place in accommodation of vision in the rabbit. The great size of the lens, compared with the eyeball, renders it impossible to draw any comparison with man; therefore, a theory constructed upon the results of experiments on the rabbit, and applied to accommodation in man, would most certainly prove to be fallacious.

Lastly, with regard to the phacoidoscope. In this experiment, the flame was placed at an angle of 35 degs., and the image fell upon the lens at a point as much beyond the axis of the cornea as the corneal image on the near side of it. I think I am not mistaken in saying that, to effect this, the cornea must have been prominent and the lens much flattened, and such a condition would be caused by compression of the eyeball. It appears that the eye was sustained between two uprights, one of which worked with a spring. I cannot say whether the eye was grasped by the supports, or whether it simply rested between them; but, in either case, there would be compression of the posterior half of the globe, for the fibrous coverings are thin and yielding. A very small amount of indentation of the eyeball in its posterior half would throw the lens forward upon the iris, and would cause its anterior surface to be flattened by pressure against the tense suspensory ligament. Such condition would account for the position of the second image, whilst, at the same time, the iris would have power to effect accommodation to a greater extent than if the lens were in its normal position.

Mr. Smith has certainly shown that accommodation was effected without turgescence, for no blood could enter the processes; but he has not proved that, during life, turgescence of the ciliary processes, which, I conclude, is the mainstay of a lengthened accommodation for near vision, does not take place. In his experiments, I believe that the iris was, by accident, made to effect accommodation to a great extent, whereas in life it effects it only to a small extent.

INFLUENCE OF MEAN TEMPERATURE ON THE PREVALENCE OF SMALL-POX.*

By J. W. MOORE, M.D. Dubl.,

Diplomate in State Medicine and Ex-scholar of Trinity College, Dublin; Assistant Physician to Cork Street Fever Hospital, Dublin; etc.

LONDON.—From the time of the cessation of any epidemic tendency of the disease in the month of August 1868, the average weekly number of deaths from small-pox in London amounted to but five or six—rising a little above these figures in winter, and falling below them in summer. In the *twentieth* week of the year 1870, we meet with the first indication of an increased morbid tendency as regards the disease, the number of deaths being 19. It is interesting to note, that three weeks before there had been a fall of mean temperature of more than 7 deg. Fahr., from 55 to 47.7 deg. With a rising temperature, the weekly number of deaths again declined slightly; and then ensued a conflict between the approaching epidemic and the summer heat, the latter holding the former in check for many weeks. With the fall of mean temperature below 60 deg. in the thirty-third week, the deaths began to increase about the thirty-eighth week; but the first actual epidemic outburst occurred in the forty-fifth week, when 40 deaths were registered, about four weeks after the mean temperature had permanently declined below 50 deg. In the forty-eighth week the deaths rose to 60, three weeks after a fall of temperature below 40 deg. In the last week of the year the number of deaths reached 110, subsequent to the occurrence of very cold weather (mean temperature = 32.5 deg.) The third week of 1871 witnessed a very considerable development of the epidemic, and this appears to be connected with the extreme cold of the closing week of 1870, the mean temperature of which at Greenwich was so low as 25.7 deg. The epidemic now rapidly made way, owing apparently to two causes—the multiplication of the foci of contagion, and the continued low temperature of the season of the year. The maximal number of deaths (288) took place in the eighteenth week; and from this period, with a rise of mean temperature above 50 deg., a decline in the mortality—occasionally more or less interrupted, indeed, but still well marked and persistent—is noticed. In the *Medical Times and Gazette* for May 13th we read:

"The epidemic has now lasted a good six months. It may be regarded as assuming a distinctly epidemic form in November, shortly after the mean temperature of the air had fallen decidedly below 50 deg. In the progress of the seasons we have now arrived at a time when this mean temperature is again reached. The mean temperature of the last three weeks, as recorded at Greenwich, has been 50, 50.7, and 49.7 deg. It is customary about the second week in May for some check in the consecutive weekly rises of temperature to take place; but after this in the ordinary or average progress of events the steady rise towards the summer temperature may be expected to set in, and with it there is at least a hope that the epidemic will begin to fade."

A glance at the figures given in Table II will show how well founded the writer's anticipations were with regard to the fading of the epidemic; but it was by no means to die out as yet—it was "scotched, not killed". With the rising temperature of summer the weekly number of deaths gradually fell, until in September the average was about 60; and from this time the mortality remained for several weeks tolerably stationary. In the forty-sixth week, however, a fresh development of small-pox commenced shortly after the advent of the first cold weather. The deaths now ran up to 105 (in the fiftieth week), and continued to be as many as 90 or upwards a week until the beginning of February. From this they declined, the weather during the next two months being mild for the time of year. Indeed, apart from this, it seemed as if the receptivity of the population was at last becoming exhausted; and we may suppose that this was antagonistic to the influence of prolonged winter cold, notwithstanding the evident languishing of the epidemic. The deaths did not fall into the "twenties" until the mean temperature of 50 deg. or thereabouts, became established; or into the "tens" until the thermometer had permanently ranged for some weeks above 60 deg. Once more, at the approach of winter, in the forty-fourth week, we ob-

serve a slight lighting up of the disease; but the unusually mild weather of the "fore-winter", as Dove calls the season before Christmas, soon reduced the death-rate to its normal height in non-epidemic times.

TABLE II.—Showing the Weekly Number of Deaths from Small-pox during the recent Epidemic in certain large British Cities, with the Mean Temperature of Three Weeks before.

Weeks of Year.	LONDON. Population in 1871—3,254,260.						LIVERPOOL. Pop. in 1871, 493,346.						DUBLIN. Pop. in 1871, 320,565.					
	1870.		1871.		1872.		1870.		1871.		1871.		1871.		1872.		1872.	
	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.	Deaths from Small-pox.	Mean temp. three weeks before.
1st	0	44.7	79	42.8	91	39.9	..	..	..	..	..	..	..	..	..	..	..	..
2nd	12	38.2	135	33.0	90	41.6	..	..	50	40.8	..	..	36	43.7	..	..	63	44.2
3rd ....	..	34.2	188	25.7	93	43.0	..	..	65	26.4	..	..	..	41	44.3	..	..	..
4th ....	..	45.2	153	31.1	90	41.5	..	..	51	32.8	..	..	..	40	41.4	..	..	..
5th	11	39.3	106	33.0	52	40.3	..	..	90	36.5	..	..	..	45	41.4	..	..	..
6th	4	36.1	211	37.1	68	39.1	..	..	86	34.0	..	..	..	47	40.8	..	..	..
7th	10	31.6	218	32.4	48	42.0	..	..	105	30.7	..	..	..	45	39.2	..	..	..
8th	11	42.0	227	34.9	53	44.4	..	..	120	33.5	..	..	..	33	46.3	..	..	..
9th	8	32.4	213	41.6	52	46.6	..	..	89	41.2	..	..	..	37	45.4	..	..	..
10th	6	30.7	194	42.7	49	43.8	..	..	89	45.7	1	47.0	41	45.4	..	..	..	..
11th ....	..	56.9	185	43.8	42	44.9	..	..	103	44.4	..	..	46.9	54	44.1	..	..	..
12th	5	48.8	205	45.7	48	45.6	..	..	97	45.1	1	46.9	32	47.1	..	..	..	..
13th ....	..	38.4	192	46.3	55	48.7	..	..	73	46.2	..	..	45.8	67	49.4	..	..	..
14th	8	41.0	214	41.7	65	44.6	..	..	77	41.1	..	..	42.9	44	46.2	..	..	..
15th ....	..	38.1	265	47.1	49	38.0	..	..	68	48.5	..	..	48.8	43	41.5	..	..	..
16th	10	37.2	276	43.8	48	43.5	..	..	74	42.9	2	43.9	52	41.7	..	..	..	..
17th	3	45.5	261	43.1	41	44.7	..	..	74	42.7	..	..	45.4	60	44.3	..	..	..
18th ....	..	50.1	288	48.3	62	51.4	..	..	55	47.8	..	..	49.3	57	51.3	..	..	..
19th	6	56.0	232	50.0	39	46.2	..	..	52	48.5	..	..	50.1	47	44.7	..	..	..
20th	19	47.7	267	50.7	54	50.1	..	..	50	50.8	..	..	50.0	37	46.8	..	..	..
21st	11	45.6	257	49.7	54	52.6	..	..	37	48.5	..	..	49.5	36	53.3	..	..	..
22nd	12	49.3	229	47.6	37	47.2	..	..	35	48.9	0	50.9	23	46.6	..	..	..	..
23rd	8	59.8	245	50.1	27	47.5	..	..	41	48.4	..	..	51.2	54	47.6	..	..	..
24th	7	56.5	240	56.7	37	49.8	..	..	34	55.1	1	55.4	25	49.4	..	..	..	..
25th	11	58.1	232	53.9	26	57.7	..	..	36	44.4	2	55.4	28	53.7	..	..	..	..
26th	12	58.0	235	49.9	43	52.6	..	..	26	51.6	0	55.1	36	51.0	..	..	..	..
27th	13	64.6	164	59.5	35	57.9	..	..	27	51.8	3	58.9	20	55.6	..	..	..	..
28th	11	63.8	133	56.2	26	66.5	..	..	22	53.0	1	55.1	35	61.0	..	..	..	..
29th	15	57.7	135	56.6	29	60.3	..	..	27	56.6	..	..	56.6	18	57.0	..	..	..
30th	11	65.0	122	60.5	33	64.5	1	61.1	20	57.9	..	..	59.5	7	60.8	..	..	..
31st	15	65.7	87	61.7	28	65.1	..	59.5	9	59.4	..	..	60.4	9	58.4	..	..	..
32nd	11	68.5	96	65.5	15	61.4	1	64.6	6	59.1	3	60.7	19	64.5	..	..	..	..
33rd	10	64.8	80	60.4	16	71.1	1	62.9	8	56.2	..	..	57.4	10	64.2	..	..	..
34th	11	65.3	82	60.3	15	61.7	1	66.2	7	58.5	0	59.1	10	58.3	..	..	..	..
35th ....	..	64.5	..	68.3	..	59.2	..	63.3	4	66.5	1	64.7	7	57.4	..	..	..	..
36th	12	60.9	81	67.1	..	60.6	..	58.0	7	62.5	..	..	58.9	5	58.1	..	..	..
37th	11	57.3	57	63.0	22	64.3	..	56.4	4	58.7	4	59.3	4	62.3	..	..	..	..
38th	15	..	89	..	5	60.1	1	..	5	..	..	..	4	59.1	4	59.2	..	..
39th	14	57.0	51	60.5	9	..	..	55.5	4	57.3	5	58.3	7	58.2	..	..	..	..
40th	27	54.0	72	62.6	10	62.7	..	54.2	4	57.4	5	57.2	4	61.8	..	..	..	..
41st	13	54.5	61	53.6	7	54.3	..	57.2	5	50.3	7	49.7	4	52.3	..	..	..	..
42nd	17	55.7	53	50.2	17	49.0	1	55.9	..	47.3	7	47.7	2	47.8	..	..	..	..
43rd	21	54.1	61	51.9	6	52.4	3	50.7	..	40.1	..	47.8	..	50.2	..	..	..	..
44th	23	47.1	61	45.5	14	47.3	6	47.7	0	46.6	14	50.2	6	46.0	..	..	..	..
45th	40	49.7	54	53.5	15	44.4	4	40.4	2	52.7	9	53.5	3	44.5	..	..	..	..
46th	45	48.2	76	46.9	13	47.4	4	48.5	1	..	7	51.4	3	46.0	..	..	..	..
47th	41	44.1	67	47.3	13	49.7	10	45.4	2	49.5	15	49.7	1	47.3	..	..	..	..
48th	60	39.1	78	39.2	8	50.3	10	39.6	5	41.2	15	41.1	3	49.6	..	..	..	..
49th	61	37.6	104	35.3	..	..	16	39.0	0	39.8	12	39.8	3	39.0	..	..	..	..
50th	44	46.8	106	34.3	5	46.0	38	43.5	1	36.6	26	44.1	3	41.5	..	..	..	..
51st	82	38.9	90	36.4	5	46.0	38	49.0	3	36.6	26	40.5	0	43.7	..	..	..	..
52nd	110	32.5	97	29.8	10	41.9	36	36.5	2	33.9	25	34.6	0	41.2	..	..	..	..

In this rather hasty sketch of the epidemic of small-pox in London, I have not gone at length into the weekly variations of the number of deaths, but the Table shows these well, as also their relation to variations in temperature; and I would, therefore, merely call the attention of my hearers to that Table, in the hope that they will follow up this interesting inquiry for themselves.

LIVERPOOL.—Dr. Trench, in his admirable Report on the Health of Liverpool during the year 1871, observes: "During the first seven months of 1870 (from January 1st to July 30th) there had not been a single death from small-pox recorded in the Borough; but on the 30th July, and 8th August, there died in the Netherfield Road Hospital, from a severe and confluent form of the disease, two Spanish sailors. These men were natives of Galicia, where the small-pox was raging at the time of their leaving." He adds, further on: "These two deaths were apparently the commencement of an epidemic which, during its course, numbered 2,093 fatal cases—174 in 1870, and 1,919 in 1871."

For thirteen weeks after the first deaths, the mean weekly number of

* Concluded from p. 718 of last number.

deaths was only one. "Yes," an objector to the 'temperature theory' will say, "but the disease required fully three months to obtain a footing in the city after its importation from abroad." As a matter of fact, however, Liverpool had been exposed to contagion through the navigation for many months before the first death occurred; for of nine non-fatal cases of small-pox admitted to the Netherfield Road Hospital in the first six months, three were foreign emigrants and three were seamen: the remaining three were attacked while in Liverpool (two work-house tramps and a little girl resident in the town). In the forty-third week the deaths rose 3, three weeks subsequent to a fall of temperature amounting to 5 deg.—namely, from 55.9 to 50.7 deg. When the weather became ten degrees colder the deaths rapidly increased, until in the third week of 1871 they suddenly ran up to 65. This was just three weeks after the severe frost of the last ten days of 1870. The next period of intense cold, in the fourth week of the year, was followed, at an interval of between three and four weeks, by the acme of the epidemic—234 deaths being caused by small-pox in the seventh and eighth weeks. The disease now declined, the most remarkable diminutions in the number of deaths occurring in the eighteenth week, subsequently to a rise of temperature from 42.7 to 47.8 deg.; in the twenty-fourth week, after a rise of temperature from 48.4 to 55.1 deg.; and in the thirtieth week, after a rise of temperature from 57.9 to 59.4 deg. The check to the disappearance of the disease given by the winter cold is well shown by an analysis of the quarterly returns of deaths in 1872. In the last quarter (thirteen weeks) of 1871, small-pox caused 28 deaths in the borough of Liverpool; the number of deaths in each quarter of 1872 was 24, 16, 4, and 6 respectively. Here the very gradual fall from 28 to 24, and again to 16 (in the winter and spring), contrasts strongly with the more rapid fall from 16 to 4 in the summer; while in the autumn even a slight rise, from 4 to 6, is noticed. Is it not evident from these figures that the winter cold acted as a drag on the decline of the epidemic in the early months of 1872? that the summer heat then encouraged that decline, which was once more checked to some extent by the returning winter of 1872-73?

DUBLIN.—The first point which strikes the inquirer into the statistics of the late epidemic, as it affected the Irish metropolis, is the postponement of the outbreak in that city to a full year after it had commenced to rage in a place even so near as Liverpool, separated by only a "streak of silver sea". Indeed, the acme of the epidemic had already been reached and passed in Liverpool before a single death from small-pox had been registered in Dublin.

In the Registrar-General's (for Ireland) *Weekly Return of Births and Deaths* in Dublin for February 18th, 1871, the Deputy-Registrar of No. 3 North City District reported that small-pox had broken out in a family living in Temple Street West. A week later, he reported a fresh focus of the disease at Constitution Hill. On March 11th, a girl, aged 16, who had come from Wales ill, died of small-pox in Cork Street Fever Hospital. This was the beginning of the epidemic, which made no head, however, for nearly seven months, notwithstanding that deaths of cases imported from England were registered on April 22nd, June 3rd, June 10th, and August 19th. In the thirty-seventh week of the year, the period of abeyance of the epidemic drew to a close while the temperature was still high; but the first pronounced outburst of the disease occurred ten weeks later, three weeks after the mean temperature had finally fallen below 50 deg. But before this, a rise in the number of deaths to 14, consequent on a three weeks' depression of temperature below 50 deg., was followed by a decline in the mortality after a rise of mean temperature to 53 deg. in the third week of October. The second great development of the epidemic begins at the end of December, three weeks after a period of severe cold, the temperature of the forty-ninth week having been only 34.6 deg. It is necessary to remark that very serious delays in registration occasionally occurred during the epidemic period, and these have rendered the task of analysis of the statistics of mortality one of no inconsiderable difficulty. To give one example of this: the large number of deaths from small-pox registered in the second week of 1872 (63) includes 36 deaths which had only then been registered, although they had occurred in the South Dublin Union Workhouse at intervals since December 17th, 1871.

In a lecture on "Meteorology in its bearing upon Health and Disease", which I recently had the honour of delivering before the Royal Dublin Society, I illustrated an analysis of the late epidemic in Dublin by means of a diagram, giving the weekly death-curve from small-pox, and the meteorological curves for the epidemic period. In that lecture I described the subsequent course of the epidemic after January 1872 in the following words:

"Towards the end of February, a slight decrease in the deaths appears to be connected with the mild temperature of that month. The peaks and depressions which follow are largely accounted for by irregular registration; but the greatest severity of the epidemic was experienced

in the first half of April, a short time after a period of cold, which was very intense for the time of year, snow and hail having fallen in large quantities (with keen north-easterly winds) on every day from the 21st to the 27th of March. The mean temperature of this period was scarcely 37 deg., or nearly eight degrees below the average. The number of deaths now began to decline, the mean temperature in two weeks (April 13th and May 4th) rising above 50 deg. The depression in the death-curve in the week ending June 1st, and the great rise in the following week, depend on irregular registration. With the rise of mean temperature to between 55 and 60 deg. in the middle of June, the weekly number of deaths falls permanently below 30 early in July.

"It is interesting to note that abundant rainfalls seemed to be followed by remissions in the severity of the epidemic. A reference to the diagram will show this very clearly; and the converse also, for the acme of the epidemic closely followed a period of comparatively dry weather and lower humidity."

So far, I have followed the weekly returns of deaths in Dublin, published by the Registrar-General; but, recognising the possibly fallacious character of conclusions drawn from an analysis of "bills of mortality," the value of which was detracted from by irregularities in registration, I have thought it desirable to fall back upon a more reliable gauge of the intensity of an epidemic, namely, the rate of admissions to a special hospital of cases of the epidemic disease.

In Table III, statistics of this kind have been compiled. I may mention that, when the approach of an epidemic of small-pox to Dublin became more than a matter of contingency, the committee of Cork Street Hospital resolved to perform their duty to the city and to those stricken by this loathsome disease, to the best of their ability. Accordingly, they at once set apart an isolated building, known as the old Fever Hospital, for the reception of small-pox patients. In this building, accommodation was provided for between fifty and sixty patients, each ward containing three beds. By referring to column 2 in Table III,

TABLE III.—Showing the Admissions of Small-pox Patients per month into Cork Street Hospital during the Years 1871-72-73, compared with the Meteorological conditions during the same period.

1	2	METEOROLOGICAL CONDITIONS.						
		Admissions.	Mean Bar.	Mean Temp.	Mean Dry B.	Mean Wet B.	Mean Humid.	Rain-fall.
			3	4	5	6	7	8
			Inches.	Deg.	Deg.	Deg.	Per cent	Inches.
								9
1871.								
February..	1	29.847	45.3	47.0	44.7	83.3	1.648	16
March ..	1	29.908	45.6	47.5	44.4	78.8	0.815	12
April ..	7	29.705	48.7	59.5	47.6	81.2	3.162	20
May ..	3	30.065	52.6	55.8	54.4	73.5	0.378	9
June ..	5	29.924	56.0	58.3	54.4	77.0	2.265	16
July ..	7	29.734	59.2	61.1	57.2	77.8	4.391	28
August ..	4	29.951	60.8	63.1	59.2	78.0	10.65	12
September ..	8	29.887	53.6	55.2	52.2	81.0	4.048	13
October ..	41	29.120	59.7	52.3	49.9	83.5	2.917	16
November ..	59	29.986	42.6	43.7	41.5	83.3	1.258	14
December ..	78	30.603	41.4	42.2	39.9	82.1	0.797	15
1872.								
January ..	81	29.405	41.6	42.4	40.4	84.5	2.864	23
February..	90	29.616	45.2	46.0	43.9	84.2	2.557	20
March ..	97	29.698	45.1	46.3	43.7	80.7	2.419	18
April ..	65	29.914	47.3	49.2	45.3	74.0	2.635	21
May ..	59	29.919	49.3	51.1	47.1	74.0	2.164	22
June ..	64	29.825	55.2	57.5	53.5	76.0	1.267	19
July ..	34	29.926	61.2	63.4	58.4	72.1	1.098	12
August ..	16	29.967	58.6	60.7	56.7	76.8	4.302	17
September ..	7	29.801	54.8	56.2	53.2	80.7	2.464	22
October ..	7	29.560	46.5	47.9	45.4	81.8	3.421	22
November ..	3	29.578	43.0	44.9	42.5	82.1	3.414	24
December ..	8	29.464	41.4	42.5	40.8	86.5	4.932	24
1873.								
January ..	2	29.550	42.2	42.9	40.7	83.0	2.650	21
February..	1	30.160	37.1	38.4	36.0	79.8	0.925	8
March ..	—	29.792	42.0	43.4	40.9	80.7	2.391	22
Total ..	746							

The meteorological data given in columns 3, 5, 6, and 7, are the results of observations taken daily at 9 A.M., 3 P.M., and 9 P.M. The mean temperature given in column 5 is deduced from the daily maximal and minimal temperatures in the shade. The rainfall is the monthly total of daily readings taken at 9 A.M., and a "rainy day" is one on which at least 0.1 of an inch of rain is collected within twenty-four hours. The barometer readings are corrected and reduced to 32 deg. at mean sea level.

The number of admissions per month to this special and isolated hospital will be seen. The decided epidemic tendency observable in the months of April, May, and June, 1871, gave way before the increasing summer heat; but, with the rapidly falling temperature of September, the number of admissions once more commenced to rise. In October, the mean temperature fell below 50 degs., and the admissions rose to 41

from 8 in September. This increase went on until the month of March, 1872, when the maximum (97 admissions) was reached. March was, indeed, a little colder than February; and I have already mentioned the intense cold (for the time of year) which characterised the latter portion of the former month. In April, the admissions rapidly declined; in May they remained almost stationary, and in June even a slight increase in this number is noticed. This anomaly, I cannot but think, was connected with the persistently low mean temperature, coupled with the diminished humidity of the three weeks dating from the 5th of May. The mean temperature of the week ending the 5th of May, 1872, was 53.4 degs.; of the following three weeks it was 46.6 degs., 47.6 degs., and 46.4 degs. respectively. The temperature then increased to 53.7 degs. in the week ending June 1st; but, in the next week, it again fell to 51 degs. From June, the admissions fell uninterruptedly to 7 in September. A check in their fall is now observable, and, from November to December, even a slight increase in their number occurred. The epidemic was now virtually at an end, and, in March, 1873, not one small-pox patient was admitted to the wards, which were soon afterwards closed.

It now remains merely to inquire into the probable causes of this seasonal prevalence of small-pox. It is to be regretted that but little can be said upon this subject in the present state of our knowledge. One cause I have already mentioned, namely, the overcrowding of the poor in winter. Another is the lowering of the vital powers of the population in the cold season, and the consequently increased receptivity of and liability to infectious disease. But there must be something beyond all this, for these causes operate in the case of other infectious diseases also which do not attain their maximal degree of prevalence in winter. Thus, measles is most prevalent in early summer, scarlatina in autumn, and so on. A possible cause of the diminution of small-pox in early summer may be sought for in the influence of the leafing and flowering season upon the atmosphere. But this explanation has its shortcomings also, and is inadequate in its application to the disease we are considering. Theory, no doubt, is useful when kept within proper bounds; but to theorise on such a subject would be unprofitable, and we must wait, trusting that, with the advance of our knowledge of disease, further light will ultimately be shed upon this interesting question.

NOTES ON A NEW PERIMETER.*

By C. S. JEAFFRESON, F.R.C.S.E.,
Surgeon to the Eye Infirmary, Newcastle-on-Tyne.

THE introduction of a new instrument to the profession, like that of a new work, seems always to demand an apology from the author. I trust, however, that my readers may find such points of merit and novelty in the description I am going to lay before them, as will redeem me from the feeling of having uselessly trespassed upon their time and the valuable columns of this JOURNAL.

Many, like myself, must have felt the difficulty and want of taking an accurate chart of the field of vision with rapidity; and this want has led to the development of many instruments and devices. No one of these performs, to my mind, what is required of them rapidly and efficiently; and, for clinical purposes, it is highly essential that these two qualities should be combined. Thus, in hospital practice, most surgeons continue the old custom of making the patient fix his eye upon their own, and then rapidly moving the fingers in the different parts of the field of vision. No doubt this practice (which cannot be registered, and must leave but a doubtful impression on the mind of the surgeon) is continued on account of the facility and rapidity with which it is carried out, and also because, up to the present time, no instrument has been devised the use of which does not take up more time than can well be spared, except under special circumstances.

The instrument which I have devised, and which is represented in Fig. 1, enables the operator to map out the field of vision with as great rapidity as, perhaps greater than, it could be done according to the old method described above, and which is in general vogue. With its help, the greatest accuracy can be obtained; and, if necessary, the limits of the field can be immediately transferred to a chart, and kept for future reference. But it not only fulfils the duties of a perimeter in an ordinary sense; it will also test the field of vision for colours, transmitted or spectral; and, by a very simple addition, it can be made to indicate the presence of astigmatism, and show the meridian in which this exists, if present. Some other indications it can fulfil, which I shall speak of by and by, as they will be more readily understood when the instrument has been fully described.

* Called a Photo-perimeter.

The perimeter is a hollow hemisphere of light metal (zinc or copper), hammered out with great accuracy, its diameter being twenty-four inches. The concavity of the hemisphere is painted white, and divided into degrees of latitude and longitude. The meridians of longitude commence at the pole, and between each is a space equal to

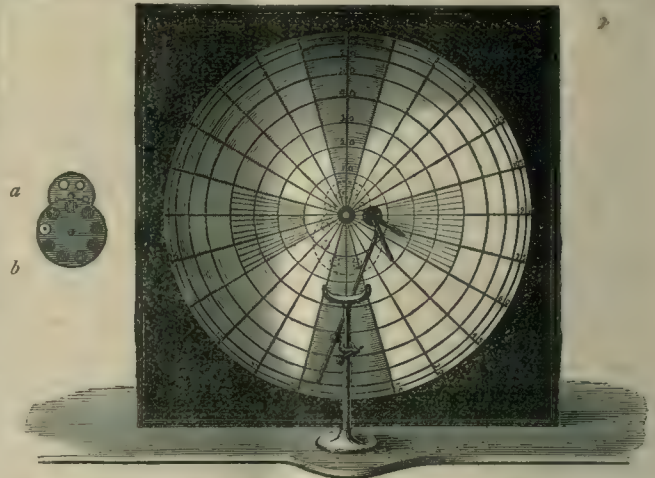


Fig. 1 represents a front view of the Perimeter, with the chin-rest and mirror *in situ*.

Fig. 2.—a. The Diaphragm, containing various sized apertures. b. The Colour-Discs: these are attached behind the Perimeter, and are drawn in Fig. 1 with dotted lines.

15 deg. The parallels of latitude encircle the pole; the first being at 10 deg. from it, and each successive one placed at an interval of 10 deg. The pole itself is occupied by a circular opening about three-quarters of an inch in diameter, the purpose of which will be shortly explained, as will also some further markings on the surface of the perimeter.

In order to measure the field of vision, it is necessary, whatever the instrument employed, to have a fixation-point, and an object which can be made to travel over the parts of the retina which do not occupy the fixation-point. In the instrument which I am describing, these two indications are fulfilled in the following manner. A gas-lamp upon a movable upright stand is so adjusted behind the perimeter, that the rays from it pass through the aperture which occupies the pole of the

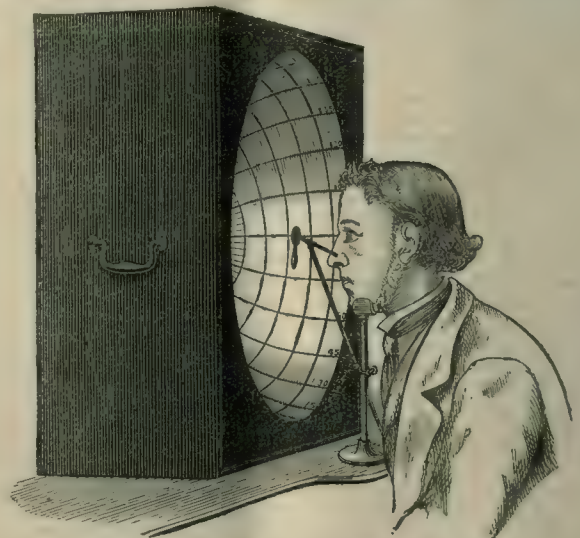


Fig. 3 shows the patient in position for taking the field. The position of the mirror is not quite exact: it should be nearer and more to the side of the eye.

hemisphere in a diverging beam. These rays fall upon the mirror, which is (as seen in Fig. 3) attached by a rod to the chin-rest; and this mirror, being ground to a focus of a little less than twelve inches, will form a small and bright dispersion-circle upon the surface of the peri-

meter. To enable this disc of light to be thrown in any direction required, the mirror is attached to its connecting rod by a ball-and-socket joint. To use the perimeter for testing the field of vision, we proceed as follows. The chin-rest is placed opposite the concavity of the hemisphere; its height is so adjusted that, when the patient's chin is placed upon it, the eye to be examined is opposite the aperture at the polar extremity of the hemisphere. (Fig. 3.) The reflecting mirror is now adjusted and made to occupy a position slightly below and to the outside of the eye to be examined. The other eye is covered by a shade. By a little management, the beam of light, which passes through the aperture in the perimeter, is made to fall, not directly upon the eye, which it would dazzle, but upon the mirror, which reflects it, as before said, in the form of a bright dispersion-circle, upon the perimeter. The light, not falling directly upon the eye, renders the fixation-point less dazzling, and more easy to look at for some length of time.

When a patient is placed in the position above indicated, his eye being directed upon the central aperture, an image of the perimeter is projected upon his retina; and it is, so to speak, artificially mapped out into exactly the same divisions as are present on the instrument—the central aperture lying exactly at the yellow spot, the peripheral parts of the instrument occupying the peripheral parts of the retina. The concavity of the retina becomes, therefore, an exact counterpart (of course inverted) of the concavity of the instrument. Now, it is evident that, if a disc of light be made to travel over the surface of the perimeter, this will also travel over the surface of the retina (in an opposite direction to that in which it is passing over the instrument); and that, if it should come to a portion of the retina whose sensibility is lost or impaired, or to the natural limit of the sensitive retina, we shall know by the degrees of latitude and longitude the exact bearings and position of the spot whose sensitiveness is impaired, and where the natural limit of the sensitive retina terminates. Let us illustrate this. A patient is placed in position, with his right eye opposite the perimeter, fixed upon the central aperture spot; we wish to examine the spot or optic nerve entrance in this eye; we know that its situation anatomically is slightly to the inner (nasal) side of the yellow spot; we therefore gradually move the travelling disc outwards; and, when it arrives at a position about 15 deg. to the outer side of the central aperture, it disappears.

If we wish to ascertain the limits of the field of vision, we cause the disc to travel along the various meridians of longitude, marking the exact position in which it ceases to be visible. As in many cases it is necessary to measure the exact size and limits of the optic nerve entrance, the surface of the perimeter, in the region which this portion of the fundus occupies, has been carefully divided into spaces of 3 deg. each.

In order to enter the cases examined, charts of the perimeter can be obtained, drawn up on a scale of half or a quarter the real size. Attached to the back of the perimeter, will be found two sets of diaphragms (Fig. 2). One, the inner, contains apertures of various sizes; and the other, the outer, contains discs of variously coloured glass; also a disc which has a fine slit and revolves upon its own axis, for testing for astigmatism.

The use of these parts will now be explained. Of course, in many cases, where the sensibility of the retina is much impaired, a small aperture and a small disc of light will not be available for measuring the field; hence the large apertures. The smaller, especially the smallest, is for taking exact measure of the blind spot, the area of which can more easily be measured by a fine point of brilliant light. The intensity of the light may be varied by regulating the amount of gas burnt.

To test the field of vision for colour, we proceed in exactly the same way as under ordinary circumstances; the glass discs of the colour required being interposed between the flame and the aperture in the perimeter.

The processes above described only enable us to test what is termed the quantitative field of vision, or that portion in which a person can distinguish roughly a spot of light. To measure the quantitative field of vision, a stencil letter is inserted in an inverted position in the aperture of the perimeter. Immediately the mirror forms a bright erect image of it upon the perimeter; and the operator thus ascertains the distance from the fixation-point, in different directions, at which the patient still recognises this letter. This forms a severe but very useful quantitative test, and the shape of the test-object can be varied *ad infinitum*.

I must now show how the instrument is used in the diagnosis of astigmatism. In astigmatic persons, as is generally known, all the rays of light falling upon the eye (owing to some changes, congenital or acquired, in the refracting surfaces) are not brought to a focus on the

retina at the same point. Hence if an object made up of radiating lines, like a wheel, be looked at from a distance, all the lines will not be distinctly visible. If the refraction of the eye be normal in one plane, the lines which lie at right angles to that plane will be distinctly visible, whilst those occupying it will be indistinct, or perhaps almost invisible. Now these changes, which are well marked when looking at a drawing such as we have named, become much more obvious when a luminous streak is employed. In the perimeter, a diaphragm with a slit equal in thickness to No. xx Snellen, is placed in the aperture at the back of the perimeter, and is illuminated with the gas through an intervening portion of ground glass. This slit can be made to revolve upon its own axis, and thus pass through all the planes in which incident rays can fall upon the cornea. If the sight be normal, the slit at twenty feet has a well defined margin in all directions; but if astigmatism be present when the slit is passing through the plane at right angles to which it exists, its contour will become blurred, and assume a shape which will vary according to the degree of the astigmatism. Thus, supposing we produce an artificial degree of myopic astigmatism in the horizontal direction by placing a + 30 cylindrical lens before the eye with its axis occupying the vertical meridian, and we then rotate the slit in front of this eye, we shall observe that when it occupies the horizontal direction its form of a slit will be retained, though it may appear somewhat elongated horizontally, but when it occupies the vertical meridian it assumes the form of a thickened band. A small point of light may be used, if required, for the same purpose, by bringing the smallest aperture of the diaphragm into the centre of the perimeter. The value of testing the field of vision for colour is greatly enhanced when the pure colours of the spectrum are employed; and I find that, with sunlight, this can very readily be accomplished. In a darkened room, a beam of sunlight is allowed to enter by means of a slit in a shutter; this beam is made to fall upon a prism, and a large spectrum is immediately formed. The perimeter is so adjusted that the band of any one colour in the spectrum shall fall upon the central aperture at the back of the perimeter; the rays of this colour will then pass through and be reflected by the mirror in the same way as usual, forming a disc of the colour which at that point corresponds to the back of the central aperture. A spectrum, when necessary, can be produced by artificial light, and then thrown upon the back of the perimeter; but, although it answers its purpose fairly, it cannot compete with the light of the sun. In the vertical meridian, it will be observed that the perimeter is marked off by fine lines into spaces each of one degree. This is to enable the operator to mark the distance of the double images from each other when diplopia is present. To use the instrument for this purpose, the perimeter is placed upon its side, so that the vertical meridian becomes the horizontal one. By means of a wand, the patient is made to indicate the position of the second image, and the number of degrees which separate it from the central image will indicate the angular displacement.

THE ANTICIPATION AND TREATMENT OF POST PARTUM HÆMORRHAGE.

ABSTRACTS OF PAPERS BY MR. QUIRKE, MR. TRESTRAIL, MR. J. THOMPSON, MR. TURNER, MR. HOUGHTON, MR. GURNEY, MR. KNIGHT, DR. BOULTON, DR. EDIS, MR. PARSONS, DR. HADDEN, DR. DONALDSON, MR. WOODMAN, MR. DATE.

[Concluded from page 723 of last number.]

MR. JOSEPH QUIRKE of Birmingham states that he has employed the intrauterine injection of iron as a *dernier ressort* in three cases of *post partum* hæmorrhage, with the effect of immediately arresting it in each case, the patients recovering without bad symptoms. In spite of firm and continuous pressure and manipulation of the uterus, the employment of cold, the application of the child to the breasts, the administration of brandy, the introduction of the hand, and the injection of cold water into the uterus, the formidable loss continued, and death was imminent. The injection of a solution of iron (1 to 20) caused the uterus to contract with great energy, expelling the hand that had been passed in, together with a number of clots, not another drop of blood being lost. He considers that the risk of embolism is obviated by the firm contraction of the uterus and the consequent closure of its vessels; and that metritis and peritonitis are not likely to occur, if too strong a solution be not employed. He thinks its employment should be restricted to those cases where all ordinary remedies fail.

MR. H. ERNEST TRESTRAIL of Harston endorses the views of those who employ ergot as soon as the head is born, and carefully follow down the uterus with the hand as the child is expelled, continuing to support it until the application of the bandage after the placenta is removed, the

binder having been placed in position before delivery. Where these means fail, and cold injection is not efficacious, in place of relying on pressure on the aorta or on galvanism, he advocates the injection of a solution of iron or some other powerful styptic, the danger being in using too strong a solution. He prefers chloralum, being less likely injuriously to affect the tissues with which it comes into contact, and being at the same time a more powerful antiseptic. He thinks that ergot is given in too large doses generally, having seen violent shaking, a sense of sinking, sickness, etc., and even symptoms of collapse and thrombosis, as results. Again, one of the most distressing results is powerful contraction of the uterus, producing "continuous pains", and threatening injury to the womb. He has also seen it produce irregular contraction, the cervix acting so forcibly as to interfere with the extraction of the placenta. He considers five to ten minims of the liquid extract of ergot sufficient in all ordinary cases as a safeguard against *post partum* hæmorrhage.

Dr. J. ASHBURTON THOMPSON thinks that sufficient stress has hardly been laid, if it have not indeed been entirely overlooked, upon the administration of a full dose of ergot at such a stage of labour as, it may be calculated, will allow the drug to take effect just before the final act of expulsion. It should be given twenty or thirty minutes before delivery is expected. He has been in the habit of giving it invariably to every case in which there is no obvious mechanical contraindication. No harm accrues to the fœtus; and the ergot has on many occasions obviated a flooding which there was every reason to anticipate, and also diminished the severity of the after-pains. If there be any septicæmic element in the case, its influence must probably be diminished by the more efficient and lasting contraction of the uterus. Special precaution should be taken to prevent any sudden evacuation of the uterus after the administration of ergot; otherwise the placenta may be with difficulty extracted. Grasping the uterus by the hand, after immersion in cold water, will both expedite the expulsion of the placenta and also lessen the tendency to hæmorrhage. He then gives the outlines of eight cases occurring in his own and Dr. Brunton's practice, in which flooding had taken place in previous labours, but was obviated by the administration of a full dose of ergot in the present deliveries. In one case, the intrauterine injection of a solution of iron was resorted to without permanent effect, continuous pressure ultimately succeeding. Ergot prevented flooding on the next occasion.

Mr. JOHN SIDNEY TURNER of Norwood thinks *post partum* hæmorrhage occurs more particularly in women of relaxed habit, where labour is long protracted, and there have been long intervals between the pains in the last stage. He inculcates avoiding haste in delivery, and waiting patiently for the extraction of the placenta, giving ergot prior to the birth of the child. Compression of the aorta should be resorted to where practicable. Galvanism with hand-kneading is the special means which he has found of very decided advantage; one hand being placed in the uterus, and the galvanism being applied externally. He considers this far more philosophical treatment than that by injection, intensifying the physiological mode by which uterine hæmorrhage is arrested, and imitating Nature's process in the closest degree.

Mr. J. HYDE HOUGHTON of Dudley, a pupil of the late Dr. Rigby, writes in praise of the binder applied before the birth of the child, and tightened as soon as this takes place. He says that, out of a very extensive midwifery practice, he has had only one fatal case during thirty-three years. During the last eight or nine years, he has carried about a binder with buckles, and has not had a single case of hæmorrhage that has given him the least anxiety.

Mr. THOMAS GURNEY of Stoke Newington advocates ergot and pressure by the hand externally on the uterus, together with the application of cold plates dipped in water, or a sponge saturated with cold water introduced into the uterus; failing this, the introduction of a Barnes's bag and its distension with cold water.

Mr. H. J. KNIGHT of Rotherham endorses Dr. Musket's views on the value of cold-water uterine injection. He has employed it in several cases, and has never seen any ill effects follow this simple and effective mode of treatment.

Dr. PERCY BOULTON replies to Dr. A. B. Steele's strictures on his previous communication respecting the abdominal binder, and states that it is not the *bandage* for which he claims any special advantage, but *perfect rest* after delivery. He expresses also his appreciation of the value of the injection of iron-solution when hæmorrhage with inertia of the uterus occurs.

Dr. EDIS thinks that, in the multiplicity of methods of treatment, we are apt to lose sight of the importance of *anticipating post partum* hæmorrhage, to which Dr. Whittle's original paper and Dr. Lombe Atthill's remarks were almost exclusively confined. Attention to the condition of the health of the patient preceding parturition is as important as the training of the athlete, and yet how seldom is it thought

of! Iron and strychnia are of great service in improving the general tone of the general system. "Where we have any reason to expect hæmorrhage, every precaution should be taken to obviate this, by refraining from the administration of chloroform except just at the completion of the second stage; by applying the forceps, if there be any unusual delay from inefficient uterine action—not waiting for the natural powers to exhaust themselves; by assisting the expulsive efforts by means of the abdominal bandage; by giving ergot just before the final throes; and by not hurrying the extraction of the child or of the placenta, but following the uterus down with the hand externally, allowing an interval to elapse between the birth of the child and the expulsion of the placenta. Then, again, anticipate your wants; have a second skilled assistant, to attend to the child, and so leave you free to devote your attention entirely to the mother; have plenty of ice as well as ice-water at hand, with a proper syringe and tube, and your iron-solution ready mixed. Have some ergot poured out, and brandy within reach. See that the arrangement of the bed is such as to leave you room to move. Have a hot-water bottle, ready filled, to place under the lower back, thus increasing the determination of blood to the spinal cord, and so intensifying the nervous supply to the uterus. Forget not your transfusion apparatus, including a subject able and willing to supply the life-giving stream if requisite; compression of the aorta; ligatures to the extremities; hips raised above the level of the pelvis; free ventilation; and exclusion of all unnecessary attendants. Above all, a quiet and confident manner on the part of the attendant will inspire hope and ensure success; and, if every one who practises obstetrics will *think* beforehand and *act* when called upon in such emergencies, we shall less frequently have to deplore the sad issue of these anxious cases."

Mr. FRANCIS J. C. PARSONS of Bridgwater states that his experience is diametrically opposed to that of Dr. Lombe Atthill and Dr. Steele. He thinks that, the placenta acting as a foreign body, its speedy removal is of vital importance; and the rule he invariably adopts is to remove the placenta as soon as the child is born and the umbilical cord secured. "Placing the left hand on the fundus uteri, and gently moving my fingers backwards and forwards, accompanied by slight pressure, I feel the uterus, thus excited, to contract, and almost immediately the placenta is expelled. I continue my command of the uterus for ten or more minutes, and then substitute a pad in place of my hand beneath the binder, before applied, during the second stage. By these means, *post partum* hæmorrhage is with me of most rare occurrence." He agrees with Dr. Barnes that "the removal of the placenta is the first great end to be attained as a security against hæmorrhage", and refers to the practice of Hardy and McClintock as corroborating this view.

Dr. H. R. HADDEN of Rathmines, Dublin, narrates the particulars of a case where Cæsarean section was performed. "On the removal of the child and placenta, severe *post partum* hæmorrhage set in. Here there was no difficulty in the fullest application of the hand to the interior of the womb, nor even to grasping the organ in both hands, and firmly compressing it; but neither this, the application of cold, nor any other means, was of the smallest avail in controlling the hæmorrhage or stimulating the organ to contract and close the gaping orifice which my incision had made, till I resorted to the diluted solution of perchloride of iron, when immediately the exact appearances described by Dr. Barnes were seen by the eye; the uterus contracting; the styptic serving to seal up the mouths of the vessels and corrugate the inner surface of the uterus."

Dr. JAMES DONALDSON of Glasgow writes to record his experience of these cases when senior civil medical officer on the Neigherry Hills, 7,500 feet above the sea-level, where local hæmorrhages were common. Epistaxis was frequent, and at times troublesome, even serious and copious oozing ensuing after extraction of teeth; and the ordinary monthly flow in women, often excessive, became at times dangerously profuse. During nearly four years' tenure of office, *post partum* hæmorrhage was of constant occurrence; but he did not lose a single case. Thoroughly alive to the great danger and responsibility, he always went prepared. In one case of rapid labour, "everything went on well, the placenta being expelled, and the uterus contracting. In less than an hour, the patient became suddenly restless and began to shiver. On removing the binder, the uterus was found to be relaxed, and internal bleeding going on. All ordinary means failing, the hand was inserted, and the clots extracted. This had to be repeated thrice, the hand being kept *in utero* for nearly an hour. The patient recovered. In a second case of natural labour, a portion of retained membrane was found to be keeping up hæmorrhage, and was removed. In another case, a full dose of ipecacuanha, bringing on rapid emesis, caused strong contraction after inertia, where introducing the hand was not thought desirable. In another case, where the uterus was well contracted, plugging the vagina with sponge steeped in perchloride of iron

lotion arrested hæmorrhage from the cervix. Where it is necessary to introduce this lotion into the uterus, it is much more effectually and safely done in most cases by the hand guiding a sponge and applying it as required. Many cases are lost where the hæmorrhage occurs from the lower part of the uterus and upper part of the cervix, and is unsuspected. The plug with iron lotion is the best and surest remedy for this."

Mr. JOHN WOODMAN of Exeter writes to corroborate the advantages and success of the treatment by free injection of cold water, as advocated by Dr. Mushet. He has tried it in several cases, and always with success, and has found it to produce contraction of the uterus when galvanism and all other means had failed. It is essential that the water be quite cold. Occasionally he has used a little vinegar mixed with the water, but he believes that the good effects are entirely due to the direct application of cold to the uterus. He has never had any bad results from this treatment.

Mr. WILLIAM DATE of Crewkerne, Somerset, states that he has attended over two thousand cases of labour, and has never lost a patient from *post partum* hæmorrhage. He advocates grasping the uterus and keeping up pressure—kneading it if necessary—until firm contraction ensues; pressure being kept up for an hour, if requisite. A firm broad binder is then applied. He refers to the fact of ergot not being under all conditions absorbed by the stomach, and thus failing to exert its well known action.

CLINICAL MEMORANDA.

SUDDEN DEATH FROM AORTIC CONTRACTION.

E. H., aged 59, had never suffered an hour's illness since the birth of her only child, twenty-four years ago. She died suddenly on the 11th of March, 1873, after eating a moderate dinner. At the *post mortem* examination, twenty-four hours after death, the cranial and abdominal organs were healthy; the lungs were congested; the heart was larger than natural, but unaltered in structure; the left ventricle was considerably dilated; the aortic valves were sound; the calibre of the aorta was enlarged in its ascending portion; and, immediately beyond the point at which the left subclavian artery was given off, close to the termination of the ductus arteriosus, there was a circular contraction of the aorta, as if a cord had been tied round it. On the proximal side of the stricture, a line of the wall of the vessel was so thin, as to be almost transparent; the ascending aorta was large enough to admit an index and middle finger, while the contracted portion would barely permit the little finger to enter. There were round and oval atheromatous patches in the innominate, left carotid, and left subclavian arteries, and at the punctum of the ductus arteriosus. The contraction of the artery was found in the usual place. The peculiarity in this case consisted in the total absence of any other lesion, or of any symptom during life. In this it differed, so far as I know, from all other cases on record. There was probably a sufficient channel for the aortic current under ordinary pressure. In the *British and Foreign Medico-Chirurgical Review* for April, 1860, Dr. Peacock published an abstract of forty cases of aortic contraction, which comprised all that was then known on the subject. It is, however, not unlikely that more extended observation will show this defect to be a not unfrequent cause of sudden death.

HENRY DAYMAN, F.R.C.S. Eng., Millbrook, Southampton.

THERAPEUTIC MEMORANDA.

ON THE EMPLOYMENT OF NUX VOMICA.

IN the BRITISH MEDICAL JOURNAL for October 11th, there is a report of a very interesting paper, which was read before the British Medical Association, by Dr. Thompson, of Leamington. The author refers to the possibility of abusing nux vomica, and cites examples of cases where it was abused.

Some time ago, a case came under my observation, in which the patient could not get along without what she termed her "heart medicine." This mixture contained chloroform and tincture of nux vomica. The lady was in a miserable state of nervous debility, bordering on hypochondriasis; but she said that the medicine "pulled her up." She valued the prescription so highly, that she had the medicine dispensed from a copy, while the original was kept in her own possession.

I lately had a case of scarlatina under my care in the hospital. The patient progressed very favourably; but, during convalescence, she had

a remarkably slow pulse. I resolved to give her tincture of nux vomica as a nerve-tonic. On September 30th, she got a ten-minim dose of the tincture of nux vomica during the day and another in the evening. I was hastily called about 2 A.M. The patient had had a sort of cold shivering, with pain and fluttering at the heart, and the nurse observed that her teeth were clenched. I found the pulse much more rapid than it had been for some days before. The patient was in a state of fear and apprehension. This state of things gradually passed off. At the evening visit on the 30th, the pulse still remained good (72).

On October 1st, the patient's pulse was slow again (no more of the nux vomica mixture had been given). I ordered five-minim doses of the drug to be again administered: *i.e.*, two drachms of a mixture containing 160 minims of tincture of nux vomica in eight ounces of water. The patient got a dose about half-past 2 P.M. and another in the evening. Between 11 and 12 P.M., I was called to see the girl, who had been seized, as before, with weakness and shaking of the legs. There was no clenching of the jaws; the pupils were dilated; pulse 65. In this instance, the dose was smaller and the symptoms were less formidable. The increase in the rate of the pulse was not so great as on the previous occasion. Seeing that so small a dose produced disagreeable symptoms, I left off the drug altogether. Probably the state of debility after the fever rendered the patient peculiarly susceptible to the influence of this powerful remedy. The girl left the hospital quite well.

JAMES W. ALLAN, M.B., C.M.,

Belford Hospital, Fort William, N.B.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORTS FROM THE METROPOLITAN HOSPITALS ON THE USE OF TORSION IN SURGICAL OPERATIONS.

[Continued from p. 756 of last number.]

Mr. BRYANT (Guy's Hospital), remarks: The more I see of torsion in surgical operations, and the more I practise it, the more convinced am I of its superiority over every other known method for the control of hæmorrhage. Whilst, in a physiological point of view, it utilises more fully than any other known plan all the physiological processes employed by nature to prevent and arrest bleedings, places them in the most favourable position to take effect, and leaves no foreign body in the wound, as a ligature, to irritate or to become a source of future danger, by undoing at a later period what has been done at an earlier, by Nature's own efforts; in a clinical point of view, it allows the repair of wounds by immediate and primary union, and practically almost does away with the fear of secondary hæmorrhage, except as a consequence of a general sloughing of a stump or wound. It is applicable to all arteries, large or small; it may be employed with confidence to the femoral or the brachial, and it has been applied with success to the external iliac and subclavian. It can be applied with safety even to atheromatous vessels. Under all circumstances, when torsion is successful at the time of operating, it may with confidence be trusted. When it fails, it fails at the time. When once by torsion the flow of blood is arrested, there need be no fear of any subsequent hæmorrhage. Its application is possibly more difficult than that of the ligature, for, to prove successful, it requires that the artery should be isolated, seized firmly, drawn forward, and twisted sharply; it is apt to fail when a mass of tissue or the sheath of the vessel is taken up with the artery; this latter peril being rarely regarded as of importance in the application of the ligature. To practise it with safety, the vessel should be twisted till resistance has ceased, but not longer; and, in the larger arteries, it is wise to allow blood to flow into the twisted end before the torsion-forceps is removed, with the view of gaining the full benefit of the valvular incurvation of the inner coats of the vessel. In atheromatous arteries the same rules hold good; but the necessity of observing them is greater, for, from the brittleness of the inner coats of the vessel, the slightest twist breaks them up, and any excess in twisting breaks them off, together with the external and cellular coat; and to break off the external coat under these circumstances, means failure; whereas, with the external coat entire, the breaking up and the incurvation of the inner coat, and the coagulation of the blood within the vessel, success may generally be achieved under all circumstances. Acting on these principles, I have successfully twisted many very diseased vessels, and, on one occasion, a femoral artery by means of one complete twist, where two twists had previously failed. Where

torsion may fail is where a number of vessels come off together; and under such circumstances a ligature should be applied. I am convinced that many of the recent successes in surgery have been greatly due to the practice of torsion; and, as its earliest advocate in London, I have been gratified to find the practice has been so freely adopted. At Guy's Hospital it is now generally followed. I believe the practice to be so good that I can hardly think any surgeon, who has had any experience of its use, will so retrograde as to return to the practice of acupressure or the ligature.

Mr. HULKE (Middlesex Hospital) writes: My personal experience of torsion has been limited to vessels of secondary and smaller magnitude. I have never applied it to one artery of the size of the superficial femoralis. With this restriction, I have been in the habit of employing it for many years where I aimed at obtaining primary union; and I have been generally satisfied with the results. I have not used it for such vessels to the exclusion of deligation, but have often had recourse to the latter when the circumstances of the operation were such as to make this appear to me more safe than twisting.

Mr. G. GASCOYEN (St. Mary's Hospital) has never used torsion to the larger arterial trunks, but has occasionally applied it to the smaller branches divided during operation. He has, however, no doubt that, properly applied, it would prove equally efficacious in controlling hæmorrhage from the large vessels, and in skilled hands possibly with as much safety to the patient as a ligature. But whilst admitting that torsion may close a large vessel effectually, he thinks the risks of its failure in unpractised or careless hands are far greater than with the ligature, and therefore it is not adapted for general use. Nor can he perceive what advantages are offered by torsion over the carbolic catgut ligature, which completely obviates the objections urged against the use of the ordinary ligature.

Mr. BARWELL (Charing Cross Hospital) reports: Torsion was four or five years ago much extolled by several surgeons—notably by those connected with Guy's Hospital. I have used it frequently, even for large vessels; but always tested the ends of the vessel with great care before finally dressing the stump, and occasionally have felt it safer to tie the vessel, not having been satisfied with the effect produced by the twist. There is no doubt that, when successful, this method is useful, as it eliminates from the wound the foreign bodies—viz., the silk ligature and the dead end of the tied vessel. I say “when successful” with some emphasis, for this reason—that the operation of twisting, to be secure, must produce a certain arrangement of the inner, middle, and outer coats of the artery, as described and figured by Mr. Cooper Forster in the *Clinical Society's Transactions*. If all arteries were in one and the same condition, the results of torsion would be uniform; but, practically, the vessels are in different states in limbs that require operation, according to the age of the individual and to the species of disease. Atheroma, even inflammatory conditions, in and around an artery, will so modify its elasticity and resistant powers, that the surgeon who uses torsion on any large vessel must frequently feel uncertain as to whether he has produced the desired involution of the inner coat; and, indeed, secondary hæmorrhage has at least in one case proved fatal. Since the introduction of torsion, another method of arresting hæmorrhage, without the intrusion of any foreign body, has been invented—deligation with the carbolic catgut of Professor Lister, which appears to combine all the advantages and none of the uncertainties of torsion. I have, therefore, quite disused that method, save for quite small vessels.

Mr. H. MORRIS (Middlesex Hospital) has published some remarks on torsion. His opinion is decidedly in favour of the procedure, which he adopts, whenever practicable, in his operations. He has seen hæmorrhage occur on the day following an amputation of the thigh in which torsion was used; but, upon the stump being laid open, the bleeding was found not to proceed from any artery of large size but from a small muscular branch.

Mr. HOWSE (Guy's Hospital) writes: I always employ torsion in those cases in which I wish to get primary union of a wound; but in those in which the successful treatment of the case requires that the wound should close from the bottom by granulation, I generally prefer ligature. The latter is more easy and speedy in application than the former. The successful employment of torsion requires that the vessel should be isolated from the surrounding tissue before it is twisted, whereas it is of no great consequence if a little of the cellular tissue around a vessel be caught up and included in the loop of the ligature. Moreover, torsion requires more manipulative skill than ligature for another reason. Arteries differ from each other, not only in size, but also at different periods of life. The larger arteries contain more elastic tissue in their middle coat, and experience has shown that it is in these that the incurved retraction of this coat takes place most perfectly after torsion. In the smaller arteries there is a preponderating amount of muscular tissue, and this is united more firmly to the external

coat; hence retraction does not so readily occur, and the vessel requires more twisting to prevent hæmorrhage. If a large vessel, such as the external iliac, be twisted, the giving way of the middle coat is very distinctly perceived, and the retraction is very marked; but this is not the case with small vessels. Hence more care is required with them than with the larger ones, the aim being to stop short before twisting the end off, and yet to secure the vessel perfectly. This certainly requires more practice than the ligature, and it is a kind of practice more difficult for a student to obtain. For the ligature, all that is required is a tablecloth and a companion to hold the forceps; whereas torsion requires to be practised in the dead-house or upon an amputated extremity. I believe that torsion will never be commonly and satisfactorily carried out in the profession until it is thus made an object of study. Again, arteries differ in youth and old age. In the latter, they become much more brittle, even if there be no atheromatous change, and hence they require much more guarded twisting. It is well known that in atheroma one or two turns are often quite sufficient, anything more tending to cause ruptures and lacerations in the continuity of the vessel, and thus to prejudice the result. All these differences cause difficulties in the minds of the unpractised, so that torsion is often not so successfully employed as it might be. There can be no doubt in my mind that in suitable cases it is the most perfect way of controlling hæmorrhage that we possess. I have never had a case of secondary hæmorrhage where torsion has been used.

Mr. FRANCIS MASON (St. Thomas's Hospital) has used torsion in various parts of the trunk as well as in the upper and lower extremities, with the exception of the femoral artery. His opportunities of comparing this method of arresting hæmorrhage have, however, not been sufficient in number to enable him personally to estimate the advantages it offers over that by ligature or other means frequently employed. Torsion, he believes, requires more care and skill, and occupies more time than the application of the ligature. Nevertheless, the delay in the process of torsion is not without its benefits; for the wound surface has time to glaze, and thus, quite irrespective of torsion, there is less probability of suppurative action. He has, however, seen in a few cases considerable suppuration after amputation, in which this method was alone employed; and in one instance secondary hæmorrhage supervened, but such an accident might possibly have happened under any other circumstances. In the so-called “bloodless operations” torsion may be equally useful, but the ligature or acupressure is more quickly and more certainly applied; the ligature, with all its supposed short-comings, securing the vessel, as a rule, at once, and without further trouble; moreover, it is in many cases indispensably necessary, being called into requisition as a last resource. Mr. Mason has noticed that, in twisting vessels in the intercostal spaces, after removal of the breast, there is some risk of injuring the pleura.

Mr. FAIRLIE CLARKE (Charing Cross Hospital) writes: The only thing of interest that I can add to the discussion upon torsion is that about two years ago, with the help of my colleague, Dr. Mitchell Bruce, I made some experiments upon the common carotid artery in rabbits. On reading Mr. Bryant's paper in the *Medico-Chirurgical Transactions*, vol. li, and then referring to the notes of my own experiments, I think I may say that the best methods were followed, and that all reasonable care was used. Yet the result was that only in one case out of five did the twisting succeed in completely and at once arresting the flow of blood, and the case which succeeded was one of torsion of the distal extremity of the artery, where the pressure was of course much less than on the proximal side. In each case I proceeded the same way. The artery was carefully exposed and raised. Two forceps were applied to it transversely, leaving between them rather more than half an inch of the artery. This was divided in the middle, and “limited” torsion used first to one end and then to the other. The minimum number of twists given in any case was four; sometimes as many as six were made. And where the first attempt was not successful, the full amount of twisting was repeated. But, as I have said, the results were not satisfactory; and, in four instances out of five, I had to fall back upon the ligature. After a few days I examined both the twisted and the ligatured extremities most carefully with the microscope. The impression left upon my mind by these experiments was not such as to permit me to rely upon torsion alone in securing any large artery. For small vessels it is no doubt very useful; but for those of greater calibre I should be most unwilling to trust solely to it.

Mr. GANT (Royal Free Hospital) states that from his experience he has formed a very favourable opinion as to the efficacy and safety of torsion in permanently arresting arterial hæmorrhage, without the disadvantage of leaving any foreign body—slough or surgical appliance—in the wound. He has used torsion to arteries of all sizes; the radial and ulnar, the brachial and axillary, the anterior and posterior tibials, and the femoral in the upper third of the thigh. Provided that the

artery have been seen to remain thoroughly twisted until the wound is closed, Mr. Gant has never yet known secondary hæmorrhage to occur, as occasionally after ligature and acupressure. The probability of this event in regard to the latter method of treatment will depend on the period when the needles are withdrawn. He has endeavoured to supply some data for guidance in this important particular by *post mortem* examination of the process of occlusion in arteries after acupressure—the “pathological mechanism” which Sir J. Simpson acknowledged to be “the unknown desideratum.” His observations, and others relating to the comparative value of ligature and torsion, illustrated by woodcuts, were published in the *Transactions of the Clinical Society* for 1871. He believes that torsion will eventually supersede the employment of either ligature or acupressure in the treatment of surgical hæmorrhage.

Mr. MIALL (Bradford Infirmary) writes: My experience of torsion includes, in addition to smaller operations, fifteen consecutive cases, comprising sixteen of the larger amputations. The arteries twisted were the femoral (3); popliteal (1); posterior tibial (1); anterior and posterior tibial (4); axillary (1); brachial (4); radial and ulnar (2); besides smaller arteries in each case. Torsion failed in one case where the brachial was divided at its bifurcation. This, and a case where a vein was tied, were the only ones where the ligature was used. The torsion was not limited by applying a forceps above, after the first four cases. In no case was the end of the artery twisted off. No hæmorrhage followed in any of the cases. At present I use torsion in all operations.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 9TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

DISORDERS OF MUSCULAR MOVEMENT ILLUSTRATING THE USES OF CONIUM. BY JOHN HARLEY, M.D.

DR. JOHN HARLEY related the particulars of four cases, and exhibited three of the patients. 1. One patient, a man aged 44, had spasmodic wry-neck, of a chronic and severe nature. The right arm was almost equally affected, and, while the head was plucked round to the right, and the chin tilted upwards, the arm was drawn over the chest to the other side of the body. He had been under care for a month at St. Thomas's Hospital, and during that time had taken daily from three to seven ounces of the *succus conii* of the *British Pharmacopœia*. He was taking three ounces and a half of the juice—which quantity Dr. Harley gave him. 2. The second case was a similar one, but the spasm had not existed for more than fifteen weeks, and it was confined to the muscles of the neck. The patient was a strong middle-aged, and otherwise healthy man. He had been under Dr. Harley's care six weeks, and had taken from five to seven ounces of the juice daily. Three ounces and a half were given to him. 3. The third patient, a healthy young man, aged 19, had long had spasm of the muscles of the right upper arm. Dr. Harley gave him three ounces. 4. A little girl, aged 4½, had been the subject of epilepsy and complete hemiplegia of the right side. She had taken a paralysing dose of hemlock twice a day almost every day for the last three months. One-sixth of the quantity of the juice which Dr. Harley gave the men was sufficient to produce moderate cutis in a woman or in a weakly man. In the cases there was from the first an almost or altogether uncontrollable irritation of the motor centres, an irritation which had now long since degenerated into a vicious habit—the muscles of one side exercising a withering tyranny over those of the other. To relieve such affections the remedy must be somewhat proportionate to the disease, sufficient to paralyse, within the limits of safety, the motor centres. Dr. Harley had found that, while hemlock was quieting and restraining the turbulent centres of motion, it was at the same time invigorating them; and that while it held spasm of one set of muscles in check, the corresponding muscles of the other side, which had perhaps become weakened and atrophied, rapidly improved in nutrition and power. The little girl was making a speedy recovery. Three months ago she could not walk, and the right arm hung useless by the side, and for the previous two months she had from five to nine convulsive seizures with loss of consciousness every day. From the day she came to Dr. Harley, he had daily induced cutis. The fits ceased at once, and there had not been a single return. She now walked alone, and was able to use the arm and raise it to her head. The cases of spasmodic wry-neck had benefited greatly; the spasm in the second case was wholly arrested, and in the other almost abolished, and the use of the right arm had been restored. The other case of spasm of the arm as yet had derived no benefit, but he had had

efficient doses of hemlock only one week. Dr. Harley said that, if the patients were examined at the end of the meeting, there would be found complete relaxation of the whole muscular system; the muscles of the head and face being apparently more affected than those of the rest of the body. The orbicularis was incapable of resistance; the movements of the eyeball were very sluggish, and there was more or less complete ptosis. The muscles of mastication and deglutition were nearly paralysed. Speech was slow, and effected with exertion; the voice was gruff, from relaxation of the laryngeal muscles. The heart and breathing were normal, sensation and intelligence were perfect, and the mind was calm. The surgeon would infer from these facts the value of conium in trismus, in spasm of the orbicularis and of the gullet, and in dislocations of joints. To the ophthalmic surgeon conium was ready to become a valuable assistant in relaxing the spasm of the orbicularis, caused by photophobia; it was savage to talk of the division of this muscle as a preliminary to excision of the eyeball. It would prove useful in the removal of artificial substances from the gullet. Hemlock was totally destitute of anæsthesial properties, and patients under its influence were able to help by their efforts, and to guide by their sensations. There was no danger in using the hemlock pure in large doses. The dose required was always proportionate to the motor activity of the individual. The *succus conii* varied considerably in power; that which Dr. Harley used was perhaps a little stronger than the average, but he had four patients who were taking more than two ounces, six one ounce and a half, and more than a dozen one ounce as a single dose. And yet the *succus* was the only efficient preparation in the *Pharmacopœia*. He had long ago shown how a much more powerful medicine might be obtained.

The PRESIDENT asked Dr. Harley whether he had made any experiments with conia.—Mr. R. B. CARTER asked whether Dr. Harley had any experience of the use of conium in nystagmus, where the eyeball was in a constant state of oscillation, with some rotation. He thought that the practice of dividing the orbicularis muscle before removal of the eyeball, referred to by Dr. Harley, had been discontinued for a quarter of a century. The spasm of the orbicularis was easily relaxed by the simple operation of division near the canthus. Dr. O'CONNOR asked whether the *succus conii* used was obtained from plants of the first or of the second year's growth.—Dr. JOHN HARLEY said that the action of conia injected subcutaneously was precisely the same as that of hemlock-juice; but in such cases as he had described, subcutaneous injection was not applicable, as the medicine required to be used twice a day. He had used conium mostly in epilepsy and chorea, and in the irritability attending teething in children. The results in epilepsy were very variable. When the epilepsy depended on centric irritation of the motor centres, conium was very valuable; and it was also valuable in chorea unconnected with rheumatism, as well as in spasm due to local irritation. In paralysis agitans, it was of some use in the first stage; but afterwards, when the spasm was due to debility, it rather increased it. Under the influence of conium, the eyeball became almost fixed. He could not say positively whether the juice was obtained from annual or from biennial plants; but he had no doubt that it was prepared as directed in the *Pharmacopœia*. His observations, however, had led him to conclude that the juice of the annual plant was as active as that of the biennial.

THE SUCCESSFUL TREATMENT OF ANEURISM BY POSITION AND RESTRICTED DIET. BY JOLLIFFE TUFNELL, F.R.C.S.I.

The paper was illustrated by cases, preparations, and drawings. The cases were the following. 1. Aneurism of the abdominal aorta cured in thirty-seven days. The patient was a shipwright, aged 31, who had been sent from Liverpool to be under Mr. Tufnell's care. While he was crossing, he was shipwrecked; and was much disturbed through exertion and excitement. On admission into the City of Dublin Hospital, an aneurismal tumour, with an area of pulsation three inches in width, was found an inch and a half below the celiac axis. His pulse was 170. The patient was confined to bed, lying on his back, and was limited to a restricted diet. In thirty-seven days all pulsation had ceased in the tumour. The man died of Bright's disease, attended with convulsions and coma, five months afterwards. At the *post mortem* examination, the aneurism was found to spring from the front of the vessel. The sac contained firm laminæ; but posteriorly there was a free passage for the flow of blood, and all the vessels springing from the aorta were pervious. One of the kidneys was much enlarged, while the other was contracted.

2. Aneurism of the abdominal aorta cured in twenty-one days. The patient, a male, aged 78, was a pensioner from the army. He died three years subsequent to recovery, from old age and general decay.

3. Aneurism of the popliteal artery cured in twelve days. The patient, aged 37, was a trooper in the Royal Dragoons, and is still

serving in that regiment. (See Report of Surgical Society of Ireland, page 761, col. 1, line 1).

Mr. Tufnell said that three things were necessary to ensure success in the application of the plan which he advocated. 1. The aneurism should spring from the part of the vessel furthest removed from the bone—from the front of the aorta, or from the posterior part of the popliteal artery. 2. The sac must be entire. 3. There must be a fibrinating power in the blood.—Mr. HOLMES said that few could have read much of the history of aneurism, or seen much of its surgery, without seeing that operations were often not performed until the cases had become desperate. Hence the statistics of operation on aneurism were very useless; for the mortality that they showed was increased by operations performed in cases where there was no reason to expect to save the patients. Death was sometimes the direct result of the operation, as when the sac was wounded, when diseased structures were operated on, or when an unfavourable anatomical condition was present. If it were really true that many cases could be cured by simple rest and diet, the statistics of aneurism in future must be greatly modified. Was it the fact that, in a case of aneurism of the aorta or of the subclavian artery, there was a prospect of curing the patient by rest and diet? He had tried this treatment in many cases; but as yet he had been disappointed. Aneurism occurred generally in persons broken down by debauchery, dissipation, disease of the kidneys, long military service, etc. But his negative experience could not set aside the positive experience of Mr. Tufnell; who, he understood, had had fourteen cases in which the treatment by rest had produced cure. It was known that this occurred in aneurisms of all parts of the body. In a case of Mr. Luke's, it was intended to operate; but while the patient was undergoing rest to prepare him for the operation, his aneurism was cured. Before undertaking an operation in a case of aneurism, the surgeon should first try the effect of rest. In many cases, the growth of the aneurism no doubt depended on exertion. It was especially advisable to try rest before other means when the aneurism was near the heart. He was almost horrified at the rapidity with which surgeons resorted to operative treatment in cases of abdominal aneurism. There had already been three deaths in London hospitals following pressure on the abdominal aorta. There could be no doubt that the operation was very dangerous; the prolonged subjection of the patient to chloroform was itself perilous, and the aorta could not be pressed on without danger of injuring the viscera. If Mr. Tufnell's paper led to less haste in the adoption of surgical processes in cases of aneurism, much would be done for the advance of surgical science.—Mr. CALLENDER said that the profession was much indebted to Mr. Tufnell. His method was very simple, and it involved no risk. It should be recollected that the plan was a very definite one, and required to be applied in selected cases, and to be carefully carried out in all its details. He had adopted this treatment in a case of aneurism, at the suggestion of his colleague, Dr. Andrew. The patient, a woman, who had been discharged as incurable from a hospital in London, had an aortic aneurism projecting beyond the sterno-clavicular articulation. She was placed as comfortably as possible in bed, and was dieted in the way recommended by Mr. Tufnell, for two months. She complained occasionally of thirst, which was relieved by ice. The aneurism became harder and smaller, and the pulsations more equable; and the patient lost the dysphagia and pain in the chest from which she had suffered. She ultimately left the hospital much relieved. The case made a strong impression on him as to the line of treatment to be adopted in apparently irremediable cases. The treatment must, however, be carried out in all its integrity, as regarded both rest in bed and diet.—Dr. ANDREW had found it impossible to carry out Mr. Tufnell's plan in every case, on account of the self-will of the patient or the inability to submit to restricted diet. He had under his care in St. Bartholomew's Hospital a patient with projecting thoracic aneurism, whom he had treated by rest and low diet for some weeks with apparent improvement. Some days ago, however, the patient had received a sudden shock; after which pain was felt extending down the arm, and it was feared that the aneurism had reappeared. In a case in which a thoracic aneurism had been cured by this plan three or four years ago, there was, three or four months since, some indication of the existence of a mediastinal tumour; otherwise the patient was quite well.—Mr. DURHAM thought that Mr. Tufnell must be exceptionally fortunate in his treatment of aneurism by rest. It was known that in many cases a cure followed rest; but in many instances it was impossible to keep the patients at rest; the pain made them restless. He had never had a case of aneurism in which he had not first tried the effect of rest and diet; but, after all this, the aneurism often went on increasing, and the patient called for relief. One of the fatal cases of abdominal aneurism treated by pressure had been under his care. The patient was treated by rest and low diet for a month; and it was believed that the death was favoured by this. He thought

that Mr. Holmes was rather severe in his remarks on the readiness with which surgeons resorted to mechanical treatment. Of the two cases of abdominal aneurism which he had treated by compression, one was now in good health, after an interval of three years. This patient had been subjected to rest and restricted diet three months before the operation. In the other case, it was found at the necropsy that compression had been made on the aorta alone, and not on any other viscus. That the duodenum was compressed in one of the fatal cases, arose from the pressure having been applied too low down. He would have no hesitation in applying pressure in a case of abdominal aneurism that had been treated by rest and diet. There were at least three successful cases; and he did not know that more than two had been fatal.—Mr. HOLMES explained that he quite agreed with Mr. Durham, that pressure should be resorted to in cases of abdominal aneurism that had resisted the treatment by rest and diet.—Mr. GANT asked under what circumstances in any given case Mr. Tufnell would abandon the treatment by rest and diet. He had lately had two cases of popliteal aneurism treated successfully by the application of Cartes's compressor.—Mr. SAVORY referred to the work done by Dublin surgeons with regard to the treatment of aneurism. The mode of treatment followed by Mr. Tufnell had manifest advantages over compression, as there was no danger of injuring other organs, and it did not interfere with other methods. He believed that this plan was carried out in some form, though perhaps less exactly, in the treatment of aneurism by every judicious surgeon. Although many operations were no doubt done on desperate cases, there were many instances in which the surgeon must apply the ligature at once. He thought that surgery was in advance of pathology with regard to the treatment of aneurism. It was a matter of the highest importance to be able to diagnose the character of the aneurism, and to adopt the treatment specially proper to each case.—Dr. SIBSON said that the profession were indebted to Mr. Tufnell for his interesting communication. Mr. Durham had referred to the restlessness caused by pain; this might be overcome by the injection of morphia. In the diet, the amount of fluid should be restricted; a too great reduction in the quantity of solid food probably interfered with the filling up of the aneurism. He asked whether Mr. Tufnell had met with cases of difficulty or failure.—Mr. BARWELL asked Mr. Tufnell if he had had any cases in which he had tried other plans after failure of the treatment by rest and diet. How was the fitness of the patient to undergo other treatment affected by the restricted diet? According to the Dublin surgeons, compression put the patient in a better condition for ligature, by causing enlargement of the collateral branches of the vessel above the aneurism. He noticed in the preparation from one of Mr. Tufnell's cases that the renal vessels were adherent to or implicated in the tumour. Perhaps this interference led to the disease in the kidneys and the death of the patient.—Mr. TUFNELL could not say whether the Bright's disease was coincident with the aneurism or not. Patients remained in perfect health after being subjected to a restricted diet—i.e., a diet small in quantity, but nutritious in quality. They did not ask for more food; and evidence of the sufficiency of the diet was afforded by the redness of the muscles in the fatal case. He had not made any selection in his cases, but had taken them as they were, and had been successful in fourteen out of about eighteen. Cases where the patient would not submit to the treatment could not be dealt with in this way; but this method in no way interfered with subsequent treatment. External compression, properly applied, did not interfere with subsequent ligature. There had been five or six cases in Ireland of ligature after compression; and in none was there any difficulty. The mortality from aneurism in the present day was no doubt less than in the records referred to by Mr. Holmes, because treatment was applied sooner. In conclusion, Mr. Tufnell showed a specimen from a case of aneurismal dilatation of the left ventricle, attended with a varicose state of the coronary veins, which caused death by exudation into the pericardium, without rupture.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 12TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Aneurism of External Iliac Artery Cured by Pressure with Lister's Abdominal Tourniquet.—Mr. WHEELHOUSE, of Leeds, read the following particulars.—R. L., publican, was admitted into the General Infirmary at Leeds, on September 26th last. His family history was good, and he had always been temperate. He contracted a chancre in 1860, followed by suppurating bubo, rash over the body, and sore-throat. In 1861, he "caught cold" in his eye, and, soon afterwards, iridectomy was performed by Mr. Teale. In 1862, kidney-mischief, with bloody urine, occurred, for which he was treated (as he said) successfully with iodide of potassium and sarsaparilla. Twelve months ago, a popliteal aneurism

was found in the right leg, accompanied by pain, which latter became aggravated by a subsequent strain. The aneurism was treated by Mr. Wheelhouse, in consultation with Mr. Newstead, by continuous compression of the femoral artery for eight hours, by means of Porter's femoral compressor. The treatment was well borne, and was perfectly successful, the tumour, in September last, being perfectly hard, about the size of a pigeon's egg, and easily felt in the popliteal space. About the middle of July last, the patient felt another tumour in the right iliac fossa, constantly pulsating and very painful, which had formed gradually, without history of strain or other injury. The right leg was colder than before. The author, with Mr. Newstead and Mr. Jessop, found a large pulsating and expansile tumour in the right iliac fossa, reaching from Poupart's ligament upwards to within two inches of the umbilicus, and extending in an outward direction, almost to the spine of the ilium; it was about the size of a small cocoa-nut, hard and firm at the lower part, and softer in the upper portion, with pulsations and dilations synchronous with the pulse in the left femoral artery. The swelling appeared to be connected wholly with the external iliac artery, but to extend and overlap the common iliac; and, although pressure could not be made on the latter vessel sufficient to stop the beating, it was easily controlled by pressure on the abdominal aorta, just above its bifurcation. After a consultation, treatment by pressure was determined upon; and, on September 27th, chloroform was administered by Dr. Barfoot, ether being substituted as soon as the muscles were relaxed, and its action kept up continuously for five hours without any untoward symptoms, 25 ounces of ether being used. Lister's large abdominal tourniquet was applied just over the umbilicus, and slowly screwed down until the flow of blood through the aneurism was arrested. Two slips of the instrument occurred during the first half-hour, but it was immediately replaced. Pressure was commenced about 1.15 P.M.; the foot was cold, and a little blue, at 2.30 P.M.; at 3 P.M., the tourniquet being slightly unscrewed, pulsation in the tumour returned, and the instrument was at once reapplied. At 4 P.M., blueness had extended beyond the knee, the left leg being very cold; at 5 P.M., the right limb was blue to the groin, and the left to the knee. Pressure was slightly relaxed; the tumour was much harder, but pulsation was still perceptible. At 6 P.M., both limbs were black, and the body blue as far as the tourniquet. The instrument was then removed gradually in fifteen minutes, a quarter-turn of the handle being taken every minute. The tumour had ceased to pulsate, and was firm and hard. The limbs were wrapped in wool and tied together, and a hypodermic injection of morphia was given. During the entire operation, slight pulsation could be felt in the left femoral artery. At 7 P.M., there was slight pulsation in the aneurism, but it was firm and hard. At 10 P.M., pulsation had increased, but the tumour remained firm, and another morphia injection was given. A restless night was passed, and next day the tumour pulsed with nearly its old force; but, as the walls of the aneurism felt thicker and harder than before the operation, and the beating was more "lifting" and less "distensible," the author predicted that it would soon cease altogether. Two grains of opium were given, to quiet the bowels. The limbs were recovering their natural hue and temperature. On the second morning after the operation, the tumour was still harder; pulsation was almost imperceptible, the patient was easy; and, in the evening of the same day, the tumour was almost fully consolidated, and both limbs were normal as to warmth. Three days after the operation, the pulsation was found to have stopped; the tumour was hard and firm. When examined on November 14th (forty-eight days after operation), no pulsation was found; the aneurism had contracted, and was hard and firm, about the size of a cricket-ball; the limb had completely recovered, and the patient had returned to work. The author was assisted at the operation by Dr. Barfoot, house-physician, and Mr. A. R. Dunnage, house-surgeon to the hospital. Sphygmographic tracings, taken before and immediately after the operation, were exhibited to the Society.—The PRESIDENT tendered the warmest thanks of the Society to the author, and thought it a recommendation of the Society that Mr. Wheelhouse should come from Leeds to read his paper before the members.—Mr. BRYANT said that another successful case must now be added to the list of aneurisms treated by compression of the abdominal aorta, and that that plan of treatment must now be accepted as fully established. It must, however, be remembered that it had its dangers. In a case treated by the speaker, the pressure injured the intestine, contused other viscera, and caused peritonitis, of which, at its onset, the patient died. The risk necessarily belonged to the practice, but did not preclude its adoption. Abdominal aneurisms were occasionally cured by rest and regulated diet. Mr. Bryant would like to know how long expectant treatment should be carried out, and under what circumstances pressure should be applied? Unfortunately, if expectancy were too long continued, the patient might die from bursting of the aneurism, whether seated in the chest, in the abdomen, or in the extremities. Delay was, therefore, sometimes very serious. Still, any surgeon, unless he saw

urgent reasons for operating, would probably commence his treatment by rest and diet. It was very agreeable to the surgeon and patient when cure by expectancy was effected; but operations upon arteries were not now so serious as in the days before chloroform. Professor Syme had twenty-three cases of ligature of the femoral artery without a death; at Guy's Hospital, twenty-four consecutive cases occurred with only one death from pyæmia. In seventeen cases of femoral and popliteal aneurism at Guy's Hospital, pressure had been employed with failure in six instances only: In a recent case of popliteal aneurism in a bad subject, pressure was tried; the blood clotted, but the sac suppurated, and the man sank. In such cases as Mr. Wheelhouse's, should the expectant method or pressure be employed? and, if the expectant plan, how long might such treatment be used? In fact, what circumstances in an aneurism were indicative of the special line of treatment to be adopted? Mr. Bryant did not think there was any evidence that the subjects of syphilis were more liable to aneurism than others; but, of course, aneurismal patients might contract syphilis.—Mr. BARNARD HOLT exhibited a patient, who, years before, had suffered from a large aneurism occupying the greater part of the front of the right thigh. Pressure was first tried, but could not be borne, and had to be abandoned for a time. Chloroform was then given continuously for twelve hours, and pressure on the iliacs was tried; upon removal of the tourniquet, the tumour was found to be solid and non-pulsating. Pulsations returned, however, next day. At the end of a fortnight, chloroform was again administered for fifty-two hours at one sitting, the patient being allowed at intervals to recover, so as to take food. Pressure was kept up alternately on the right common and external iliac arteries. The aneurism was hard at the end of the operation, but a *bruit* was still audible on the outer side of the sac, and pulsation was also there perceptible. A small slough of skin from the lower part of the abdomen, where the pressure had been applied, was subsequently removed. The pulse during inhalation of the chloroform ranged from 90 to 110. The aneurism was perfectly cured; and the case proved the excellence of the plan of treatment by pressure advocated by Mr. Wheelhouse. No inconvenience from the chloroform was experienced; and Mr. Holt considered that the best treatment to be adopted, where chloroform was well tolerated.—Dr. MOXON inquired if the experience of the Society agreed with opinions which he had published in the *Guy's Hospital Reports* for 1866. He had met with a healed aneurism of the aorta in a case of starvation from cancer of the œsophagus; and, upon examining the other eight or nine recorded cases of healed aneurisms, he had found the one link of union between them to be, that they all (except one) existed in cases where a wasting disorder terminated life. What was expected when the expectant plan of treatment was practised? He had tried to imitate nature's mode of cure, in internal aneurisms, by adopting Valsalva's method of starving; but he found that patients would or could not stand it. Still, he believed that, if he could starve a patient almost to death, he might thus cure his aneurism. The sac was occasionally a mere pouch, and cases of this kind should be treated by the severe starvation method. Dr. Moxon did not think that syphilis had anything to do with the cause of aneurism, because female prostitutes did not suffer from the disease, though soldiers did. Syphilis would, however, induce inflammation of the outer coat of the walls of arteries in the brain, quite unconnected with disease of the tissues around; but the arteries of other parts were not found to be so affected.—Mr. DURHAM had tried pressure in two cases of aneurism of the abdominal aorta. One was successful (*Medico-Chir. Trans.*, vol. xlv), and the man was still well and pursuing his avocation. In the second case, the patient succumbed at the end of the pressure, in consequence of his being too weak to bear it; at any rate, there was no indication at the *post mortem* examination of pressure upon, and damage to, any of the abdominal viscera. In one case which had occurred at a metropolitan hospital, Mr. Durham understood that the pancreas was pulsed by the pressure. He had made several observations in the dead-house, with the object of determining where the tourniquet might be with least danger applied; and he had come to the conclusion that one of two situations might be chosen, either a spot high up, just where the aorta escapes from the thorax between the crura of the diaphragm, or low down, just above the bifurcation of the vessel. From both of these points, the intestines might be most easily moved away. The spot high up was surrounded by the semilunar ganglia and solar plexus of nerves, and pressure upon the part, as related in the case recorded in the *Transactions*, greatly influenced the pulse at the wrist. The tourniquet, called Lister's, but which was rather Pancoast's, should not carry a convex pad; the surface should have a kind of groove up the middle, to catch the aorta when screwed down upon it. The vessel was apt to slip away from beneath a convex pad, for which reason the groove greatly facilitated the compression. Statistics were fallacious for the settlement of the question as to what cases were appropriate for treatment by pressure,

and what cases might be left to expectancy. Each case must be treated on its own merits. There was no hard and fast line between cases suitable for either treatment; the surgeon must have the fullest knowledge of all methods, and act upon it in every case.—Mr. CALLENDER had made drawings of the parts said to have been crushed in the case to which Mr. Durham had probably alluded. He found some slight damage to the pancreas; but great injury to the larger arteries in the neighbourhood. Death seemed due to damage to the large and important plexuses of nerves which lay around the aorta; in fact, the life was crushed out of the patient.—Mr. HOLMES would have liked to hear a few more particulars from Mr. Wheelhouse of the experience gathered at the Leeds Hospital, respecting the treatment of aneurism by manipulation. Had it been successful? If so, it was contrary to the experience of surgeons elsewhere. Mr. Holmes doubted if safety could be obtained by going high up to press the abdominal aorta; surely, the risk increased. As one went higher, the liver was pushed aside, the heart was, to some extent, pressed upon and impeded in its action, and injury was inflicted upon the coeliac plexus of nerves. In cases of amputation of the hip, he had known the pressure low down upon the abdominal aorta to so embarrass the heart that the pad had to be removed, and pressure applied by the hand only. The rule which Mr. Bryant had asked for was to be found in common sense. The expectant method was sometimes successful, with its rest in bed and careful diet; and pressure sometimes succeeded in curing an aneurism. Ligation of the abdominal aorta had never been successful, and ligation of the common iliac rarely so. Mr. Holt's was a case of success after long pressure. At Salisbury, a case of aneurism of the femoral artery, occurring in a man 70 years of age, had been cured by complete compression of the external iliac vessel for an hour and a half; whilst, in America, a case was recorded in which an aneurism of the external iliac was cured by pressure upon the common iliac for five and a half consecutive hours. Mr. Holmes had seen cases of popliteal aneurism cured by simple rest in bed. Cases were also occasionally cured spontaneously; there was a remarkable specimen of aneurism in the museum of St. George's Hospital cured by detachment of clot.—Mr. WARRINGTON HAWARD gave particulars of a case of aneurism of the superior mesenteric artery that occurred in St. George's Hospital, under the care of Mr. Pollock. The patient, having been kept in bed one week, was placed under chloroform, and a Lister's tourniquet applied as high up as possible upon the abdominal aorta. The pulse became irregular and very feeble, and the breathing embarrassed; consequently, after a trial of two hours and ten minutes, during which the patient vomited several times, the chloroform was discontinued, and the tourniquet removed. The man recovered from the immediate effect of the pressure. Next day, however, blood appeared in the urine. On the following day, ether was given, and the pulse was good when the tourniquet was screwed down; the pulse then immediately became irregular and the respiration laboured; so that, after a trial of an hour and a quarter, the treatment had to be relinquished. Tight pressure was not again applied; modified pressure, however, was used four times daily for about an hour and a half each time, during the next six months. The tumour became smaller and more consolidated, though it still pulsated. No change then occurred for some time, and the patient left the hospital. The tumour slowly increased again. Iodide of potassium was given, but had to be left off, as iodism was produced. Rest in bed and good diet were tried; but the patient died suddenly. After death, an aneurism of the superior mesenteric artery was found, filled with a laminated clot, with a channel through it, by which the blood passed. The aorta was ruptured behind the aneurism. Mr. Haward thought there was great danger to some patients from the pressure of Lister's tourniquet upon the abdominal aorta.—Mr. BARWELL thought the pressure need not be kept up so long as fifty-two hours, as in Mr. Holt's case. Even if some pulsation returned upon removal of the tourniquet, yet that was frequently the case, and such pulsation often slowly subsided within the next day or two. (At Mr. Barwell's suggestion, it was decided that particulars of Mr. Holt's case and of Mr. Haward's case should be published in the Society's *Transactions*.)—Mr. WHEELHOUSE, in reply, said that manipulation had been tried at Leeds by Mr. Teale. Some cases were very successful; but the surgeons found there were dangers from embolism, and so the practice was discontinued. Mr. Teale once punctured a cyst in the neck, from which serum escaped, and, six months afterwards, the patient went into another provincial hospital, suffering from an aneurism of the carotid at the site of the cyst. The surgeons communicated with Mr. Teale, who went over to see the case, and was handling and examining the aneurism very closely, when the woman dropped dead at his feet. The aneurismal sac was the sac of the original cyst, into which the carotid artery had opened subsequently to Mr. Teale's puncture; a portion of clot was displaced by the manipulation, and was carried in the current of the

circulation to the brain. Since that event, the surgeons at Leeds had been chary of manipulating an aneurism; but, up to then, and even since, cases had been successfully treated by that method. Other cases had also been cured by rest and starvation; expectant treatment was tried where it seemed to promise success, and where no other treatment seemed to be better adapted. Respecting the degree of rapidity of the cure from pressure, the speaker mentioned that, in both aneurisms in his patient, the rapidity was great; could it be due to the syphilitic condition of the blood? Had syphilis any power to alter the composition of the blood, so as to increase its coagulability? Further, had syphilis anything to do with the production of aneurisms? The patient was no sooner rid of one aneurism than he had a second. Did syphilis cause degeneration of the artery? Mr. Wheelhouse believed it to be comparatively useless to try compression, unless the pulsation in the artery were entirely arrested. He would also be timid of placing a tourniquet above the point at which it was placed in his case, for fear of dangerously compressing the abdominal nerves and viscera.

Sarcomata of Both Iridides.—Mr. R. BRUDENELL CARTER read notes of a case; but, as the discussion was adjourned to the next meeting, for want of time, the report is also deferred.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, NOVEMBER 28TH, 1873.

JOHN DENHAM, M.D., President, in the Chair.

President's Address.—The PRESIDENT delivered an introductory address. He vindicated the practice of medicine and surgery from the charge of inconsistency often advanced by non-professional persons. Treatment should be adapted to the individual case. Thus, he had recently occasion to bleed a gentleman in apoplexy freely; as the blood flowed, the patient became conscious, sat up, and asked what brought him there. A perfect recovery followed. He believed that stimulants were becoming less necessary in treatment. No strict line of demarcation could be drawn between medicine and surgery; the one glided imperceptibly into the other. The President then touched upon the subjects of (1) treatment of aneurism by compression, the introduction of which belonged to the Irish school; (2) Lister's antiseptic method, and Mr. John Wood's remarks upon it at the recent meeting of the British Medical Association; and (3) the vexed question of anaesthetics. He also urged upon the profession the necessity of securing an increased influence of medicine in social life. He believed that medicine, like the bar and the church, should have public rewards for its illustrious followers—handsomely endowed chairs in various departments; and that the profession should seek for further parliamentary representation. In conclusion, he alluded, in kindly and touching terms, to the loss by death of two members—Dr. W. Barker and the Vice-President, Dr. R. W. Smith.

Lipoma of Head.—Dr. W. J. WHEELER showed a large specimen of this form of tumour, which he had successfully removed from the left antero-lateral portion of the head of a man, aged 75. The mass weighed nearly three pounds, and 100 parts contained 20.9 of water, 35.1 of albuminoid substances, 43.76 of oily and fatty bodies, and 0.25 of ash. It had been growing for thirty-five years.

Large Ovarian Cyst.—Mr. PORTER exhibited a large ovarian cyst, which he had that morning removed from an unmarried woman, aged 23, a patient in Dr. Foot's ward in the Meath Hospital. The tumour was first noticed on the right side of the abdomen fifteen months ago. Tapping had been performed on four occasions: first in December 1872, when 130 ounces of fluid were drawn off; then in July of this year (263 ounces); in September (308 ounces); and, lastly, in October (204 ounces). The patient did not lose an ounce of blood during the operation, and was rendered anaesthetic by methylene, which acted very well, except that it caused slight nausea. The quantity used by Mr. Spencer Wells's inhaler was seven drachms. At the time of the operation, the circumference at the level of the umbilicus was thirty-six inches, and the measurement from the pubes to the xiphoid cartilage was fourteen inches and a half. The cyst, which showed some adhesions on its anterior surface (apparently at the points of puncture) was unilocular and non-malignant, weighed, after removal and when empty, 1 lb. 15 oz., contained 210 ounces of fluid, and measured in circumference in one direction twenty-six, and in the other twenty-nine inches.

Lithotomy: Large Calculus.—Dr. CORLEY showed a pear-shaped calculus, two inches and a half long by two broad, and an inch and a half deep, weighing 3 oz. 7 drs. 8 grs., which he had removed by the lateral operation.

Disease of Knee-Joint.—Dr. WHEELER showed a specimen of granular degeneration of the cartilages, with ankylosis of the patella.

Treatment of Popliteal Aneurism by Position.—Mr. TUFNELL detailed a case of popliteal aneurism which was completely cured by position, mechanical rest, and judicious diet. A trooper, aged 36, had a tumour of the size of a hen's egg in the popliteal space. When he came into hospital, he was placed in the recumbent position, with the leg raised on a pillow, but not flexed. Evaporating lotions were applied, and (as the man's heart was naturally weak) merely the ordinary low diet of the hospital was given. In twelve days the aneurism was cured, and within a month the contents of the tumour were absorbed. Dr. Muschamp, under whose care the man was, wrote lately to say that he was perfectly well and had an active limb; but the calf of the affected leg was one inch smaller in circumference than that of the sound one.—Mr. TYRELL mentioned a case in which position alone failed, the application of the antiseptic ligature being followed by complete success.—Surgeon-Major MANIFOLD stated that cases were now being treated at Birmingham and elsewhere after the method recommended and described by Mr. Tufnell.—In replying, Mr. TUFNELL alluded to the dangers attendant on keeping the leg strongly flexed in these cases.

Apparatus for treating Fractured Patella.—Dr. W. J. WHEELER showed and described an apparatus for the treatment of this injury. He alluded to the various devices proposed by Sir A. Cooper, Malgaigne, Wood, and Butcher. The instrument consisted of a hollow wooden splint, $4\frac{1}{2}$ inches wide, and extending from about the middle of the thigh to the sole of the foot, at which point a foot-board was attached by a hinge. This splint, having two transverse bars, was fitted into a long box-splint, the sides of which were 40 inches long and 8 inches in depth, in which it travelled horizontally. That portion of the splint in which the limb rested could be elevated or depressed as required by perpendicular slots cut through the sides of the box-splint, so that the instrument could be adjusted to suit a long or short leg. The limb could be elevated or lowered at pleasure, and the foot placed at any angle. This hollow splint was fixed in position by means of thumb-screws, which fitted into the transverse bar before mentioned. Two semilunar pieces of metal softly padded were fixed one above the other, below the fractured patella, by means of leather straps which passed around the limb. The leg was secured to the splint by two broad web straps, round the calf and the ankle. The foot could be bandaged to the foot-board. A roller with rack adjustment was fitted in the box-splint, below the foot-board. From this roller started four cords which, passing through brass sheaves, were attached two to the upper and two to the lower metal pads by chains and light hooks. The roller was turned by means of a key, and acting on the cords, caused the metal pads simultaneously to approach each other, thereby bringing the fragments into apposition. The rack was covered by a brass box which could be locked, so that the adjustment of the splint could not be interfered with by the patient. This apparatus had all the advantages of Malgaigne's hooks without the objections. This splint provided for the position of the limb; Malgaigne made no such provision. This apparatus would obtain perfect coaptation of the fragments without penetrating the soft parts, without the pain and irritation frequently caused by the hooks, and without the dangers of erysipelatous inflammation. It was superior to Sir A. Cooper's method, by drawing on both fragments, and could make a well maintained traction on the lower as well as the upper (if necessary); and it was better than both the plans just mentioned, being able to exert greater or lesser force on each fragment as the case might require, or merely to fix the lower fragment. Tilting of the fragments was prevented by the direction of the traction. Dr. Wheeler believed the splint to be suitable for certain fractures of the thigh and fractures of the leg.—Dr. MORGAN spoke in favour of Malgaigne's hooks. He had had several cases, and they had all done well.—Dr. B. F. McDOWELL related the particulars of four cases which he had successfully treated with the hooks.—Dr. McDONNELL said that very recently he had observed serious inconvenience follow the use of Malgaigne's hooks.—Mr. STOKES thought that we should recognise as the cause of the tilting forward of the upper fragment, not muscular action, but effusion (he believed hæmorrhagic) into the joint. Apparatus therefore should not be applied until this effusion had greatly subsided. He commended the method suggested by Mr. Sanborn of America. Dr. Wheeler's splint resembled that of Schuh of Vienna.—Mr. FLEMING objected to Malgaigne's hooks, and so did Mr. PORTER, who spoke in high terms of praise of Mr. Wood's splint. He thought that Malgaigne's hooks were inadmissible in private practice. He had obtained very perfect apposition but had not secured true bony union of the fragments.—Mr. WHARTON had seen suppurative and disastrous consequences, if not death, follow the employment of the hooks.—Mr. E. HAMILTON dwelt upon the necessity for elevating the patient's body and foot.—Mr. TUFNELL mentioned a curious case. A lady fractured her patella on

three different occasions. Each time there was firm ligamentous union, and the fracture occurred in a different place, until at last the lady's knee-cap came to resemble a Venetian blind.—Mr. THORNEY STOKER said there was complete apposition in a case which had been detailed by Mr. Stokes.—Dr. WHEELER replied.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 27TH, 1873.

DR. ALFRED CARPENTER ON AREAS OF SANITARY ADMINISTRATION.

THE Committee of the Health Department of the Social Science Association did wisely to appoint Dr. Carpenter to open a discussion, at the late Norwich Congress, on "the most convenient and efficient areas for sanitary purposes"; for, with great experience in public health administration and in public business generally, and known for his originality of research, he was unconnected with most of the previous associated efforts in this direction. He had not given evidence before the Royal Sanitary Commission; he was not on the Joint Committee of the two Associations; and, though he had publicly submitted his views concerning the recent Act and its administration to Mr. Stansfeld, and had elicited a remarkable announcement of that minister's official policy, he might fairly be considered as independent of any party movement, unpledged by previous statements, and unbiassed by combinations.

Now that the temporary irregular arrangements of areas, authorities, and officers are nearly completed throughout the country, and as their abnormal character and unsatisfactory results are becoming daily more obvious, we hope that Dr. Carpenter's able effort to suggest "some definite plan by which local authorities should be advised to shape their course in future" may not have been made at too late a period. We thought, indeed, that the said Joint Committee had already proposed such a plan, though not, perhaps, with sufficient definiteness or consistency: but certain it is that this point is the very *desideratum* of inquiry which the Royal Sanitary Commission was specially appointed to supply, but on which they failed to make any recommendation, although directed by the Government to include in their inquiry and report "the formation of areas proper to be controlled by local authorities". Instead of performing this important part of their duty, which required, as the Joint Committee urged, the actual visitation and inspection of localities by assistant commissioners, they accepted (apparently to save trouble) the existing areas of unions, boroughs, and local board districts, which are generally unfit for sanitary purposes; and thus they fell into the present muddle of Urban, Rural, Port, and Conjoint Districts, without reference to another order of sanitary duties which are, or can only be, administered in counties.

Dr. Alfred Carpenter very properly begins with the foundation of any scientific organisation as a guide to the definition of areas. He says:

"It may fairly be expected that the health-officer shall be able to get on the trail of preventable disease—that he should put his foot down upon it as soon as it becomes manifest, and before it has the power to produce a general epidemic of either disease or panic. This is the theoretical design of the Act of 1872, and in many places it is thought to be working to that end. But in most instances there is a missing link in the chain, which prevents the working out of the theory in the manner indicated."

He shows that, wherever this primary discovery and announcement of disease is really carried into effect, it "has been brought about rather by the personal influence of the health-officer than by a law applying to all circumstances". The proper working of the Act ought not to depend on sufferance. "No supervision can be satisfactory which does not provide for the supply of this information"; and this ought to depend, according to Dr. Carpenter, not only on inspectors of nuisances—the bull-dogs of the sanitary proctor—but also on the whole practitioner body, and mainly upon the medical men who officially attend the poor.

These "already constitute a network of active agents ready and thoroughly competent to assist in the work . . . and their services must in every case be secured, so that a portion of the missing link may be provided". Why not, then, as he asks, appoint them at once as acting medical officers of health? (1) Because, as he shows, their districts are not the most convenient and useful areas for sanitary purposes; (2) because, attending in single cases, without any organised co-operation with other practitioners, in or out of office, no general conclusions can be drawn as to the extent or nature of an epidemic; (3) because they are rivals in practice of the other officers and practitioners, and therefore not very ready to admit the latter to share in their work; (4) because in populous and poor districts they are mostly the youngest and least experienced men in the profession—often new comers into the district and looking-out for practice—less likely, therefore, to command confidence or to lead concerted action. Dr. Carpenter does not urge—

"The difficulties that union surgeons might have to encounter in having to take proceedings against the men that are trying to conciliate, to whom they are looking for future preferment; but they are real difficulties nevertheless"—he says:

"To appoint, therefore, the union surgeons to be medical officers of health as a matter of course would be, as I have urged on a former occasion, similar to appointing the junior subaltern of a regiment, or the last newly joined officer, to take measures for the defence of a corps against a hidden and dangerous enemy. It is no reflection upon the sagacity of the subaltern to have the older and more experienced man placed in command, though it frequently happens that the former has often to do duty at the point of greatest danger. His services as a junior ought to be a necessary stepping-stone to the higher offices, and it ought to be a standing rule that no man should be appointed a medical officer of health who has not previously filled the subordinate post of union medical officer."

Dr. Carpenter, by way of illustration, supposes a district of 100,000 persons, containing five or six medical officers (oftener twenty) in which a dozen cases of fever arise, as lately in Marylebone.

"Each union medical officer may or may not be in attendance upon an isolated case, the rest being under the care of private practitioners. No inference can be drawn at all as to the important point of causation, for each man remains in ignorance of other cases even in his own area; but if all these cases are brought to the cognisance of one medical officer at once, who has nothing to do with their medical treatment, he will be able to get upon the trail of causation, and trace out the source of the disease much more certainly than the five or six unassociated medical officers, who will get very little evidence regarding causation from an isolated case, knowing nothing of cases in private practice until a death has occurred, and it becomes noted in the registrar's return."

We think that Dr. Carpenter's arguments against making the union officers the sole health-officers of their districts—arguments which have been repeatedly adduced by previous writers on the subject—are quite conclusive, as are also his reasons for employing them officially as subalterns. In estimating the extent of the most convenient, efficient, and possible areas, and taking the individual house as the unit of sanitary work and the basis of calculation—considering also the physical capabilities of the officer, and the chances of increased labour in times of prevalent disease—he concludes that a district "in which, under ordinary circumstances, forty or fifty deaths from all causes occur per week (and this at common rates of mortality means a population of from 90,000 to 120,000), the area occupying 35,000 or 40,000 acres", is as large as ought to be entrusted to the investigation of one man. Of course, with a smaller area the population might be larger. The union, he thinks, may be often a convenient area; but as frequently it is the reverse, and he objects to its being taken as the rule.

With regard to Boards of Guardians as authorities, he regrets, as many thoughtful persons do, "that any measures connected with general health should be placed in the hands of those who have had hitherto to deal only with the destitution of the country. A destitution administration elected for that purpose will never be a good health-administration". Destitution he considers to be fairly a local matter, and to be only locally relieved, while epidemic influences arising in one place may rapidly spread to another, and become of imperial moment. He thus proceeds:

"It is a serious error, therefore, to appoint those who believe their mission to be to check imposition and keep down the rates, to be the supervisors of sanitary work. It may be convenient for the present that the health-officer should be appointed by the Board of Guardians, because the law requires it; but in no case should this be done without consultation, and without agreement with those sanitary authorities who have nothing to do with the care of the poor, but whose area for Poor-law purposes is included within the jurisdiction of the Guardians. To have an *imperium in imperio* is a serious error, and it is to be urgently hoped that an enlightened public opinion will be used to prevent the scandal of a local board (having health jurisdiction within a Poor-law union) appointing a medical officer who is independent of and without any official communication with the Guardians of the poor, whose district in many cases entirely surrounds the local boards area. In the same way for a Board of Guardians so situated to appoint medical officers of health for the rest of the district without any agreement with the local board can only lead to a waste of money, and to mischievous, because inefficient, work."

Having stated fully his objections to the union area and the union authority, he recommends, as do all our best sanitarians, the county, as respects both area and authority. It is, as he says, convenient for division into proper areas, and in a great number of instances it has the advantage of natural boundaries.

Where unions have been carved out of two or more counties, he appears to recommend their being re-divided into sections, which might belong to other unions, whose boundaries are more natural; but he is not very clear on this point. We have no doubt whatever of the feasibility of the division of unions and their reconstruction in such cases—the portions being sometimes constituted distinct unions, and sometimes attached to other adjacent unions in the same county. The matter is already in the power of the Local Government Board; and practicable methods of effecting these changes have been frequently indicated both in and out of Parliament, while the supposed financial difficulties have been shown to be easily capable of adjustment.

We are glad to find that Dr. Carpenter does not insist on new areas bounded by watershed lines, for this would be "impracticable without the formation of an entirely new authority—a course of proceeding not likely to be entertained by Parliament". But, as he says:

"There is a county authority nearly as old as the county itself, upon which already devolves the duty of dealing with questions connected with health-administration—viz., the inquiries into the causes of violent deaths; the repression of crime; the care of pauper lunatics; contagious diseases among cattle; detection of adulteration of food; all matters having a health significance, which would be in general accordance with a care of the general health of the people."

"A county area divided into sections, having regard to present local boundaries when satisfactory, but also considering river basins as well as centres of population; each section to be supervised by a proper health-officer appointed by the county, and paid by the county, but responsible for the proper performance of his duties to the local authority, having intimate and official relationship with the union surgeon and the medical officers of public establishments, with the right to ask for information when required from private practitioners throughout the area supervised by him, would be the most convenient, as well as the most efficient, arrangement which can be devised against the unit of disease. It is convenient, and it is practicable."

One of the objections raised by our author to the present system of sanitary appointment in too limited areas is based on the analogy of the police force. Little, indeed, would be done in the detection and repression of crime were each police officer made independent of his fellows, and confined to particular limits. There can be no doubt of the vast importance of concerted action under commanding officers having special knowledge of the subject, and proper authority over their subordinates. Nor can it be questioned that the permissive plan of organisation has been tried long enough. Much of the principle of the legislation of 1848 which still remained permissive in the Act of 1872, will have to be made compulsory in the next Public Health Bill. We do not assent unreservedly to Dr. Carpenter's demand for a Minister of Public Health, distinct from the chief destitution authority: at least, for the present, such a change would be premature; but his plan for general inspection is substantially the same as that of our own Committee—

taking county areas for combination under a sufficient staff of inspectors, and for division into sanitary districts (whether unions or more natural divisions), as may best suit the sanitary exigencies of the localities; with health-officers appointed by county authorities, and giving their whole time to the duties of their office—the area for each to supervise being not larger than can be inspected periodically at reasonable intervals, beside “those special inspections which should always be made when there is evidence of disease which may spread”. We recommend the excellent arrangements for medical work under Dr. Robinson, in East Kent, recently noticed in this JOURNAL (p. 519).

Dr. Carpenter makes some very sensible remarks on the subordinate action of the inspectors of nuisances, on the advantage of full-sized ordnance maps of the district, on the reports of the health-officers, and especially on proper forms of return or certificate to be supplied both to union medical officers and to other practitioners, who should be legally entitled to moderate fees for filling them up. He protests “against the custom of demanding, gratis, information upon health matters from medical men, because they have hitherto acted on the principle that it is right to diminish the ravages of epidemic disease even at their own expense”.

As regards areas, we confess to being converts to Dr. Farr's great principle, that there should be one administrative division of the county for all local purposes—a sufficient number of administrative areas being wholly contained in each county, so as to bring them, like highway districts, under county authority. Mr. G. W. Hastings, though ably supporting, at Norwich, the recommendation of county areas, urges, we believe, the Petty Sessions division of the county as the best sanitary unit of management; and this might easily be made to correspond with the highway districts. But we hold to the more general opinion, that the statistical area (the registration district) furnished, as the parochial union, with its staff of medical officers, as well as of registrars, has the first claims to be considered—claims which have been allowed by the authors of the Public Health Act. But why should not a process of correction and mutual adjustment be at once set on foot by a good Boundary Commission, acting with the several county authorities? In this manner, surely, the existing diversity and complexity of territorial divisions for various administrative purposes might be removed, and the areas harmonised.

We congratulate Dr. Carpenter on having handled this subject more reasonably and practically than some recent writers and speakers, and we commend his paper to the consideration of the Joint Committee of the two Associations.

MR. FLOWER's friends have, we are glad to learn, received favourable accounts of his health.

THE Michigan University has matriculated eighty-eight female students for the current academical year, thirty-seven of whom are in the medical department.

THE death of Dr. Horace Basan has lately occurred under melancholy circumstances. He was suffering from pyelitis; and, his mind becoming unbalanced, he destroyed himself with prussic acid. The verdict was “temporary insanity”.

PROFESSOR OWEN's medical advisers find it necessary for his health, to relieve a troublesome bronchial affection, that he should take a short winter-refuge on the Nile; and he will shortly depart thither for a couple of months. Professor Owen is a privileged and favoured visitor of the Khedive.

A MILKMAN was recently fined £15 at Dublin for selling as milk a mixture of 90 per cent. of water and 10 per cent. of milk; the magistrate explaining that he had not imposed the full penalty of £20, because he wished to leave himself a margin of £5 to meet the case of any enterprising trader who might carry adulteration to a yet further pitch.

WE regret to learn that the *Archives of Scientific and Practical Medicine*, published in New York by Dr. Brown-Séquard, is to be discontinued, after a short life of one year.

MR. W. K. PARKER.

MR. W. K. PARKER, F.R.S., who has been appointed as Professor Flower's *locum tenens* during the term of that gentleman's absence in Egypt, is insufficiently known to the profession at large, although long since recognised amongst anatomists as one of the first European authorities on the comparative anatomy and development of the osseous system. We referred recently to some of Mr. Parker's most remarkable labours; but he has continued and enlarged his labours by an admirable series of papers read before the Royal Society and the Royal Microscopical Society, following out the same line of investigation. The whole of Mr. Parker's work has been done in the scanty leisure left by the labours of a general practice in the neighbourhood of Pimlico. The admirable scientific results which he has achieved must be a remarkable encouragement to others who have equal love of science and no greater opportunities of satisfying it.

THE LEARNED SOCIETIES AT BURLINGTON HOUSE.

THE members of the Royal Society and of the Chemical Society are beginning to cry out, not without reason, against the sufferings which they endure in their new rooms at Burlington House. So low are they, so ill-ventilated, and fiercely heated from above by the illuminating sunlights, that it is considered advisable for visitors to bring “a flask of cold water, a slaked-lime respirator, and an umbrella.” It is feared that, before the end of the session, more than one philosopher will be prostrated with “gas-stroke”.

SHERRY VERSUS HOCK.

IT will be observed from the second report on the chemical composition of wines, which we publish this week, that natural hock contains sulphate of potash in proportions not far inferior to sherry. A great deal has been made by some chemical experts of the presence of sulphate of potash in sherry, and to it has been ascribed deleterious properties, as well as the “bitter flavour” of dry sherry. In truth, however, considering how much fuller draughts of Rhine wine are taken, hock-drinkers seem to imbibe as much sulphate of potash as sherry-drinkers; and, as far as we are aware, they are no more the worse for it than Alderman Farebrother was really the worse for the strawberry at the bottom of his wineglass, although he was always disposed to blame the unoffending fruit more than the port wine. The quantitative analysis which will be found in the report may calm any apprehension which may have been caused by this chemical discovery. The mean of the total ash is not more than 0.4 per cent.

THE POLICE AND THE DRUNKARDS.

THE Melbourne authorities have solved for themselves some of the difficult questions arising between these two classes by issuing an official order to the police, that whenever they bring up an alleged lunatic who has become so through excessive drinking, “and whose lunacy may therefore pass away in a few days”, they are to procure his remand to gaol for such period as the magistrates may deem necessary for his recovery. This course, the *Australian Medical Journal* says, it has been considered necessary to adopt in consequence of the number of persons continually sent to the Yarra Bend, and the other hospitals for the insane, suffering only from delirium tremens, a condition, of necessity, not constituting eligibility for treatment in a lunatic asylum. There is no doubt such an opportunity of getting rid of drunkards is too frequently had recourse to, and that a good many persons are in this way sent to the asylum, who ought to go to prison. But, on the other hand, there are not a few cases of genuine dipsomania, which would be sure to be confounded in the common mass of ordinary drunkards. It is needless to say that a serious wrong would be done by sending a case of actual dipsomania to prison, instead of subjecting it to medical treatment, but it is just such a mistake as would be likely

to occur, if it were left to the discretion of the police to deal with any particular case. It is therefore of importance that the whole history and circumstances of every case should be gone into, and a medical certificate obtained, so as to enable a magistrate to avoid the serious error exceedingly possible to happen, of punishing a person for an offence when there may be every reason to subject him to the most considerate medical treatment. And until the Inebriate Asylum is fully established, there is nothing, in reality, but the ordinary lunatic asylum to which the dipsomaniac can properly be sent.

HARD ALE.

SOME light has been thrown in Glasgow upon the character of the villainous stuff often sold at beer-houses as cheap hard ale. Two samples which were examined were found to contain about two ounces of strong vinegar to the pint. The defendant's solicitor admitted the case, adding "it is no use tinkering with the matter: it is not table-beer at all, but a miserable drug which spoils in their hands". They had bought it of local brewers at ten shillings the half-hogshead: they refused to take back any of it; but, when they heard that proceedings had been commenced against the beershop-keeper, they gave him the consolation that "the sale would help to pay his fine". The penalty was modified on the understanding that "the horrible drug should be destroyed", and that the brewers should be brought before the court if possible. Presently, three hogsheads of this stuff were rolled out into the street and the bungs sprung in the presence of the populace; but while the "hard ale" ran down the kennels, sympathetic bystanders could not restrain their grief at the waste of what had the semblance of beer; and it seems probable that the *dura ilia* of the denizens of the Cowgate are rather agreeably tickled by the mixture of spoiled malt, vinegar, burnt sugar, salt, and water, which is there known as "hard ale."

THE POLLUTION OF RIVERS BY LEAD-MINING.

SPEAKING of the various forms of river pollution which are due to mining industries in this country, the Rivers Pollution Commissioners, in their recent report, which we have already noticed, state that lead mines cause the most serious injury to our streams, both on account of the essentially poisonous character of the ores themselves, and also from the elaborate treatment, involving the use of large volumes of water, which these ores require before they are ready for the market. The pollution, however, from lead-mining arises altogether from matters in suspension; indeed, as regards polluting matters in solution, the water used in the mines is frequently discharged in a condition of greater purity than it possessed before use. The lead ore raised from British mines is almost exclusively galena or sulphuret of lead, which is met with in lodes or veins, and at times also in masses or nests embedded in a crystalline matrix, and situated in the most ancient stratified rocks of the transition series. Both in the matrix and in the waste rock there is a varying proportion of lead ore, and when, after the ore stuff has been crushed, washed, worked through sieves, and allowed to deposit in settling-tanks, the waste material finds its way into the nearest water-course, it is carried down the rivers causing serious injury, for not only is the water rendered quite unfit for human consumption but the fish are destroyed, and it is a common complaint that no ducks or poultry can be kept near any stream so polluted. In the case of several mines, small quantities of carbonate of lead also appear in the waste materials, and, being a virulent poison, which is not capable of profitable extraction, its influence for harm is conspicuous. The land also in the vicinity of streams polluted by lead mines, suffers to a considerable extent, for, during times of flood, the mud of the streams is deposited over the river-side pastures, producing at times all but irreparable injury to the herbage, and actually poisoning cattle which may graze upon lands which have been recently flooded. The Clarach, a small river entering the sea to the north of Aberystwith, is said to have been formerly, at no distant date, free from mining pollutions, and whereas a careful examination of the subsoil—which was evidently

river deposit—one foot deep on its banks, failed to reveal any trace of poisonous metal, yet in the sand, upon the surface of an adjacent field in which seven bullocks are stated to have been poisoned early in 1871, no less than 1.36 per cent. of galena was found. The slimy matter, which is brought down these streams in flood time, further kills the plants whose roots have held the land together, and so renders the shores liable to abrasion, if not destruction, on the next occasion of high water. In a few instances in which the waste rubbish instead of being passed into the streams has been stored on the premises of the mines, advantage has resulted to the proprietors, because it has been found profitable to work it over again; and this consideration alone must do away with any hesitation which may have existed as to the absolute necessity for prohibiting this method of polluting running waters, on the ground of interference with a trade which has within recent years undergone considerable development.

IS COD-LIVER OIL MEDICINE OR FOOD?

THIS question is repeatedly arising, and receives opposite solutions. The *New York Commercial Advertiser* says: "A New York firm imported 2,700 gallons of cod-liver oil, and entered it as fish-oil, under the reciprocity treaty between England and the United States. It was claimed by the Custom House officials that cod-liver oil, when imported, was a medicinal preparation, subject to a duty of 30 per cent. *ad valorem*, and an additional duty of 10 per cent. under Section 6 of the Act of July 6th, 1862, making the total duties 960 dollars in gold. After eight years' delay, the attorney for the Government consented to a discontinuance under the rulings of the judge, though another suit is threatened."

THE CLINICAL SOCIETY.

MR. WHEELHOUSE of Leeds is to be congratulated on the large gathering of members which the reading of his careful and practical paper brought together last Friday week. The extremely satisfactory case reported, and the interesting remarks elicited from other speakers, (reported at page 758), show that a disease formerly considered almost incurable is being gradually rendered amenable to treatment by the improved art of the surgeon. Compression of the abdominal aorta for aneurisms of the iliac and femoral arteries must now be recognised not only as a perfectly justifiable measure, but as offering in many instances the best hope of cure. We hope at some future day to learn more fully the particulars of the cases of aneurism treated at Leeds by manipulation, in which the success would appear to have been more marked than has been elsewhere experienced in similar instances. An interesting discussion on some cases of aneurism treated by rest and restricted diet, by Mr. Tufnell of Dublin, will also be found in the report of the Royal Medical and Chirurgical Society in the present number.

PEPSINOMANIA.

WE learn, from a report in the *Chemist and Druggist*, that Dr. Schacht, a councillor and recently president of the Apotheker-Verein, lately read a paper on "Pepsine and Schering's Pepsine Essence." He showed that pepsine only dissolves albumen in presence of free acid, but that a given small quantity of pepsine will effect the solution of any given larger quantity of fibrine, on the same principle as a small quantity of sulphuric acid acting upon alcohol will continue to produce ether. Further, he showed that when the limits of its dissolving capacity are attained, yet by dilution with water and further addition of acid more solution will be effected. He also maintained that a stomach had never been found without pepsine, that the natural pepsine was never entirely destroyed by the process of digestion. From this he concluded that the administration of the artificially obtained product could only be a work of supererogation. It is evident, also, from these premises, that the value of a pepsine cannot be estimated by the quantity of fibrine which it will dissolve, but by the time it occupies in dissolving it. Dr. Schacht's experiments also went to prove that wine or alcohol were the worst possible vehicles for the adminis-

tration of pepsine. It was probable that the tannin of wine almost entirely hindered the catalytic action of the pepsine. Some experiments were shown to prove that it was much more effective if dissolved in water. Of course, in either case hydrochloric acid is necessary. Dr. Schacht chastised the "pepsinomania" in England, and referred to such preparations as Mr. Lorimer's sauce, which however was, he thought, preferable to the pepsine essences or wines. The speaker concluded that the administration of pepsine or any of its preparations was altogether unscientific, on the ground that no stomach had yet been observed in which the remedy was already absent.

THE LATE PROFESSOR AGASSIZ.

FROM the purely scientific standpoint, Professor Agassiz was a many-sided man. He was not one of that class of *savans* whose ideas are cramped by the restricted limits of special investigation. Like Edward Forbes, he worked in various directions, mastered the facts exhibited throughout various areas of research, and, what is still more noteworthy, put himself in sympathy with other scientific workers who occupied themselves with areas of investigation outside his own immediate field of action. In short, we have always looked upon Agassiz as a sort of enlarged Edward Forbes—wanting, however, in some of the peculiar attributes which characterised our genial English naturalist. In both there was displayed that far-reaching and accurate knowledge of natural-history data which results in the enunciation of useful generalisations. True, of late Forbes has been taken much to task respecting the erroneous conclusions he formed in regard to the presence of life at great depths of the sea; nevertheless, we are amongst the number of those who believe that, but for his prior researches in *Ægean* waters, neither the labours of Carpenter and Wyville Thompson, nor even those of Agassiz himself, would ever have had any existence. It is well known that these deep-sea and coast-line researches have revolutionised certain propositions in geology and biology which had hitherto been regarded as thoroughly trustworthy. We have alluded to these deep-sea and littoral investigations for two purposes—first, because Agassiz's explorations along the South Atlantic and Pacific shores were amongst the latest of his varied toils; and, secondly, because we desired to point to the true originator of these deep-sea researches. Furthermore, it has afforded us an opportunity of protesting against mere specialism in science and the narrow bigotry often resulting from it. Several of our daily contemporaries have pointed to Agassiz's *Studies of Glaciers* as constituting his greatest work, and as forming the book upon which his fame chiefly rested. Doubtless the volume referred to was one of his best productions, and will long retain its value as a standard work of reference, whilst at the same time it testifies to the author's love of his Alpine fatherland. Whatever may be Agassiz's merits as a glaciologist and geologist, we have always looked upon his early *Researches on Fossil Fishes* as amongst the most valuable of his writings. In this matter, we think, his merits have been somewhat under-estimated. As with Forbes in connexion with dredging operations and their results, so with Agassiz in respect of his palæontological labours. To our thinking, in either case, later researches have led to an undue depreciation of the doings of these remarkable men. Only those who can realise the comparatively profound ignorance which existed at the time Agassiz worked at fossil remains, are in a position to appreciate the high merit of his labours in this particular branch of natural history. It is not fair to judge of his earliest labours by the present state of our knowledge. For the sake of illustration, let us cite a single example. Take the case of *Staganolepis*, which was, we believe, described by Agassiz as a fossil fish of old red sandstone date; it has since received various names, being allied to, if not actually identical with, the *Leptopleuron* of Owen, the *Hyperodapedon* of Huxley, and the *Telerpeton* of Mantell. At all events, in the hands of these skilled investigators, Agassiz's fish turned out to be a reptile; whilst modern geologists almost unanimously recognise the yellow fossiliferous sandstones of Elgin and Ross, in which the remains of these reptilian creatures are found, as of Upper Triassic age. Here, therefore, is a great advance in palæontology, re-

sulting from the combined labours of many eminent men spread over a considerable lapse of time. These labours have led to the exposure of similar errors to the one just mentioned; and this is but a sample of others which may be detected in the early writings of Agassiz, as well as in those of some of our best living naturalists. We believe that the work on fossil fishes gave a great impulse to the study of palæontology, and we have often admired the beauty and accuracy of the illustrations. The author's previous account of the fishes collected by the celebrated Martius in Brazil formed a fitting prelude to his great work just mentioned; and it was, therefore, not at all surprising that in later years he longed to explore for himself the wonders of the rich Brazilian territory. At length, to Agassiz's great delight, the much desired opportunity occurred, chiefly through the munificence of a private individual, Mr. Thayer. The *Journey in Brasil* gives a condensed account of the astonishing wealth of the Fauna of that country; and those of us whom circumstances compel to labour at home, chiefly in the closet, may well envy the pursuer of those exhilarating out-of-door researches which, as Agassiz himself remarked, were "rich in permanent results for science". Without doubt, biological science in general, and zoological science in particular, have been advanced by this South American expedition; but, in this connexion, we must not forget the prior researches of Wallace and Bates. What, then, is the lesson which the illustrious Agassiz's life teaches us? Is the busy medical practitioner capable of deriving any comfort from such a record as this *savant* leaves behind him? The special prerogative of the man of science is the opening up of new truths; and, if possessed of a really cultured and lofty mind, he cannot remain insensible to the luxury afforded by the inrush of new and ever-widening ideas. His career may well be envied. The practitioner, however, has one advantage: his scene of action is not so varied. It is, indeed, often dull and prosaic—a mere daily routine of active duty. In the performance of this duty, however, the results of his labours are both immediate and practical. He does good to others, and obtains far more sympathy in his work than usually falls to the lot of men of science.

QUARANTINE AND CHOLERA.

THE discussion on Dr. Milroy's important paper on Quarantine, read at the last meeting of the Epidemiological Society, has been adjourned till the next meeting on Wednesday, January 4th. At that meeting, Inspector-General Dr. John Murray will give a paper on Dr. Cunningham's late Report on Cholera in North-Western India, lately reviewed in this JOURNAL under the title of "Retrograde Views on Cholera". As Dr. Milroy brings forward the question of quarantine chiefly in relation to epidemic cholera, the whole discussion will be on one subject. The matter is one of very general and actual interest, and members of the profession are invited to attend and take part in the discussion.

ST. MARK'S HOSPITAL.

IN the early part of this year (January 4th), we drew attention to the questionable way in which St. Mark's Hospital for Fistula was advertised in the daily newspapers as the only hospital existing for the relief of a painful and distressing form of disease. We then suggested that the terms in which the advertisement was couched were liable to be misunderstood by the public, and ought to be altered. We are sorry to observe that our advice has not been followed. The words, it is true, have been slightly changed; but the *suggestio falsi* of which we complained is as glaring as ever.

"St. Mark's Hospital for Fistula, etc., City Road, E.C.—This is the only hospital in England for the relief of diseases of the rectum, and the beds now open are quite inadequate to meet the applications for admission. Annual subscriptions are specially needed to increase the usefulness of this institution; etc."

It is upon a general conviction of the value and usefulness of a medical charity that its success must ultimately depend; but this is not the way to recommend a hospital to the good opinion either of the profession or of the public.

THE LATE MR. TURNER OF MANCHESTER.

FULL of honours and at the ripe age of eighty-one, Mr. Turner has passed quietly away, leaving many persons to regret him and to hold his memory in honour. The efforts of Mr. Turner in promoting provincial medical education form the main historic feature in his life: they are thus described by a local writer.

"The Royal School of Medicine and Surgery, heretofore in Pine Street, and which Mr. Turner has lived to see united to that noble academical establishment the Owens College, owes its first complete organisation to Mr. Turner. Fifty years ago, Mr. Turner and the late Mr. Jordan were regarded as rivals in the honourable ambition of promoting medical education. To Mr. Jordan belonged the high distinction of forming in Manchester the first provincial anatomical school. In 1814 he began a course of lectures on anatomy, and in 1817 his certificates were recognised by the London Royal College of Surgeons. In 1822 Mr. Turner delivered his first course of lectures, but in the latter part of the year 1824 he carried out his design of combining the exertions of individual teachers in Manchester in one complete system of medical instruction. The celebrated Dr. Dalton became the lecturer on chemistry at Mr. Turner's institution. Shortly after this, Mr. Jordan obtained similar co-operation from a number of his professional friends, and for many years the two schools existed side by side. Mr. Jordan retired from public teaching, after twenty years of labour, in 1834. Mr. Turner continued his services as lecturer at the school in Pine Street uninterruptedly till within the last three years. It would, therefore, be difficult, if not impossible, to apportion the greater share of merit in the exertions of these two lamented men; but Mr. Turner, coming later in the field, was in some respects the more successful, and his success was recognised in the year 1835 by King William's grant of a royal patent to the institution in Pine Street, as having been the first provincial school embracing instruction in the different branches of medical science. Aided by a succession of talented colleagues in the school, Mr. Turner had the satisfaction of seeing it maintain its acknowledged pre-eminence as the first and chief of similar institutions in England, the metropolis excepted."

Mr. Turner was a scientifically minded man, and became, in 1821, Secretary to the Manchester Natural History Society, and, in 1843, Honorary Professor of Physiology in the Manchester Royal Institution, where he lectured annually up to a year ago. He was a benevolent man—chief promoter of the Infant Deaf and Dumb School, of which he laid the foundation-stone in 1859; and of the Manchester and Salford Sanitary Association, of which he was always a most earnest supporter. What he was publicly, he was also professionally: scientific, earnest, charitable, and trustworthy. These qualities won for him wide respect and deserved success. As surgeon and afterwards consulting surgeon of the Manchester Infirmary, he commanded the confidence of his brethren and of the public, and held a leading position in practice. He was much known and highly esteemed in London and in other capitals; and will long be remembered as one of the provincial worthies who, by their influence and personal worth, have done much to bring provincial medicine and surgery into the position of prominence and equality which it now occupies in this country.

THE LATE DR. HENRY W. FULLER.

WE have to announce, with deep regret, the death, at the age of 53, of Dr. Fuller, Senior Physician of St. George's Hospital, whose serious illness we mentioned last week. Dr. Fuller was taken ill on Sunday, the 7th instant, with severe rigor, but on the following day managed to see his patients. He next had severe pain at the epigastrium, and at the lower border of the right side of the thorax, intermittent pulse, short cough, and a temperature of 102 deg. He had a second rigor on Thursday, followed by profuse perspiration; but on Friday was enabled to work at his book, his temperature being 100 deg. On Sunday, the 14th instant, the temperature rose again to 102 deg., after a rigor. On the following day he began to be lethargic; the conjunctivæ became congested, and he quickly sank into a comatose condition, in which he remained until his death, on Thursday, the 18th instant. A chronic abscess in the posterior mediastinum, and secondary pyæmic abscesses in the brain, were discovered after death. The case was one of much clinical interest; and we are promised the particulars for publication

next week by Dr. Dickinson and Mr. William Fuller. Dr. Fuller has for many years been in active and successful practice; and it is as an accomplished and successful practitioner that he is best described. Attached by hereditary interests to St. George's Hospital, where his father, the late Mr. Fuller of Piccadilly, was for many years visiting apothecary, Dr. Fuller received there his medical education, and identified himself early, by steady application, with the clinical work of the hospital. He was an industrious, intelligent, and active student. Having duly graduated as M.D. of Cambridge, he showed himself as well fitted for, as he was desirous of, the position of a medical officer of the hospital, and rose steadily through the regular gradations of office to the highest post of senior physician, which he reached comparatively early in life, and filled with conscientious assiduity. Dr. Fuller will be best remembered in medicine for his inquiry into the use of alkalies in rheumatism. He was an enthusiastic believer in their efficacy when used in sufficiently large doses, and was very successful in the application of his principles of treatment. Nor did the recent publications of those who were more sceptical suffice to shake his convictions. Dr. Fuller was a great friend to the Harveian Society of London, of which he was the treasurer, and largely contributed to its success by his steady loyalty and unflinching attention to its affairs. He was an excellent man of business, a good clinical physician, a firm friend, a successful practitioner, and a writer much esteemed by the profession. His early death cannot but be much deplored, and probably adds another to the long list of distinguished medical men who have fallen victims to the habit of overwork, with insufficient relaxation. Dr. Fuller was a Lumleian Lecturer at the College of Physicians in 1866, and author of treatises on Rheumatism and Gout, and on Diseases of the Heart and Lungs, which have gone through several editions.

THE SALE OF SPECIFICS.

THE intending adventurers in the "Inhalants Company" of Dr. Churchill may learn something from the history of the "Greathead specific" for diphtheria, for which £5,000 was solemnly asked from the Australian Legislature. When made known, the specific was, as we have stated before, four drops of dilute sulphuric acid, which kill the "millions of insects of which the diphtheritic exudation consists", and so cure the patient. The public in Australia are immensely grateful for this grand boon; "and for six weeks everybody with the slightest suspicion of sore-throat has been swallowing the four drops of sulphuric acid, and blessing Greathead for his inspired discovery."

BRONCHIAL ASTHMA.

WITH regard to the interesting question which has lately been discussed between Dr. Berkart and Dr. Thorowgood in these columns M. Paul Bert has lately written to Dr. Berkart as follows.

"You have very exactly interpreted my words. I meant to convey that excitation of any of those nerves, even of the pneumogastric, produces much more easily the phasis of expiration—i. e., the relaxation of the inspiratory muscles—than the phasis of inspiration. Arrest of respiration is as easily obtained during inspiration as during expiration; and it happens much more frequently that we see the inspiratory muscles become relaxed, than to enter into a persistent tetanic contraction."

THE MEDICAL COUNCIL.

DR. RAWDON MACNAMARA, Professor of Materia Medica in, and ex-President of, the Royal College of Surgeons in Ireland, and Surgeon to the Meath Hospital, has been appointed the representative of the Royal College of Surgeons in Ireland upon the General Medical Council of Education and Registration of the United Kingdom. Dr. Macnamara has been for many years identified with the best interests of the College of Surgeons of Ireland, of which he has repeatedly been the champion and spokesman. On these occasions he has shown conspicuous ability and public spirit: he is thoroughly conversant with the whole question of medical education and medical reform, and is widely and deservedly popular on both sides of the Atlantic. The Irish College of Surgeons could not have selected a more worthy representative.

REPORT ON THE COMPOSITION OF WINE.

II.—SHERRY.

In the recent discussions on the sherry of commerce, it has been said that sherry is deleterious, inasmuch as the tartrate of potash, which is naturally present in the grape, and which should be retained by the wine, has been converted into sulphate by the action of the sulphate of lime in the operation of plastering, to which sherry is subjected. It has furthermore been hinted that the consumer of sherry runs the risk of being poisoned with sulphate of potash. It is true enough that the ash of sherry consists in great part of sulphate of potash; but if a calculation be made it will be seen that, after all, the dose of sulphate actually taken by the sherry-drinker must be small. The average ash of sherry is about 0.4 per cent. In eleven sherries of very various kinds, including very cheap and very dear wine, the mean ash was found to be 0.39 per cent., the extremes being 0.28 and 0.54 per cent. Assuming the entire ash to be sulphate of potash, and taking 0.4 per cent. as the amount of the ash, it follows that a pound of sherry contains 28 grains of sulphate of potash. The ordinary consumer of sherry cannot, therefore, run much risk of being poisoned with sulphate of potash, for that salt is not a very active medicinal agent. Moreover, on extending our investigations to the ash of Rhine wine, which is said not to share this disadvantage with sherry, we found that the ash of that wine was loaded with sulphates, just like the ash of sherry. It is quite true that the total ash of Rhine wine is smaller than that of sherry; but larger quantities of Rhine wine than sherry are taken, and thus the dose of sulphate of potash which is taken becomes much the same in both instances. The bitter taste of dry sherry has also been ascribed to sulphate of potash. This does not appear to be correct, and the bitterness is most probably due to some constituent of the organic extract.

There is, as is well known, some considerable degree of variation in the alcoholic strength of sherry. A sample, said to be "natural sherry", which I have recently examined, contained 13 per cent. of absolute alcohol, and yielded the following results on analysis, in 100 parts by weight:

Water	...	...	...	...	...	84.48
Alcohol	...	...	...	...	...	13.00
Non-volatile residue (including ash)	...	...	...	...	...	2.52
Total	...	...	...	...	...	100.00

Common sherry is, however, richer in alcohol than the above. Thus in a sample I have found 17.5 per cent. by weight of absolute alcohol. The alcoholic strength of wines is often given by volume instead of by weight; and, since alcohol is lighter than water, whilst the wine is almost of the same specific gravity as water, that mode of representation shows higher figures than the above, and the 17.5 per cent. by weight would become about 22 per cent. by volume. Ordinary sherry derives part of its alcohol from brandy added to the wine after the natural fermentation is over; and that being so, it will be perceived that the drinking of sherry is very much like the drinking of spirits.

The following are some additional determinations of the percentages of organic extract and ash in sherries.

	Fixed Organic Matter.	Mineral Matter, or Ash.
Pale Sherry, dry, at 30s. per doz.	0.98	0.38
Fine Manzanilla, 48s. per doz.	1.22	0.42
Very fine old Amontillado, at 63s. per doz.	1.56	0.44
Ordinary medium quality, 43s. per doz.	2.66	0.40

J. ALFRED WANKLYN.

TESTIMONIAL.—A testimonial address, with a valuable timepiece and silver salver, have been presented to Mr. Thomas Roberts by professional friends and patients at Ashley, which place he is leaving after twenty-three years' residence, to reside at Twyford, near Winchester.

FERRIER'S EXPERIMENTAL RESEARCHES IN CEREBRAL PHYSIOLOGY AND PATHOLOGY.

The first note of these researches, now attracting deservedly the attention of the physiologists of all countries, was published in these pages. Since then, Dr. Ferrier has published an extended account of his experiments up to a given date in the West Riding Asylum Reports.* We avail ourselves of an abstract prepared by the author for Professor Humphry's *Journal of Anatomy*, and for further information refer to the volume of Reports, which is one of great interest.

The paper contains the chief results of a research commenced with a view to test the accuracy of the views entertained by Dr. Hughlings Jackson on the pathology of Epilepsy and Chorea. As is well known, Dr. Jackson regards localised and unilateral epilepsies as depending on irritating or discharging lesions of the convolutions about the corpus striatum. In order to put this theory to the proof, the author determined to expose the brain in various animals, and apply irritation to the surface. The method of irritation was suggested by the experiments of Fritsch and Hitzig, who had shown that contractions of definite groups of muscles could be caused in dogs by passing galvanic currents through certain portions of the anterior regions of the brain. The progress of the research ultimately led to the endeavour to establish the localisation of cerebral function, not merely as regards motion, but also as regards sensation and the other faculties of mind.

The paper in the West Riding Reports gives the result of experiments on rabbits, cats, and dogs, and is confessedly only a preliminary instalment of a more extended research.

Since this paper was written, the author has been engaged in the further prosecution of his inquiries; and, at the British Association at Bradford, on September 19th, he gave an account of his more recent researches, at the same time entering more fully into the psychological explanation of many of the phenomena which are partly described in the published account. He has performed experiments on numerous monkeys as well as other animals, but reserves a complete account of his researches for the Royal Society.

The method of experimentation which the author has adopted is to place the animal under chloroform, and gradually expose the surface of the brain by successive trepannings and removal of the skull by means of the bone-forceps. In this way he has been able to expose the whole hemisphere. After removal of the dura mater, the points of blunted electrodes in connection with Du Bois Reymond's induction coil are applied to the surface of the brain, without injury to the cortical substance.

The first experiments recorded have special reference to the production of epileptic convulsions; and the mode in which the attacks begin, and the march of the convulsive spasms, are accurately recorded. It was found that in rabbits, cats, and dogs, the application of the electrodes for a few seconds induced almost immediately, on some occasions after the lapse of a distinct interval, violent unilateral epileptic convulsions. When the electrodes were applied, one at the anterior, and the other at the posterior part of the hemisphere, the convulsions were complete and violent in the whole of the opposite side of the body. As a rule, they commenced in the face, spread to the neck and upper extremity, and then invaded the hind-leg and tail. Dilatation of the pupil, clonic spasms of the jaws, foaming at the mouth, and loss of consciousness, were induced when the fits were at their greatest intensity. Occasionally the spasmodic convulsions remained localised in one or other limb, or in some one muscle or group of muscles, and frequently, instead of a hasty epileptic attack, a series of choreic twitches alone were manifested, without any affection of sensibility or consciousness.

The march of the spasms is shown to be quite in accordance with the clinical observations of Dr. Hughlings Jackson in cases of unilateral epilepsy in man. Peculiar variations in the mode in which the attacks commenced, depending apparently on the position of the electrodes on the surface of the brain, led the author to approximate the electrodes and to apply very limited irritation, in order to discover whether the convulsive spasms were not due to over-violent irritation of localised centres in the brain, whose special function is to govern and direct the action of these muscles, for definite purposes, possibly such as might indicate volition and intelligence. The results were such as to indicate, with a beautiful degree of exactitude, the localisation in certain definite and easily defined regions, the cerebral centres for various apparently purposive combined movements of the muscles of the limbs, as well as of

* West Riding Lunatic Asylum Medical Reports, vol. iii, 1873. Smith, Elder, and Co.

the tail, the facial muscles, and the muscles of the jaws and tongue. These are all situated in the anterior parts of the brain in advance of the fissure of Sylvius, and the individual centres are marked off in the various external convolutions, of which woodcuts are given. The general plan is, that in the superior external convolution, anterior and posterior to the crucial sulcus, the various movements of the paws, legs, and tail are centralised, and it is shown that the differentiation of these centres is to a great extent characteristic of the animal's habits; the centre from the fore-paw in cats being much more highly differentiated than in dogs and rabbits.

The middle external convolution governs the movements of the eyelids, face, and eyes, while the inferior and the Sylvian govern various movements of the whiskers, angle of the mouth, depressors of the lower jaw, and tongue.

In the convolutions posterior to the fissure of Sylvius, certain movements are described as resulting from irritation, viz. of the ears, eyes, etc. In the paper as yet published no attempt is made to explain the signification of these; but the author, from his later experiments, indicated at the Meeting of the British Association that he had been able to obtain indications of the situation in these regions of the centres of special sense, sight, hearing, and smell. These results and conclusions, are however not as yet detailed fully. The author indicates, in a note in the paper published in the West Riding Reports, that he had at that time explored the brain of the monkey, and satisfactorily localised the regions and the homologues of the centres already discovered in the brains of the cat, rabbit, and dog.

One of the more important conclusions drawn from the experiments is, that the region which governs the movements of the mouth and tongue in cats and dogs is the homologue of what is known as Broca's convolution in man, viz. the posterior part of the inferior frontal. This, it may be stated, is further borne out by experiments on monkeys.

The pathology of Aphasia is thus rendered comparatively simple. The memory of words is situated in that part of the brain which governs the movements of articulation. It is shown, however, by the experiments, that the brain is symmetrical, and that the corresponding part of each hemisphere produces exactly the same effect on opposite sides of the body. Generally the action is unilateral and crossed, but as regards the mouth the action is almost bilateral, and hence disease of one or other side alone does not cause paralysis of the articulating muscles, because the other side is able to govern as before. The occurrence of loss of speech with lesion of the left side is attributed to the fact that most people are left-brained, and that therefore a lesion of the left side causes such an interference with the voluntary recalling of words that the person is speechless, not because memory of words is utterly lost, as this exists in the undamaged side, but because he is unable to lay hold of the word which he wishes to express. With the education of the other side, however, the individual recovers the power of speech. During the interval of recovery of speech only automatic expressions or interjections are uttered, which are evoked by a sort of reflex action, and unconnected with volition. Among other points discussed is the hypothesis advanced by Dr. Broadbent, that associated movements of the body are bilaterally co-ordinated in each hemisphere. The author thinks the experiments which he gives indicate not an anatomical but a physiological co-ordination through the media of the lower ganglia.

The results of the experiments in the corpora striata, optic thalami, corpora quadrigemina, and cerebellum, are also detailed. The corpora striata are shown to be motor in function, and to govern all the muscles of the opposite side; representing all the muscles directed by the hemispheres, and having a physiological subordination to these as higher centres.

The optic thalami are shown to have no motor function, and the author attributes the interference with motion, which is sometimes described in connection with disease of these ganglia, to affection of the motor strands with which they are in close relation.

The corpora quadrigemina have a special relation to the eyes and also to the extensor muscles. Irritation of the nates causes great dilatation of the pupils. The action is crossed, but powerful irritation easily acts on both sides of the body. Trismus and opisthotonus are induced when these ganglia are powerfully stimulated.

The cerebellum is shown to have a function, which has never been allotted to it, viz. to be a co-ordinating centre for the muscles of the eyeballs. The author has only given the results of his experiments on the cerebellum of rabbits, but he has since extended and confirmed them in cats, dogs, and monkeys. The various lobules of the rabbit's cerebellum are shown to have the power of directing the eyes in certain definite directions. These cerebellar oculo-motorial centres are brought into relation with the cerebellum as a coordinating centre for the muscles concerned in the maintenance of the equilibrium, and these functions are indicated as mutually depending on each other.

A more complete exposition of the facts of experiment, and an account of the results obtained from a further investigation of the brains of the various classes of the Vertebrata, is in process of publication.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Treatment of Typhoid Fever.

To give a practical illustration of his teaching, M. Béhier selected for his opening lecture one of the commonest affections to be met with in France. So common is it that, during his whole practice, extending over thirty-six years, he had never passed a day without seeing a case in or out of hospital. This affection, he said, was typhoid fever, which is just now almost epidemic in Paris. Several cases are in the Professor's ward, and M. Béhier took occasion to give a series of practical lectures on the subject, which he did in a most masterly manner. In these lectures, he merely touched upon the state of the pulse and the temperature of the body, and the correlation of the latter with the progress of the malady, its diagnosis and prognosis as deduced from the thermometer, and the principles of treatment based upon certain indications. The thermometer, he said, was a most useful guide in these cases; and, although the temperature in typhoid fever used to be measured by the hand, it is evident that this cannot be much depended upon, as the sensation of heat and cold must vary according to circumstances over which the physician can have no control. With the thermometer the temperature is ascertained with such precision, that he would venture to say that, with this instrument alone, he would be able to diagnose typhoid fever from any other affection. M. Béhier urged upon his hearers the importance of taking thermometrical observations, and did justice to the advance made by the Germans in this respect, although the idea had, really and long ago, originated with the French. He referred to the works of Wunderlich and others, of which he made a digest, and so simplified the subject that the student may, with the aid of a few tables, see at a glance the variations of temperature, and distinguish the affections that are likely to be confounded with typhoid fever. M. Béhier further pointed out the steady rise and fall of the temperature of the body in typhoid fever, which are almost invariable. Generally speaking, the heat is less in the morning than it is in the evening; but, although this regularity is looked upon as classical, yet he has met with exceptions to the rule, and only lately he had two cases of typhoid fever in his ward in which the contrary was observed—that is to say, the temperature was higher in the morning than it was in the evening. This he termed "inversion of the fever;" but what is most remarkable was, these two patients recovered under the same treatment adopted with the regular cases.

This treatment consists of hydrotherapy and alcohol, which, with certain exceptions, M. Béhier employs indiscriminately in all cases of typhoid fever. He avers that he is an enemy to uniformity of treatment in any affection; but, as he has found nothing better than the above in typhoid fever, he feels himself justified in continuing the practice, much to the dismay of the patients, who are unaccustomed to this system of treatment, and of French physicians in general, who look upon it as cruel and irrational. He then went on to explain the *rationale* of the above treatment, which, he said, was refrigerant in the true sense of the word; and, although he would not push the cold baths to the extent of the German doctor (Brand) of Stettin, who administered, on an average, six or eight baths a day to his typhoid patients, yet he thought that one a day, or one in two days, as practised by some physicians, was simply absurd. M. Béhier prescribes three baths a day, at a temperature of 68 degs. Fahr., in which the patient remains fifteen or twenty minutes at a time. Dr. Brand, with the exception of intestinal perforation, admits of no contra-indication in any condition of age or sex for the employment of the cold bath in this affection; but M. Béhier is a little more prudent, and to intestinal perforation he would add old age, pregnancy, menstruation, as conditions in which it would be unsafe to employ the cold bath. In every other case, however, without distinction of age or sex, M. Béhier has recourse to this heroic remedy in typhoid fever, even in pulmonary complications; and, although he does not go so far as the German physician as to look upon it as a specific in this affection, yet it has proved almost infallible in his hands. As for the alcoholic part of the treatment, he stated that he would not stop to inquire whether the alcohol acted as food or as medicine, as this much-vexed question is far from being settled; but, from his own clinical experience, he has found it an in-

valuable remedy in typhoid fever and in all inflammatory affections, whether acute or chronic. In typhoid fever, he prescribes eighty grammes (about two and a half ounces) a day of brandy, with an equal quantity of water, which is administered in divided doses in the twenty-four hours. This, in the Paris hospitals, is called Todd's mixture, and was first introduced by M. Béhier into French practice.

Professor Sée, however, is not so enthusiastic as to the curative powers of cold baths and alcohol in typhoid fever; he employs both with great reserve, contenting himself with an occasional cold bath, or sponging the body of the patient with vinegar and water, and, instead of brandy, he prescribes wine and water, administering, at the same time, small and repeated doses of quinine. In a lecture lately on the cold water treatment of typhoid fever, he severely criticised the observations of Dr. Brand, and even questioned the veracity of his statements, as reported by Dr. Frantz Glénard, a French physician, who was in captivity at Stettin during the war. Dr. Glénard states that, during his six months' captivity, he assisted Dr. Brand in carrying out his treatment among the French prisoners, and that, out of 170 cases treated after Brand's method, there was not a single casualty. This is what astounded Professor Sée, and the result, he said, was so extraordinary, that he looked upon the report as simple fiction. Even Dr. Brand's own countrymen received these statements with suspicion, and he was branded as a mountebank. Since his return from captivity, Dr. Glénard has had occasion to test this method himself in France, and, after the results of thirteen cases of typhoid fever confided to his care, and treated with cold baths, he states he has been enabled to verify the conclusion of Dr. Brand, "that all cases of typhoid fever, treated regularly from the commencement with cold water, will be exempted from complications, and be most certainly cured". Dr. Glénard states, however, that the few fatal cases he had observed were due to the application of the treatment when the disease was far advanced; and, although he looks upon it as a barbarous method, yet, with Dr. Brand, he considers it a specific in typhoid fever. Professor Sée, however, is not of that opinion, and states that there is no specific for this or any other affection, and anyone who pretends to have found one is labouring under a delusion, for there is no method of treatment that can be applied to all cases indiscriminately, and, in the present state of our knowledge, we must be content with the science of indications.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Health of the Town.—Conference on the Abuse of Hospitals.—The General Hospital.—Galvano-Therapeutics.—The Queen's Hospital.—Surgical Cases.—The Tea Adulteration Case.

The health of the town is not good: there is more than the average proportion of enteric fever, scarlatina, and diphtheria; whilst the number of new variola cases went up suddenly last week to 42 (3 unvaccinated), and the deaths from variola alone to 6 (2 unvaccinated). The returns of new cases for the current week give 25. The Registrar-General's return of the town mortality is 26, being only one, or perhaps two, above the average. These figures must be taken as but doubtful evidence of the average amount of illness in towns, though often quoted by town councillors and others as the most trustworthy.

The adjourned conference on the question of abuse of medical charities was held lately. Those present included able men from each charity committee, but not one medical man, possibly because the circumstances rather than the illnesses of applicants form the prominent point. The question of the existence of the abuse is now taken for granted; and the result of several committee meetings was embodied in the following recommendations: 1. To constitute a central committee; 2. To report all applications for hospital relief to it for registration, and for inquiry if necessary: pending inquiry, all cases to be treated as at present; 3. That in all cases which appear unfit objects of charity, details be returned to the hospital concerned, which is itself then to decide whether to continue relief or not; 4. The cost, estimated at £600 *per annum*, to be borne *pro rata*. The principal difference of opinion was as to whether the said committee should have power to decide the question of fitness, or, after inquiry, refer back to the hospital; if the latter, was not £600 too much to pay for such results? Ultimately the meeting adjourned for conference with the respective managing committees. The difficulty in this as in various other hospital questions lies chiefly in having to deal with privileged "ticket" institutions.

In going round the wards of the General Hospital with Dr. Russell,

we observed a child convalescent from severe chorea. The malady had improved under chloral and bromides, but left the child with marked inco-ordination of the limbs. After the case had remained stationary for some days, the interrupted battery current was applied to the lower spine and legs with marked immediate improvement. The arms did not improve at the same time, but later on, also after galvanisation to them and upper spine. In a case of "localised chorea" (occasional contractions of the pectoralis muscle), and also in a case of hysterical fit, the interrupted current was used purposely as a painful remedy. A case of atrophied shoulder-muscles in a blacksmith was recovering well under the same current. A characteristic case of facial palsy was also under treatment. To Dr. Russell is largely due the attention now given to galvanism at the hospital, and the well-fitted room the staff now have at command, with 100 cells of Daniel (Elliott), a single and double Stöhrer, several of Meyers's smaller batteries, and all appliances.

The state of matters in this respect at the Queen's Hospital is not yet so far advanced, but the subject is by no means neglected; in fact, five years ago they arranged and worked with a continuous current from a chloride of sodium battery—zinc plates packed in carbon and soaking in a strong saline solution. This form has several advantages, and good things were hoped from it, but it has not proved sufficiently constant or permanent, and the mechanical troubles of cleaning, etc., is more even than the average. Mayer's battery of twenty cells represents at present the galvanic arrangements, and some good results have been obtained in relieving neuralgia; but more completeness in the apparatus is much to be desired, and soon, we hope, to be gained, amongst the many other improvements. At this hospital we have observed recently the following interesting surgical cases. A man, aged 20, had caries in the knee-joint of three years' duration. Mr. West excised it, adopting a "horse-shoe" incision, and dressed with splint of gutta-percha and sheet-lead at the back, and a "bracketed" splint in front. The patient is doing well. A similar case occurred in a woman aged 35, who had been under treatment by rest and extension for six months without improvement. Excision was performed by Mr. Gamgee, who made use of Esmarch's method of bandaging. Not more than a teaspoonful of blood was lost during the operation, and what little flow occurred on removal of the bands was easily stopped by torsion and ligature. At an interesting discussion on the subject at the Branch meeting, it was agreed that this case was a great success, though in a patient advanced in years the plan would evidently be hazardous. Mr. Furneaux Jordan removed a calculus two inches by one from an adult woman through the meatus with a pair of lithotomy forceps. The patient retained urine for four hours after the operation, and then it passed freely. Ten days afterwards, she left well.

Side by side with the Liverpool butter case and the London bread, we have had a great Birmingham tea case, illustrative of the working of the Adulteration Act. Eight summonses were issued at the same time against dealers for selling tea adulterated with iron and sand. It was not maintained that they wilfully added these, but allowed that they sold as received; yet that point was not admitted as a defence. They were held liable for the genuineness of what they sold, whether they made it or not; and this seems, and justly so, to be accepted now everywhere. The chemical evidence for the prosecution, supported by Dr. Hassall and Dr. Brown, affirmed the presence of iron filings but afterwards partially accepted evidence offered for the defence, that the iron was magnetic oxide. When, however, the defence further argued that both iron and sand were blown on the leaves while growing, or taken up in process of drying, the stipendiary declined to agree, remarking "that if the soil of China were so very rich in iron, it would pay to import it for smelting". Whether it was iron, or iron ore, or oxide, it was equally adulteration. Another point which the defence fairly argued was, that fresh items of adulteration should not be charged in addition to those mentioned in the analysts' first certificate—*e.g.*, plumbago and "lie" tea in addition to the sand and filings—but in this matter also the Bench decided against them. Of the eight cases, one prosecution was withdrawn, "because the adulteration was slight"; the other seven were fined each one pound and costs, excluding those of some of the experts, to be defrayed by the borough. The cases have excited much interest, and may possibly yet be taken to a higher court.

An important and several times deferred meeting of governors of the General Hospital was held last week, and certain alterations in the laws were carried, with a few dissentients. These alterations are partly of a business, partly of a professional character. The former include a re-arrangement of the boards and committees, of the financial year, etc.; the latter introduce a limit of age in the tenure of office (65), and also equality as to beds, titles, etc., amongst all members of the staff. This important change well illustrates the tendency of professional as well as of political feeling in this town—*viz.*, to do away with factitious disabilities. I venture to say that in this respect we are more liberal

than our London brethren. We hold that if a man be fit and able to do out-patient work, he is fit and able for in-patients also, and should be credited as such. We have long since abolished the title of "assistant" surgeon, have practically discarded the names "senior" and "junior", and have thrown open all appointments to fair and free competition. Let names and opportunities be equal and given honourable character; let ability and honest work be the test between men, and have a fair field and a fair reward—*Honor cui debetur*. The numbers of the staff are fixed as five physicians and five surgeons; that they retain seats on the managing Board, has been recorded by anticipation in the JOURNAL. Mr. Jolly being the fifth surgeon, now takes his share of beds. A vacancy for a fifth physician will be again declared—to be a Member or Fellow of the London College of Physicians is imperative for this appointment. Whether to insist on this or not, we observe, is a question now under discussion at the Manchester Infirmary.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

Small-pox.—A New Medical Society.—The Glasgow Medical Journal.

ALTHOUGH there has not been of late, in Glasgow, an occurrence of small-pox to such an extent as in some of our other large cities, still the disease seems to linger and recur in our midst longer than is at all agreeable. During the last three years, small-pox has been more or less continually present in the city, and of late it has been particularly prevalent in some of the neighbouring towns, in Greenock especially; and now again, in Glasgow, we have such an increase, as to awaken attention, if it be not sufficient to cause serious alarm. At the end of last week, there were 149 cases reported in the city, and of these 145 were under treatment in the City Fever Hospital. We believe that this is the largest number of cases of small-pox that has ever been admitted to this hospital; but the fact, that it is only five under the total number of cases in the city, seems to show that there is a thorough system of inspection and seclusion of the cases which occur, and gives very good hope that the epidemic will be kept under. It may be remarked that, though these numbers are comparatively large, yet, considering the size of the city, there seems no ground for apprehension of a serious outbreak of the disease.

Within the last few weeks, a society has been begun in Glasgow, which shows signs of very remarkable vigour. The society is, we understand, named the "Pathological and Clinical Society," and its object is to give its members the opportunity of bringing forward cases and facts of interest which may occur to them. The society has had quite a private origin, and it is proposed that it should be entirely composed of working members, who are each of them expected to contribute one case to the society each session. Each communication is to be based on something shown, if it were only a drawing or a table, and by this means it is hoped that the subjects brought before the society will be limited to such as have come under the actual observation of the respective members. From the name of the society, it will be seen that it is intended to include two classes of subjects, pathological and clinical; but in each class there is always to be direct reference, in the various communications, to cases brought forward. The society has, in the meantime, obtained the use of the rooms belonging to the University Lying-in Hospital, kindly placed at their disposal by Dr. Leishman. Its numbers are small, and we understand that it is one of the propositions of its founders that they should remain so, as it is felt that, in order for a society to be a working one, it is necessary that its membership should be limited. We are informed that, at a recent meeting, the following were elected office-bearers:—President, Dr. W. T. Gairdner; Vice-president, Dr. Joseph Coats. The meetings hitherto have been singularly successful, and it is to be hoped that the society may have a long life and prosperity.

We observe that your local contemporary, the *Glasgow Medical Journal* has altered its date of publication. Formerly, the volume began in November, and, of the four quarterly parts, one was in a different year from the other three. It was felt that this was a considerable inconvenience for reference, and that the beginning of the year was a more appropriate time for commencing a new volume. Accordingly, it was recently resolved to postpone the publication of the November number till January, and to issue the four parts at the beginning of the four quarters. This arrangement may lead to some little confusion

and disappointment at first, but we feel sure that it will ultimately be a great improvement. We learn that Dr. J. B. Russell, who has ably conducted the journal during the last five years, has consented, after some pressure, to continue the editorship.

CORRESPONDENCE.

NEW TREATMENT OF ANEURISM.

SIR,—In reference to a paragraph with the above heading in your last number, which gives a short account of Mr. Bryant's recent repetition of the operation practised by Dr. Levis of Philadelphia, would you allow me to remark that you are in error (as far as our present information extends) in saying that Dr. Levis's experiment was "tried with success"? Up to the present time, Dr. Levis has not claimed any success in his operation, the details of which have been very carefully and very candidly laid before the profession in some papers which I have abstracted in the *London Medical Record* for December 17th. Reference to this paper will show that, up to the latest accounts that have reached us, although the patient was progressing favourably in many respects, he was very far from being cured. The impaction of a large mass of horse-hair in the sac had, it is true, suppressed the pulsation of the tumour, and obliterated the pulse in the axillary artery and the other lower vessels; but this is a very different thing from curing the aneurism, and Dr. Levis is too good a surgeon to confound the two things. Therefore, he did not claim a cure, of which, up to that time, there was no proof.

In the present day, we are rather too apt (if I may say so without impertinence) to snatch up our opinions as we do our newspapers; and a course of treatment which has once been favourably reported on is too hastily put down as definitely successful. The results of such an error in a matter so grave as the treatment of the more formidable examples of aneurism may be very serious. All that can as yet be truly said about the attempt to cure aneurisms by the introduction of foreign bodies into the sac is, that it is one which seems justifiable when there is no safer resource at hand; but that, in all known cases, the attempt has been unsuccessful, if not fatal.

Dr. Levis's case may prove an exception; but the last accounts of it show much reason to fear that the sac was growing at its deeper part (towards the lung), and threatening to burst, very possibly as the direct result of the irritation produced by the foreign substance. We must, therefore, wait for the close of the case before we say that this operation has been tried with success.

I am, etc., T. HOLMES.

18, Gt. Cumberland Place, Hyde Pk., W., Dec. 20, 1873.

THE HISTORY OF OVARIOTOMY.

SIR,—I was very glad to see, in the JOURNAL for November 29th, your annotation on the late article in the *Edinburgh Review*, on the progress of medicine and surgery, and agree with you in thinking it should not be republished without some correction of its numerous inaccuracies. But I confess that I was somewhat surprised that, neither in your annotation, nor in the short article in last week's impression, to which Mr. Lennox Brown's letter was appended, was mentioned a name that was and is well known in connection with ovariotomy. I allude to that of Frederic Bird, one of the earliest operators in this country, and, for many years, the principal ovariotomist in London; he performed the practice a great number of times between the years 1843-52, when Mr. Brown first commenced ovariotomy. A very brief historical sketch will show the relative dates in this country. Mr. Lizars in Scotland, 1825; Mr. Jeaffreson, Framlingham, May 8th, 1836 (the first recorded case in England). Then follow a few scattered cases in the provinces; and then Dr. Clay, Manchester, Sept. 12th, 1842; Mr. D. H. Walne, Nov. 6th, 1842; Dr. Frederic Bird, June 26th, 1843; Mr. Lane, Nov. 9th, 1843; Mr. Baker Brown, March 29th, 1852; Mr. Spencer Wells, Feb. 19th, 1858. It will thus be seen that Frederic Bird was operating eight years before Mr. Baker Brown, and fourteen before Mr. Spencer Wells.

When it is further added that these operations were performed in the teeth of the most strenuous professional opposition—in no case more strongly opposed than by Mr. Baker Brown himself—it will be seen that the real pioneers of ovariotomy were Dr. Frederic Bird in London, and Dr. Clay in Manchester, and that to deprive them of their meed of credit would be indeed a breach of historical accuracy.

I am, etc.,

JNO. B. POTTER, M.D.

20, George Street, Hanover Square, Dec. 18th, 1873.

* * * We confess to a very imperfect knowledge of Dr. Frederic Bird's career as an ovariotomist. Is he not, however, mainly re-

possible for the mystery with which it is shrouded, by failing in the point to which Dr. Keith alluded as of capital importance—the publication from the outset of all his cases, and their results? Perhaps Dr. Keith can complete the information given in his letter by informing us whether any trustworthy account of Dr. Frederic Bird's cases was ever published; and, if so, when and where.

MILITARY AND NAVAL MEDICAL SERVICES.

DISTINGUISHED SERVICE REWARD.

SPECTOR-GENERAL OF Hospitals, R. Dane, M.D., C.B., on the half-pay list, has obtained the Medical Distinguished Service Reward, granted by the death of Dr. Scott. Dr. Dane joined the Army Medical Department, as assistant-surgeon, July 17, 1835; became surgeon May 21, 1846; surgeon-major May 25, 1855; deputy inspector-general December 31, 1858; inspector-general March 4, 1868; and went on half-pay July 24, 1872. He served in the Punjab campaign of 1848-49, including the battle of Goojerat (medal with clasp), served as principal medical officer of the expeditionary force in China in 1858, and was present at the various operations (mentioned in despatches, &c., medal).

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 18th, 1873.

Crowther, Arthur Bingham, Hobart Town, Tasmania
Dodson, Andrew, Sheinton, Shrewsbury
Hamerton, George Albert, Gloucester Road, Peckham
Harsant, William Henry, Epsom
Hawkes, Anthony Mann, Doughty Street
Hunt, Robert Edmund, Gort, Ireland
Nicholson, Arthur, Newark-on-Trent
Riding, Edwin, Liverpool
Russell, Francis John Roberts, West Ham
White, Ernest William, Norwich

The following gentleman also on the same day passed his primary professional examination.

Hughes, William Lewis, London Hospital

Also, on the 11th instant.

Carter, Frederick Heales, St. Bartholomew's Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 9th, 10th, and 11th December, the following candidates obtained the License to practise Medicine.

Allen, Richard Maurice	Redmond, John Joseph
Finegan, John Stephen Francis	Roberts, Arthur Milsom
Fitzgerald, Joseph	Ross, James
Grier, Henry	Shanahan, John Francis
O'Farrell, Henry	Sparrow, William Christopher
Palmer, Joseph Mansergh	Turner, Herod
Panter, James Robert	Walker, Anster Fitzgerald

The following candidates obtained the Midwifery Diploma.

Allen, Richard Maurice	Ross, James
Finegan, John Stephen Francis	Shipsey, Edward Thomas
Grier, Henry	Sparrow, William Christopher
Palmer, Joseph Mansergh	

UNIVERSITY OF DUBLIN.—The Michaelmas Term Examinations for the Medical and Surgical Degrees, held on December 4th, 5th, 8th, and 9th, have resulted as follows. [The names of the candidates are given in the order of merit.]—Degree of M.B.

Barton, Samuel	McBride, Robert
Bluet, George	Moore, Henry Ogle
Gwynne, Charles	Hannan, Francis J.
McCarthy, Charles	

Degrees of M.Ch. and B.Ch.

Stack, Theodore	Drapes, John B.
Barton, Samuel	

Diploma in State Medicine.—At an examination held on the 9th, 10th, and 11th of December, Dr. T. W. Grimshaw obtained this diploma on very high answering.

MEDICAL VACANCIES.

The following vacancies are announced:—

BOLTON URBAN SANITARY DISTRICT.—Medical Officer of Health: £200 per annum.

BRIGHTON AND HOVE DISPENSARY.—Honorary Physician in Ordinary. Applications, 5th January.

CAMBRIDGESHIRE LUNATIC ASYLUM, Fulbourn.—Medical Officer.

CHESTER GENERAL INFIRMARY.—House-Surgeon: £80 per annum, residence and maintenance. Applications, 31st inst., to J. Jones, Sec.

CITY OF LONDON LUNATIC ASYLUM, Stone.—Assistant Medical Officer: £120 per annum, board, lodging, etc. Applications, 15th January, to H. F. Voule, Guildhall, London.

COTON HILL INSTITUTION for the INSANE, Stafford.—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications to Dr. Bower, Coton Hill, Stafford.

CRICKLADE and WOOTTON BASSETT UNION, Wilts.—Medical Officers for Districts Nos. 1 and 2: £40 per annum each.

DUNDEE ROYAL INFIRMARY.—Resident Medical Assistant: £50 per annum, bed, board, etc. Applications, 7th January, to D. Gordon Stewart, Solicitor.

DUNSHAUGHLIN UNION, co. Meath.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ratoath Dispensary District: £110 per annum, and fees. Applications, 3rd January, to James Kelly, Hon. Sec.

DUNSTON LODGE LUNATIC ASYLUM, Gateshead-on-Tyne.—Medical Superintendent.

ENNISKILLEN UNION, co. Fermanagh.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Enniskillen Dispensary District: £100 per annum, and fees. Applications, 1st January, to George Black, Hon. Sec.

FULHAM.—Public Analyst for one year: 21s. per analysis for first hundred, 10s. 6d. per analysis for second hundred, and 5s. per analysis for third hundred. Application, 31st inst., to Thomas Edward Jones, Broadway House, Hammersmith.

GARSTANG RURAL SANITARY DISTRICT.—Medical Officer of Health to March 25th, 1875: 21s. per case, and 6d. per mile. Applications, January 8th, to T. Noble, Clerk to the Rural Sanitary Authority.

GERMAN HOSPITAL, Dalston.—Honorary Medical Officer to the Eastern Dispensary. Applications, 20th inst., to A. Walbaum, D.D., Hon. Sec.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Resident Medical Officer: £100 per annum, board, etc. Applications, 15th January, to the Hon. Sec.

INDIAN MEDICAL SERVICE.—Eighteen Surgeons. Applications to Major-General Pears.

NAVAL MEDICAL SERVICE.—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Consulting Physician.

NOTTINGHAM GENERAL HOSPITAL.—Physician. Applications, 10th March, to E. M. Kidd, Sec.

QUEEN ADELAIDE DISPENSARY, Bethnal Green Road.—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 2nd January, to Rev. Thomas Peckston, 260, Cambridge Road.

RADCLIFFE INFIRMARY, Oxford.—House-Surgeon: £105 per annum, board and lodgings. Applications, 10th January, to F. J. Hallowell, Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL.—Assistant House-Surgeon. Applications, 1st January, to the Secretary.

SCHOOL FOR INDIGENT BLIND.—Consulting Physician.

ST. GEORGE'S HOSPITAL.—Physician.

ST. GEORGE'S PROVIDENT DISPENSARY, Mount Street.—Physician. Applications, 20th inst., to Col. Alcock, Hon. Sec.

ST. MARY'S HOSPITAL, Paddington.—Resident Registrar: £100 per annum, board and residence. Applications, 3rd January, to J. G. Wilkinson, Sec.

STAFFORD.—Certifying Factory Surgeon.

STAFFORDSHIRE CONSTABULARY, Stafford.—Surgeon.

STAFFORDSHIRE GENERAL INFIRMARY, Staffordshire.—Surgeon.

SOUTHPORT CONVALESCENT HOSPITAL.—Resident Medical Officer: £80 per annum, with £10 yearly increase up to £100, with board, lodging, and attendance.

SUBURY UNION, Suffolk.—Medical Officer for the Gestingthorpe District: £12 to 10 per annum.

SUNDERLAND and BISHOP WEARMOUTH INFIRMARY and DISPENSARY.—Senior House-Surgeon: £80 per annum, board and residence. Junior House-Surgeon: £60 per annum, board, and residence. Applications, 1st January, to John Kitts, Secretary.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—House Surgeon: £75 per annum, board, residence, and washing. Applications, 12th January, to the Assistant Secretary.

UNIVERSITY OF DUBLIN.—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead.—House-Surgeon and Assistant Secretary: £100 per annum, furnished rooms, board, etc. Applications, 15th January, to F. G. Hamilton, Assistant Secretary.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Applications, 10th February to F. J. Wilson, Sec.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

LOWE, John, M.B. and C.M. Edin., appointed Pathologist and Assistant Medical Officer to the West Riding Asylum, Wakefield.

***SMITH, R. Shingleton, M.D.,** appointed Physician to the Bristol Royal Infirmary, vice *John Beddoe, M.D., F.R.S., resigned; and Consulting Physician to the Bristol Dispensary, vice G. Lyon, M.D., deceased.

***STEWART, James, B.A., L.R.C.P. Ed.,** appointed Second Assistant Medical Officer of the Kent County Asylum, Maidstone, vice David Hughes, Esq., resigned.

VINCENT, H. B., Esq., elected House Surgeon to the North Lonsdale Hospital, Barrow-in-Furness, vice J. Settle, Esq., resigned.

***WOOD, Thos. O., L.R.C.P. Edin.,** Medical Superintendent of Dunston Lodge Private Lunatic Asylum, near Newcastle-upon-Tyne, appointed Assistant Medical Officer to the Kent County Lunatic Asylum, Maidstone.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATH.

FERGUSON, David M., M.D., in Dublin, on December 5th, 1873.

OPERATION DAYS AT THE HOSPITALS.

- MONDAY** Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- TUESDAY** Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
- WEDNESDAY** St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2.30 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- THURSDAY** St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- FRIDAY** Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
- SATURDAY** St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

EXPECTED OPERATIONS AT THE HOSPITALS.

ROYAL FREE HOSPITAL, Saturday, December 27th, 2 P.M. Colotomy for Rectal Stricture, by Mr. Gant.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. DE MÉRIC'S paper shall have early insertion.

M.B., M.A.—The references to Gull, Aitken, Murchison, and other authorities, from which the extracts in Dr. Bryan's Address on Miasma were taken, were accidentally omitted in forwarding the MS.

MR. WOODMAN (Exeter) is thanked. The lists are often omitted from pressure on space.

MR. WRIGHT (St. Neot's).—The article referred to will appear next week.

INQUIRER asks: Can you, or your readers, inform me if, in their experience, the use of the "magnetic appliances" has been attended with sufficient benefit in cases of asthma, bronchitis, etc., to encourage one's recommendation of them to patients suffering from certain pulmonary affections?

A.B.—The diploma in question is held in high estimation. The examination is thorough and searching, but conducted with fairness and consideration. A man "not recently from the schools", who was thoroughly educated when there, and who has maintained and increased his knowledge of pathology and therapeutics, need not fear the ordeal.

ARSENICAL WALL-PAPERS.

SIR—They have fined the milk-dealers very heavily for putting water into the milk, which is fraudulent, although wholesome; and yet I have lately been nearly poisoned to death by arsenical wall-paper on more than one occasion, and have no remedy. I would not have been so positive, but I suffered severely from bright green paper about twelve years ago. I have had several papers analysed by the public analyst, and he tells me that nearly all papers contain more or less arsenic, from the bright green to the greenish grey. The prominent symptoms are—dull gripping pain in the bowels, nausea and vomiting, loathing of animal food, and frequent diarrhoea. I have had many cases in my practice from the same cause. Of course, I must be very susceptible. I think there ought to be a law to prohibit it altogether. There was a very strong article on the subject in your JOURNAL of June 20th this year, which struck me very much: it was written by Mr. Clarke, Consulting-Surgeon to the General Hospital, Bristol. Acting on the advice of the analyst, I have had the walls of my rooms covered with strong oak paper, highly varnished, so that I hope the arsenical dust will be kept down. A medical friend told me the other day that it may be six months before I get rid of the effects. It is positively shameful. I am, etc., J. LIDDELL, M.R.C.S.E.

Newcastle-on-Tyne, December 20th, 1873.

CROTON-CHLORAL HYDRATE.

SIR—Professor Liebreich will add greatly to the obligation he has already conferred by stating the dose of the above and the best mode of administration. I have had much satisfaction in using it, but I have never dared to go beyond two grains every hour for three hours. Some of my *confidés* say that ten grains are safe. I tried it in lumbago and muscular pains, and I find its therapeutic power to be remarkable. I am, etc., THOMAS SKINNER, M.D.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. STONE ON MEDICAL MAMMON WORSHIP.

DR. W. H. STONE is still much perturbed at being divorced from medical communion with the *English Mechanic*. "Medical electricity," he writes in a recent number of that estimable periodical, "was one of those topics which had occurred to me as suitable for our late Medical Column." Mourning over the deceased column which was so prominently decorated with his name and professional titles, all seduced by "the kind and pointed personal references" of a correspondent having the pretty pink title of "Rosaniline," he jots down in this number his "crude notions" on the subject. Dr. Stone, however, cannot refrain from painting the motives and conduct of his professional associates in hues by no means *couleur de rose*. He describes their motives and his conduct in respect to the late lamented Medical Column in these words: "In the struggle of fees *versus* fellow-creature I had to yield; perhaps I should do better still to remain a silent worshipper of the great god Mammon." This is not so periphrastic as it is flowery; it appears, however, to mean that his professional associates are worshippers of fees, and indifferent to their fellow-creatures; that they have "persecuted" him because he is not so (the whole is headed "the persecution of Dr. Stone"); and that as worshippers of the great god Mammon they have put compulsion on him not to adopt more humane practices than they do. He desires to benefit his fellow-creatures his scientific communion with them in the *English Mechanic*; but from "wors" of the great god Mammon, and in "the struggle for fees," his professional fellow "prefer banding themselves into a close trades-union against any of their number who may so far sin against the usages of their particular shop." For a Fellow of the College of Physicians of London, and a physician of St. Thomas's Hospital, this certainly seems rather strong. We cannot help thinking that, if his colleagues are really such bad company as is implied in his statements to the public, he can hardly feel at ease with them; and that at any rate it would be more becoming to argue out the question with them, and try to make out whether the objection to his editing a Medical Column in a paper for English mechanics is really due to sordid motives, such as he imputes in this address to the readers of the *Mechanic*, or to much higher, nobler, and more just convictions. After the statements which were given in our columns of the reasons which operate to prevent educated physicians from doing anything of the sort, this attack upon his profession seems to us singularly unjustifiable. We had hoped that the whole subject was dead and buried, and that Dr. Stone had acquiesced silently in the justice of the objection to his course when he desisted from it. These bitter public denunciations, to the great body of "English Mechanics," of the rules which all educated physicians respect, come with a very bad grace indeed from a physician holding the positions which have been entrusted to Dr. Stone, and seem to call for something like official notice. They go beyond the bounds of ordinary indiscretion, and convey groundless imputations against the profession at large and the bodies whose rules he obeys, while they derive their chief weight and attain public importance by reason of his official relations to those bodies, which have been continuously and prominently announced in the pages of the journal in which this attack is published.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The North British Daily Mail; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Fothergill, London; Dr. Mapother, Dublin; Dr. Coats, Glasgow; Our Paris Correspondent; Dr. Bastian, London; Dr. J. W. Moore, Dublin; Dr. Batty Tuke, Edinburgh; Surgeon-Major Black, Cambridge; Dr. Foster, Birmingham; Dr. Drysdale, London; Dr. Parsons, Goole; Mr. W. Date, Birmingham; Our Glasgow Correspondent; Rev. Mr. Hillman, London; Mr. Orchard, Salford; A Member; Dr. Snow Beck, London; Dr. Berkart, London; The Secretary of the Harveian Society; Dr. J. N. Vinen, London; Mr. O. Halliwell, Oxford; Mr. Hopgood, Sunderland; Dr. Griffith, Swansea; Dr. Ogston, Aberdeen; Dr. Dyc, Duckworth, London; Dr. Bradbury, Cambridge; Mr. Jeaffreson, Newcastle-upon-Tyne; Mr. Eastes, London; Mr. Edmund Board, Bath; Dr. Munro, Cupar; Dr. Lloyd Roberts, Manchester; Mr. Oglesby, Leeds; Our Birmingham Correspondent; Dr. Cowie, Lerwick; Mr. Poole, London; Inquirer; Our Dublin Correspondent; Mr. Jones, Manchester; Dr. Whitmore, London; Dr. Burdon Sanderson, London; Dr. Farquharson, London; Dr. Cobbold, London; M.D. The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. John Harley, London; Mr. Gillman, London; Dr. Skinner, Liverpool; Mr. Lawson Tait, Birmingham; Dr. Fussell, Brighton; Dr. G. Hill, Hooton; Mr. H. B. Vincent, London; Mr. Jessop, Leeds; Mr. T. O. Wood, Gateshead; Mr. Dyke, Merthyr Tydfil; Mr. Berkeley Hill, London; Dr. Potter, London; Dr. Bryan, Northampton; Mr. Woodman, Exeter; Our Manchester Correspondent; Mr. De Méric, London; Mr. J. Ingpen, London; Mr. A. T. Norton, London; Mr. George Morgan, London; Mr. A. Tomes, London; Mr. Bryant, London; Mr. Hulke, London; Mr. Gascoyen, London; Mr. Barwell, London; Mr. F. Mason, London; Mr. H. Morris, London; Mr. Howse, London; Mr. Fairlie Clarke, London; Mr. Gant, London; Dr. Shingleton Smith, Clifton; Mr. Holmes, London; Dr. Percy Boulton, London; Dr. Bassett, Birmingham; Mr. Hinds, Birmingham; Mr. Liddell, Newcastle-on-Tyne; Mr. Miall, Bradford; Mr. Wright, St. Neot's; etc.

SERIAL

R British medical journal
31
B93
1873
v.2
cop.2

GERSTS

